Instructions: Applicant's must provide only the requested fields and only the filtered records as described below under "Data Filters".
In this Form A-1, include FHA, VA- insured loans, and conventional loans made for the purpose of purchasing residential real property as categorized by HMDA - Regulation C.
The data is to be sourced from your institution's 2022 data submission to the Consumer Financial Protection Bureau to comply with the HMDA act.
NOTE: Columns E and F correlate to Attachment A - Filing Instructions Guide for HMDA data collected in 2022

| Column | Field Name |  |  |
| :--- | :--- | :--- | :--- | :--- |
|  |  | Date |  |

Disclaimer: Columns 21-32 are optional for loans that do not have a value of "6" in column 4
Disclaimer: Columns 15,16, and 33-42 are optional

1
2
3

| Census Tract | Action Taken | Total Units |
| :---: | :---: | :---: |
| 6903.00 | 3-Application denied | 2 |
| 208.01 | 6-Purchased loan | 1 |
| 3201.01 | 6-Purchased loan | 1 |
| 506.00 | 6-Purchased loan | 1 |
| 3301.03 | 1-Loan originated | 1 |
| 8420.00 | 1-Loan originated | 1 |
| 814.03 | 6-Purchased loan | 1 |
| 308.00 | 6-Purchased loan | 1 |
| 8323.00 | 1-Loan originated | 1 |
| 319.00 | 1-Loan originated | 1 |
| 610.00 | 1-Loan originated | 1 |
| 8307.00 | 1-Loan originated | 1 |
| 107.01 | 6-Purchased loan | 1 |
| 619.02 | 6-Purchased loan | 1 |
| 629.00 | 6-Purchased loan | 2 |
| 8422.00 | 1-Loan originated | 1 |
| 718.00 | 1-Loan originated | 1 |
| 2001.00 | 1-Loan originated | 3 |
| 8307.00 | 1-Loan originated | 1 |
| 103.00 | 1-Loan originated | 3 |
| 8358.00 | 6-Purchased loan | 1 |
| 818.00 | 1-Loan originated | 1 |
| 8388.00 | 6-Purchased loan | 3 |
| 2801.00 | 6-Purchased loan | 1 |
| 206.01 | 1-Loan originated | 1 |
| 2206.02 | 1-Loan originated | 1 |
| 2432.00 | 3-Application denied | 1 |
| 2106.02 | 1-Loan originated | 1 |
| 5907.00 | 1-Loan originated | 1 |
| 718.00 | 1-Loan originated | 1 |
| 5907.00 | 1-Loan originated | 1 |
| 627.00 | 1-Loan originated | 1 |
| 510.00 | 1-Loan originated | 1 |
| 629.00 | 1-Loan originated | 1 |
| 2414.00 | 3-Application denied | 1 |
| 2213.00 | 1-Loan originated | 1 |
| 6905.00 | 3-Application denied | 1 |
| 7307.00 | 1-Loan originated | 1 |
| 4804.00 | 1-Loan originated | 1 |
| 2504.00 | 1-Loan originated | 1 |
| 2514.00 | 1-Loan originated | 1 |
| 8330.00 | 1-Loan originated | 1 |
| 715.00 | 1-Loan originated | 1 |
| 8423.00 | 1-Loan originated | 1 |
| 8311.00 | 1-Loan originated | 1 |
| 705.00 | 3-Application denied | 1 |
| 203.01 | 3-Application denied | 1 |
| 2435.00 | 3-Application denied | 1 |
| 203.02 | 3-Application denied | 2 |
| 1403.02 | 3-Application denied | 2 |
| 1104.00 | 3-Application denied | 2 |
| 7608.03 | 3-Application denied | 1 |
| 3102.00 | 1-Loan originated | 1 |
| 1506.00 | 6-Purchased loan | 1 |

## Residential Lending <br> Home Purchase Loans

(For loans closed in calendar year 2022)

## Loan Type

1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA)
1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA)
1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA)
1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA)
1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA)
1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA)
1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA)
1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA)
1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA)
1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA)
1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA)
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1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA)
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1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA)
1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA)
1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA)
1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA)
2-Federal Housing Administration insured (FHA)
2-Federal Housing Administration insured (FHA)
1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA)
1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA)
1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA)
1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA)
1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA)
1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA)
1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA)
1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA)
1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA)
1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA)
1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA)
1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA)
1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA)
1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA)
1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA)
1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA)

Loan Purpose
32-Cash Out
1-Home Purchase
31-Refinance
1-Home Purchase
31-Refinance
31-Refinance
1-Home Purchase
1-Home Purchase
1-Home Purchase
1-Home Purchase
1-Home Purchase
1-Home Purchase
1-Home Purchase
1-Home Purchase
1-Home Purchase
1-Home Purchase
1-Home Purchase
31-Refinance
31-Refinance
31-Refinance
1-Home Purchase
1-Home Purchase
1-Home Purchase
1-Home Purchase
31-Refinance
1-Home Purchase
31-Refinance
1-Home Purchase
1-Home Purchase
1-Home Purchase
1-Home Purchase
1-Home Purchase
31-Refinance
31-Refinance
1-Home Purchase
1-Home Purchase
1-Home Purchase
1-Home Purchase
1-Home Purchase
32-Cash Out
32-Cash Out
1-Home Purchase
1-Home Purchase
1-Home Purchase
1-Home Purchase
31-Refinance
32-Cash Out
32-Cash Out
32-Cash Out
31-Refinance
1-Home Purchase
32-Cash Out
32-Cash Out
1-Home Purchase

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| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
| 6 | 7 | 8 | 9 | 10 |
| Open End Line of Credit | Loan Amount | Application Date | Interest Rate | Loan Term (Months) |
| 2-Not an open-end line of credit | 187500 | 20220815 | NA | 180 |
| 2-Not an open-end line of credit | 159750 | NA | 5.5 | 180 |
| 2-Not an open-end line of credit | 636000 | NA | 5.5 | 240 |
| 2-Not an open-end line of credit | 403750 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 181000 | 20211020 | 3.125 | 120 |
| 2-Not an open-end line of credit | 189050 | 20211209 | 3.625 | 300 |
| 2-Not an open-end line of credit | 146250 | NA | 3.99 | 360 |
| 2-Not an open-end line of credit | 1440000 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 480000 | 20211229 | 2.99 | 360 |
| 2-Not an open-end line of credit | 388000 | 20220223 | 3.625 | 360 |
| 2-Not an open-end line of credit | 306000 | 20220513 | 5.5 | 360 |
| 2-Not an open-end line of credit | 255000 | 20220215 | 3.875 | 360 |
| 2-Not an open-end line of credit | 88500 | NA | 5.5 | 360 |
| 2-Not an open-end line of credit | 90000 | NA | 5.25 | 360 |
| 2-Not an open-end line of credit | 817500 | NA | 3.75 | 360 |
| 2-Not an open-end line of credit | 251250 | 20220422 | 4.75 | 360 |
| 2-Not an open-end line of credit | 575000 | 20220420 | 4.875 | 360 |
| 2-Not an open-end line of credit | 279500 | 20211027 | 3.49 | 240 |
| 2-Not an open-end line of credit | 328000 | 20220204 | 3.625 | 360 |
| 2-Not an open-end line of credit | 865000 | 20220406 | 3.375 | 180 |
| 2-Not an open-end line of credit | 569000 | NA | 7.375 | 360 |
| 2-Not an open-end line of credit | 408750 | 20211215 | 2.375 | 360 |
| 2-Not an open-end line of credit | 182700 | NA | 5.875 | 360 |
| 2-Not an open-end line of credit | 375000 | NA | 4.375 | 360 |
| 2-Not an open-end line of credit | 350100 | 20211019 | 2.875 | 360 |
| 2-Not an open-end line of credit | 225750 | 20220511 | 6.125 | 360 |
| 2-Not an open-end line of credit | 422314 | 20211130 | NA | 360 |
| 2-Not an open-end line of credit | 548000 | 20220805 | 4.875 | 360 |
| 2-Not an open-end line of credit | 339000 | 20211214 | 2.5 | 180 |
| 2-Not an open-end line of credit | 2600000 | 20220322 | 4.375 | 360 |
| 2-Not an open-end line of credit | 225000 | 20220329 | 4.625 | 360 |
| 2-Not an open-end line of credit | 562500 | 20220124 | 3 | 360 |
| 2-Not an open-end line of credit | 542500 | 20220126 | 2.25 | 180 |
| 2-Not an open-end line of credit | 368800 | 20211220 | 2.625 | 360 |
| 2-Not an open-end line of credit | 749000 | 20221020 | NA | 360 |
| 2-Not an open-end line of credit | 660000 | 20221028 | 6.625 | 360 |
| 2-Not an open-end line of credit | 96660 | 20221008 | NA | 240 |
| 2-Not an open-end line of credit | 206196 | 20220718 | 5.625 | 360 |
| 2-Not an open-end line of credit | 174600 | 20221011 | 6.625 | 360 |
| 2-Not an open-end line of credit | 186500 | 20220216 | 3.875 | 360 |
| 2-Not an open-end line of credit | 150000 | 20220106 | 2.99 | 180 |
| 2-Not an open-end line of credit | 583200 | 20220224 | 3.865 | 360 |
| 2-Not an open-end line of credit | 199200 | 20220606 |  | 360 |
| 2-Not an open-end line of credit | 399500 | 20220201 | 4.5 | 360 |
| 2-Not an open-end line of credit | 660000 | 20220421 | 4.49 | 360 |
| 2-Not an open-end line of credit | 150900 | 20211222 | NA | 240 |
| 2-Not an open-end line of credit | 262000 | 20220208 | NA | 240 |
| 2-Not an open-end line of credit | 391000 | 20220509 | NA | 360 |
| 2-Not an open-end line of credit | 300000 | 20220516 | NA | 360 |
| 2-Not an open-end line of credit | 307200 | 20211110 | NA | 360 |
| 2-Not an open-end line of credit | 375000 | 20211119 | NA | 360 |
| 2-Not an open-end line of credit | 91797 | 20211203 | NA | 180 |
| 2-Not an open-end line of credit | 248128 | 20211208 | 2.625 | 180 |
| 2-Not an open-end line of credit | 225000 | NA | 3.625 | 360 |


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| :---: | :---: | :---: | :---: |
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| 11 | 12 | 13 | 14 |
| Total Points and Fees | Lien Status | Property Value | Combined-Loan-Value Ratio |
| NA | 1-Secured by a first lien | 250000 | 75 |
| NA | 1 -Secured by a first lien | 213000 | NA |
| NA | 1 -Secured by a first lien | 1275000 | NA |
| NA | 1-Secured by a first lien | 425000 | NA |
| NA | 1 -Secured by a first lien | 330000 | 55 |
| NA | 1 -Secured by a first lien | 281000 | 68 |
| NA | 1-Secured by a first lien | 195000 | NA |
| NA | 1-Secured by a first lien | 1800000 | NA |
| NA | 1-Secured by a first lien | 600000 | 80 |
| NA | 1-Secured by a first lien | 485000 | 80 |
| NA | 1-Secured by a first lien | 360000 | 85 |
| NA | 1-Secured by a first lien | 340000 | 75 |
| NA | 1-Secured by a first lien | 118000 | NA |
| NA | 1-Secured by a first lien | 120000 | NA |
| NA | 1 -Secured by a first lien | 1090000 | NA |
| NA | 1-Secured by a first lien | 335000 | 75 |
| NA | 1 -Secured by a first lien | 776000 | 75 |
| NA | 1 -Secured by a first lien | 475000 | 59 |
| NA | 1 -Secured by a first lien | 410000 | 80 |
| NA | 1-Secured by a first lien | 1180000 | 74 |
| NA | 1-Secured by a first lien | 599000 | NA |
| NA | 1-Secured by a first lien | 545000 | 75 |
| NA | 1-Secured by a first lien | 203000 | NA |
| NA | 1-Secured by a first lien | 625000 | NA |
| NA | 1-Secured by a first lien | 450000 | 78 |
| NA | 1-Secured by a first lien | 301000 | 75 |
| NA | 1-Secured by a first lien | 590000 | 72 |
| NA | 1-Secured by a first lien | 685000 | 80 |
| NA | 1 -Secured by a first lien | 459000 | 74 |
| NA | 1-Secured by a first lien | 3250000 | 80 |
| NA | 1-Secured by a first lien | 610000 | 37 |
| NA | 1-Secured by a first lien | 750000 | 75 |
| NA | 1-Secured by a first lien | 950000 | 58 |
| NA | 1-Secured by a first lien | 580000 | 64 |
| NA | 1-Secured by a first lien | 1070000 | 70 |
| NA | 1-Secured by a first lien | 825000 | 80 |
| NA | 1-Secured by a first lien | 100000 | 95 |
| NA | 1 -Secured by a first lien | 210000 | 96.5 |
| NA | 1-Secured by a first lien | 180000 | 97 |
| NA | 1-Secured by a first lien | 355000 | 53 |
| NA | 1-Secured by a first lien | 255000 | 59 |
| NA | 1-Secured by a first lien | 729000 | 80 |
| NA | 1 -Secured by a first lien | 249000 | 80 |
| NA | 1 -Secured by a first lien | 470000 | 85 |
| NA | 1 -Secured by a first lien | 825000 | 80 |
| NA | 1 -Secured by a first lien | 288000 | 53 |
| NA | 1 -Secured by a first lien | 395000 | 67 |
| NA | 1 -Secured by a first lien | 600000 | 66 |
| NA | 1-Secured by a first lien | 600000 | 50 |
| NA | 1 -Secured by a first lien | 460000 | 67 |
| NA | 1-Secured by a first lien | 500000 | 75 |
| NA | 1 -Secured by a first lien | 105000 | 88 |
| NA | 1 -Secured by a first lien | 365000 | 68 |
| NA | 1 -Secured by a first lien | 325000 | NA |





Race of Applicant or Borrower (1)
1-American Indian or Alaska Native
2-Asian
2-Asian
2-Asian
2-Asian
2-Asian
2-Asian
2-Asian
22-Chinese
3-Black or African American
5-White
5-White
5-White
5-White
5-White
5-White
5-White
5-White
5-White
5-White
5-White
5-White
6-Information not provided by applicant in mail, internet, or telephone application
6-Information not provided by applicant in mail, internet, or telephone application
21-Asian Indian
26-Vietnamese
2-Asian
2-Asian
2-Asian
2-Asian
2-Asian
2-Asian
2-Asian
2-Asian
2-Asian
2-Asian
3-Black or African American
3-Black or African American
3-Black or African American
3-Black or African American
3-Black or African American
3-Black or African American
5-White
5-White
5-White
5-White
5-White
5-White
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5-White
5-White
5-White
5-White

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| Race of Applicant or Borrower (5) |
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| Race of Co-Applicant or Borrower (1) |
| 8-No co-applicant |
| 8-No co-applicant |
| 2-Asian |
| 8-No co-applicant |
| 2-Asian |
| 8-No co-applicant |
| 8-No co-applicant |
| 8-No co-applicant |
| 5-White |
| 5-White |
| 5-White |
| 5-White |
| 5-White |
| 5-White |
| 5-White |
| 5-White |
| 5-White |
| 5-White |
| 5-White |
| 5-White |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 21-Asian Indian |
| 5-White |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 21-Asian Indian |
| 26-Vietnamese |
| 2-Asian |
| 2-Asian |
| 2-Asian |
| 2-Asian |
| 2-Asian |
| 2-Asian |
| 2-Asian |
| 2-Asian |
| 5-White |
| 5-White |
| 3-Black or African American |
| 3-Black or African American |
| 3-Black or African American |
| 3-Black or African American |
| 3-Black or African American |
| 5-White |
| 5-White |
| 5-White |
| 2-Asian |
| 2-Asian |
| 5-White |
| 5-White |
| 5-White |
| 5-White |
| 5-White |
| 5-White |
| 5-White |
| 5-White |




|  | Sex of Applicant or Borrower |
| :---: | :---: |
|  | 1-Male |
|  | 1-Male |
|  | 1-Male |
|  | 1-Male |
|  | 1-Male |
|  | 1-Male |
|  | 1-Male |
|  | 1-Male |
|  | 1-Male |
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|  | 1-Male |
|  | 1-Male |

## Sex of Co-Applicant or Borrower

5-No co-applicant
5-No co-applicant
2-Female
5-No co-applicant
2-Female
5-No co-applicant
5-No co-applicant
5-No co-applicant
2-Female
1-Male
1-Male
1-Male
1-Male
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2-Female
2-Female


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| :---: | :---: |
| 34 | 35 |
| Ethnicity of Applicant or Borrower (2) | Ethnicity of Applicant or Borrower (3) |
| - | - |
| - | - |
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| - | - |
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| 11-Mexican | - |
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| - | - |
| 2-Not Hispanic or Latino | 14-Other Hispanic or Latino |
| 12-Puerto Rican | 14-Other Hispanic or Latino |
| - |  |
| - | - |
| - | - |
| - | - |
| - | - |
| - | - |
| - | - |
| - | - |
| 11-Mexican | - |
| 14-Other Hispanic or Latino |  |



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|  |
| Ethnicity of Co-Applicant or Borrower (1) |
| 5-No co-applicant |
| 5-No co-applicant |
| 2-Not Hispanic or Latino |
| 5-No co-applicant |
| 2-Not Hispanic or Latino |
| 5-No co-applicant |
| 5-No co-applicant |
| 5-No co-applicant |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 14-Other Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Not Herpanic or Latino |
| 2-Nor Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino Hispanic or Latino |
| 2-Not Hispanic or Latino |


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| 39 | 40 |
| Ethnicity of Co-Applicant or Borrower (2) | Ethnicity of Co-Applicant or Borrower (3) |
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| 11-Mexican | - |
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| 706.00 | 1-Loan originated | 1 |
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| 502.00 | 1-Loan originated | 1 |
| 815.00 | 1-Loan originated | 1 |
| 605.00 | 1-Loan originated | 1 |
| 629.00 | 6-Purchased loan | 1 |
| 804.00 | 6-Purchased loan | 1 |
| 8310.00 | 1-Loan originated | 1 |
| 2425.00 | 6-Purchased loan | 1 |
| 3302.00 | 1-Loan originated | 1 |
| 603.00 | 1-Loan originated | 1 |
| 628.00 | 1-Loan originated | 1 |
| 102.01 | 1-Loan originated | 1 |
| 717.00 | 1-Loan originated | 1 |
| 1902.00 | 1-Loan originated | 1 |
| 1002.00 | 6-Purchased loan | 1 |
| 2003.00 | 1-Loan originated | 1 |
| 615.00 | 1-Loan originated | 1 |
| 628.00 | 1-Loan originated | 1 |
| 2433.00 | 1-Loan originated | 1 |
| 8311.00 | 1-Loan originated | 2 |
| 2421.00 | 1-Loan originated | 1 |
| 1510.01 | 6-Purchased loan | 1 |
| 2423.00 | 1-Loan originated | 1 |
| 8435.00 | 6-Purchased loan | 1 |
| 810.00 | 1-Loan originated | 1 |
| 1201.00 | 6-Purchased loan | 1 |
| 8423.00 | 1-Loan originated | 1 |
| 812.01 | 1-Loan originated | 1 |
| 1201.00 | 1-Loan originated | 1 |
| 801.00 | 1-Loan originated | 1 |
| 1303.00 | 1-Loan originated | 1 |
| 103.00 | 1-Loan originated | 1 |
| 1105.02 | 1-Loan originated | 1 |
| 619.01 | 1-Loan originated | 1 |
| 634.00 | 1-Loan originated | 1 |
| 1301.00 | 6-Purchased loan | 1 |
| 8306.00 | 1-Loan originated | 1 |
| 503.00 | 1-Loan originated | 2 |
| 4203.00 | 1-Loan originated | 1 |
| 2435.00 | 6-Purchased loan | 1 |
| 2207.02 | 1-Loan originated | 2 |
| 2425.00 | 1-Loan originated | 1 |
| 630.00 | 6-Purchased loan | 1 |
| 713.00 | 1-Loan originated | 1 |
| 2216.00 | 1-Loan originated | 1 |
| 707.00 | 1-Loan originated | 1 |
| 1408.00 | 6-Purchased loan | 1 |
| 3301.02 | 1-Loan originated | 1 |
| 8421.00 | 1-Loan originated | 1 |
| 1703.00 | 1-Loan originated | 1 |
| 705.00 | 1-Loan originated | 1 |
| 2434.00 | 1-Loan originated | 2 |
| 8421.00 | 6-Purchased loan | 1 |
| 6203.00 | 1-Loan originated | 1 |
| 8331.00 | 1-Loan originated | 1 |
| 8402.00 | 1-Loan originated | 1 |
| 2430.00 | 6-Purchased loan | 1 |
| 306.04 | 6-Purchased loan | 1 |
| 2423.00 | 6-Purchased loan | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |


| 2-Not an open-end line of credit | 180000 | 20220929 | 5.5 | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 784000 | 20220320 | 3.5 | 360 |
| 2-Not an open-end line of credit | 1000000 | 20220805 | 4.750 | 360 |
| 2-Not an open-end line of credit | 487100 | 20211215 | 2 | 180 |
| 2-Not an open-end line of credit | 404000 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 618300 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 487920 | 20220302 | 3.75 | 360 |
| 2-Not an open-end line of credit | 161001.73 | NA | 3.625 | 360 |
| 2-Not an open-end line of credit | 364125 | 20220418 | 4.5 | 360 |
| 2-Not an open-end line of credit | 737000 | 20220928 | 5.5 | 360 |
| 2-Not an open-end line of credit | 768000 | 20220301 | 2.875 | 360 |
| 2-Not an open-end line of credit | 111000 | 20220121 | 3.5 | 360 |
| 2-Not an open-end line of credit | 435000 | 20211218 | 2.875 | 360 |
| 2-Not an open-end line of credit | 272000 | 20220224 | 3.75 | 360 |
| 2-Not an open-end line of credit | 327750 | NA | 6.5 | 360 |
| 2-Not an open-end line of credit | 270000 | 20220207 | 4.375 | 360 |
| 2-Not an open-end line of credit | 1704000 | 20220519 | 4.25 | 360 |
| 2-Not an open-end line of credit | 487500 | 20220421 | 5.125 | 360 |
| 2-Not an open-end line of credit | 326000 | 20211206 | 3.125 | 360 |
| 2-Not an open-end line of credit | 356250 | 20220110 | 2.625 | 180 |
| 2-Not an open-end line of credit | 418000 | 20220624 | 5.375 | 360 |
| 2-Not an open-end line of credit | 600000 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 110000 | 20220104 | 3.875 | 360 |
| 2-Not an open-end line of credit | 139500 | NA | 5.625 | 360 |
| 2-Not an open-end line of credit | 394250 | 20220203 | 4.125 | 360 |
| 2-Not an open-end line of credit | 321000 | NA | 3.875 | 240 |
| 2-Not an open-end line of credit | 682500 | 20220311 | 3.625 | 360 |
| 2-Not an open-end line of credit | 950000 | 20220106 | 2.5 | 360 |
| 2-Not an open-end line of credit | 229353 | 20220108 | 2.75 | 180 |
| 2-Not an open-end line of credit | 486750 | 20220201 | 3.24 | 360 |
| 2-Not an open-end line of credit | 241259 | 20211230 | 2.375 | 180 |
| 2-Not an open-end line of credit | 520000 | 20220114 | 3.75 | 360 |
| 2-Not an open-end line of credit | 436000 | 20220530 | 4.25 | 360 |
| 2-Not an open-end line of credit | 477000 | 20220214 | 3.75 | 240 |
| 2-Not an open-end line of credit | 728000 | 20220821 | 4.75 | 360 |
| 2-Not an open-end line of credit | 336000 | NA | 3.375 | 360 |
| 2-Not an open-end line of credit | 103500 | 20211207 | 3.49 | 360 |
| 2-Not an open-end line of credit | 349000 | 20220218 | 3.99 | 180 |
| 2-Not an open-end line of credit | 212400 | 20220422 | 4 | 180 |
| 2-Not an open-end line of credit | 466584.97 | NA | 2.75 | 360 |
| 2-Not an open-end line of credit | 476000 | 20220330 | 4.99 | 360 |
| 2-Not an open-end line of credit | 377910 | 20220321 | 4.625 | 360 |
| 2-Not an open-end line of credit | 680995.27 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 250000 | 20211206 | 2.875 | 360 |
| 2-Not an open-end line of credit | 289000 | 20211219 | 2.49 | 180 |
| 2-Not an open-end line of credit | 1960000 | 20220829 | 4.625 | 360 |
| 2-Not an open-end line of credit | 644262.1 | NA | 2.625 | 180 |
| 2-Not an open-end line of credit | 484500 | 20220215 | 4.875 | 360 |
| 2-Not an open-end line of credit | 320000 | 20211213 | 2.5 | 360 |
| 2-Not an open-end line of credit | 206000 | 20220105 | 2.875 | 120 |
| 2-Not an open-end line of credit | 401657 | 20211122 | 2.375 | 360 |
| 2-Not an open-end line of credit | 250000 | 20220408 | 5.625 | 360 |
| 2-Not an open-end line of credit | 548000 | NA | 2.99 | 360 |
| 2-Not an open-end line of credit | 200000 | 20211104 | 3.125 | 360 |
| 2-Not an open-end line of credit | 1140000 | 20220111 | 3.375 | 360 |
| 2-Not an open-end line of credit | 461400 | 20220927 | 5.875 | 360 |
| 2-Not an open-end line of credit | 749034.57 | NA | 4.625 | 360 |
| 2-Not an open-end line of credit | 147250 | NA | 3.249 | 360 |
| 2-Not an open-end line of credit | 565250 | NA | 3.875 | 360 |


| NA | 1-Secured by a first lien | 405000 | 45 |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 980000 | 80 |
| NA | 1-Secured by a first lien | 1350000 | 74.074 |
| NA | 1-Secured by a first lien | 1440000 | 41 |
| NA | 1-Secured by a first lien | 729000 | NA |
| NA | 1-Secured by a first lien | 687000 | NA |
| NA | 1-Secured by a first lien | 609900 | 80 |
| NA | 1-Secured by a first lien | 215000 | NA |
| NA | 1-Secured by a first lien | 485000 | 76 |
| NA | 1-Secured by a first lien | 1340000 | 55 |
| NA | 1-Secured by a first lien | 960000 | 80 |
| NA | 1-Secured by a first lien | 340000 | 33 |
| NA | 1-Secured by a first lien | 682000 | 64 |
| NA | 1-Secured by a first lien | 340000 | 80 |
| NA | 1-Secured by a first lien | 345000 | NA |
| NA | 1-Secured by a first lien | 365000 | 74 |
| NA | 1-Secured by a first lien | 2130000 | 80 |
| NA | 1-Secured by a first lien | 650000 | 75 |
| NA | 1-Secured by a first lien | 407500 | 80 |
| NA | 1-Secured by a first lien | 475000 | 75 |
| NA | 1-Secured by a first lien | 522500 | 80 |
| NA | 1-Secured by a first lien | 680000 | NA |
| NA | 1-Secured by a first lien | 250000 | 44 |
| NA | 1-Secured by a first lien | 186000 | NA |
| NA | 1-Secured by a first lien | 415000 | 95 |
| NA | 1-Secured by a first lien | 535000 | NA |
| NA | 1-Secured by a first lien | 975000 | 70 |
| NA | 1-Secured by a first lien | 2055000 | 46.22 |
| NA | 1-Secured by a first lien | 576900 | 40 |
| NA | 1-Secured by a first lien | 649000 | 75 |
| NA | 1-Secured by a first lien | 455000 | 54 |
| NA | 1-Secured by a first lien | 650000 | 80 |
| NA | 1-Secured by a first lien | 545000 | 80 |
| NA | 1-Secured by a first lien | 530000 | 90 |
| NA | 1-Secured by a first lien | 910000 | 80 |
| NA | 1-Secured by a first lien | 420000 | NA |
| NA | 1-Secured by a first lien | 158000 | 66 |
| NA | 1-Secured by a first lien | 510000 | 73 |
| NA | 1-Secured by a first lien | 265500 | 80 |
| NA | 1-Secured by a first lien | 680000 | NA |
| NA | 1-Secured by a first lien | 560000 | 85 |
| NA | 1-Secured by a first lien | 419900 | 90 |
| NA | 1-Secured by a first lien | 852500 | NA |
| NA | 1-Secured by a first lien | 430000 | 59 |
| NA | 1-Secured by a first lien | 820000 | 36 |
| NA | 1-Secured by a first lien | 2450000 | 80 |
| NA | 1-Secured by a first lien | 925000 | NA |
| NA | 1-Secured by a first lien | 510000 | 95 |
| NA | 1-Secured by a first lien | 400000 | 80 |
| NA | 1-Secured by a first lien | 375000 | 55 |
| NA | 1-Secured by a first lien | 540000 | 75 |
| NA | 1-Secured by a first lien | 517000 | 48.35 |
| NA | 1-Secured by a first lien | 685000 | NA |
| NA | 1-Secured by a first lien | 226000 | 89 |
| NA | 1-Secured by a first lien | 1425000 | 80 |
| NA | 1-Secured by a first lien | 769000 | 60 |
| NA | 1-Secured by a first lien | 1600000 | NA |
| NA | 1-Secured by a first lien | 155000 | NA |
| NA | 1-Secured by a first lien | 595000 | NA |


|  | 10-Not applicable |
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| 8378.00 | 1-Loan originated | 1 |
| :---: | :---: | :---: |
| 5806.00 | 1-Loan originated | 2 |
| 5206.00 | 1-Loan originated | 1 |
| 301.02 | 1-Loan originated | 1 |
| 2427.00 | 6-Purchased loan | 1 |
| 8326.00 | 1-Loan originated | 1 |
| 625.00 | 1-Loan originated | 1 |
| 3301.03 | 6-Purchased loan | 1 |
| 514.00 | 1-Loan originated | 1 |
| 2432.00 | 3-Application denied | 2 |
| 8311.00 | 1-Loan originated | 1 |
| 2827.00 | 3-Application denied | 1 |
| 1003.00 | 6-Purchased loan | 1 |
| 2827.00 | 1-Loan originated | 1 |
| 302.00 | 1-Loan originated | 1 |
| 712.00 | 1-Loan originated | 1 |
| 8316.00 | 1-Loan originated | 1 |
| 1609.00 | 6-Purchased loan | 1 |
| 715.00 | 1-Loan originated | 3 |
| 2213.00 | 1-Loan originated | 1 |
| 207.02 | 1-Loan originated | 1 |
| 6009.00 | 3-Application denied | 1 |
| 619.01 | 1-Loan originated | 1 |
| 3301.01 | 1-Loan originated | 1 |
| 707.00 | 1-Loan originated | 1 |
| 8404.00 | 1-Loan originated | 1 |
| 815.00 | 1-Loan originated | 1 |
| 2101.00 | 1-Loan originated | 1 |
| 8404.00 | 1-Loan originated | 1 |
| 8365.00 | 3-Application denied | 1 |
| 3301.03 | 3-Application denied | 1 |
| 7304.00 | 1-Loan originated | 1 |
| 7302.02 | 1-Loan originated | 1 |
| 5303.00 | 1-Loan originated | 1 |
| 4312.00 | 1-Loan originated | 1 |
| 7304.00 | 1-Loan originated | 1 |
| 4902.00 | 1-Loan originated | 2 |
| 2922.00 | 6-Purchased loan | 2 |
| 2519.00 | 1-Loan originated | 1 |
| 4902.00 | 6-Purchased loan | 1 |
| 8422.00 | 1-Loan originated | 1 |
| 5103.00 | 1-Loan originated | 1 |
| 6812.00 | 6-Purchased loan | 2 |
| 8344.00 | 6-Purchased loan | 1 |
| 8358.00 | 1-Loan originated | 1 |
| 8344.00 | 1-Loan originated | 1 |
| 4305.00 | 6-Purchased loan | 3 |
| 2606.00 | 1-Loan originated | 2 |
| 6913.00 | 1-Loan originated | 1 |
| 4401.02 | 1-Loan originated | 1 |
| 4110.00 | 6-Purchased loan | 1 |
| 5103.00 | 1-Loan originated | 1 |
| 3802.00 | 1-Loan originated | 1 |
| 8390.00 | 3-Application denied | 1 |
| 2105.02 | 3-Application denied | 1 |
| 2422.00 | 3-Application denied | 1 |
| 7706.02 | 3-Application denied | 1 |
| 812.02 | 3-Application denied | 1 |
| 8428.00 | 3-Application denied | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 2-Federal Housing Administration insured (FHA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 3-Veterans Affairs guaranteed (VA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |


| 2-Not an open-end line of credit | 738650 | 20220510 | 4.875 | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 94500 | 20211207 | 3.75 | 180 |
| 2-Not an open-end line of credit | 123250 | 20221025 | 7.625 | 360 |
| 2-Not an open-end line of credit | 185250 | 20220913 | 6.875 | 360 |
| 2-Not an open-end line of credit | 336000 | NA | 5.25 | 360 |
| 2-Not an open-end line of credit | 656000 | 20220201 | 5.49 | 360 |
| 2-Not an open-end line of credit | 602350 | 20211203 | 2.75 | 360 |
| 2-Not an open-end line of credit | 1000000 | NA | 3.75 | 360 |
| 2-Not an open-end line of credit | 323000 | 20220228 | 3.74 | 360 |
| 2-Not an open-end line of credit | 428000 | 20220930 | NA | 360 |
| 2-Not an open-end line of credit | 70000 | 20220318 | 3.99 | 120 |
| 2-Not an open-end line of credit | 266000 | 20220120 | NA | 180 |
| 2-Not an open-end line of credit | 346750 | NA | 3.75 | 360 |
| 2-Not an open-end line of credit | 191250 | 20220117 | 3.75 | 180 |
| 2-Not an open-end line of credit | 960000 | 20220307 | 3.75 | 360 |
| 2-Not an open-end line of credit | 425000 | 20220307 | 3.875 | 360 |
| 2-Not an open-end line of credit | 234000 | 20220203 | 3.25 | 240 |
| 2-Not an open-end line of credit | 424000 | NA | 2.99 | 360 |
| 2-Not an open-end line of credit | 568000 | 20220214 | 3.75 | 180 |
| 2-Not an open-end line of credit | 390900 | 20220609 | 5.375 | 360 |
| 2-Not an open-end line of credit | 298900 | 20211103 | 3.125 | 360 |
| 2-Not an open-end line of credit | 329500 | 20211106 | NA | 120 |
| 2-Not an open-end line of credit | 129861 | 20220107 | 4.125 | 360 |
| 2-Not an open-end line of credit | 216000 | 20220712 | 5.375 | 360 |
| 2-Not an open-end line of credit | 412500 | 20220307 | 4.25 | 360 |
| 2-Not an open-end line of credit | 203200 | 20220301 | 4.25 | 180 |
| 2-Not an open-end line of credit | 194400 | 20220524 | 4.375 | 180 |
| 2-Not an open-end line of credit | 816000 | 20220204 | 2.500 | 360 |
| 2-Not an open-end line of credit | 220000 | 20210730 | 2.875 | 360 |
| 2-Not an open-end line of credit | 225000 | 20220119 | NA | 360 |
| 2-Not an open-end line of credit | 240000 | 20220722 | NA | 360 |
| 2-Not an open-end line of credit | 176739 | 20220810 | 4.75 | 360 |
| 2-Not an open-end line of credit | 100500 | 20220603 | 6.625 | 360 |
| 2-Not an open-end line of credit | 203700 | 20221104 | 6.5 | 360 |
| 2-Not an open-end line of credit | 290999 | 20220307 | 4.375 | 360 |
| 2-Not an open-end line of credit | 298185 | 20220406 | 5 | 360 |
| 2-Not an open-end line of credit | 148500 | 20211212 | 2.625 | 180 |
| 2-Not an open-end line of credit | 255290 | NA | 5.75 | 360 |
| 2-Not an open-end line of credit | 179450 | 20220207 | 3.99 | 360 |
| 2-Not an open-end line of credit | 270750 | NA | 3.625 | 360 |
| 2-Not an open-end line of credit | 322050 | 20220303 | 3.125 | 180 |
| 2-Not an open-end line of credit | 85600 | 20220118 | 3.625 | 180 |
| 2-Not an open-end line of credit | 128000 | NA | 6.375 | 360 |
| 2-Not an open-end line of credit | 246525 | NA | 4.375 | 360 |
| 2-Not an open-end line of credit | 213750 | 20220421 | 5.75 | 360 |
| 2-Not an open-end line of credit | 202750 | 20220327 | 4.625 | 180 |
| 2-Not an open-end line of credit | 325600 | NA | 5.75 | 360 |
| 2-Not an open-end line of credit | 103550 | 20210412 | 2.875 | 180 |
| 2-Not an open-end line of credit | 314204 | 20220308 | 4.625 | 360 |
| 2-Not an open-end line of credit | 113995 | 20220718 | 4.99 | 360 |
| 2-Not an open-end line of credit | 229500 | NA | 3.75 | 360 |
| 2-Not an open-end line of credit | 60000 | 20211119 | 3.125 | 180 |
| 2-Not an open-end line of credit | 349600 | 20220412 | 5.375 | 360 |
| 2-Not an open-end line of credit | 295260 | 20220810 | NA | 360 |
| 2-Not an open-end line of credit | 209000 | 20220614 | NA | 360 |
| 2-Not an open-end line of credit | 1014000 | 20220114 | NA | 360 |
| 2-Not an open-end line of credit | 280000 | 20211116 | NA | 360 |
| 2-Not an open-end line of credit | 207750 | 20220120 | NA | 240 |
| 2-Not an open-end line of credit | 237211 | 20220709 | NA | 360 |


| NA | 1-Secured by a first lien | 869000 | 85 |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 318000 | 30 |
| NA | 1-Secured by a first lien | 145000 | 85 |
| NA | 1-Secured by a first lien | 195000 | 95 |
| NA | 1-Secured by a first lien | 420000 | NA |
| NA | 1-Secured by a first lien | 820000 | 80 |
| NA | 1-Secured by a first lien | 830000 | 72.57 |
| NA | 1-Secured by a first lien | 1250000 | NA |
| NA | 1-Secured by a first lien | 343000 | 95 |
| NA | 1-Secured by a first lien | 900000 | 48 |
| NA | 1-Secured by a first lien | 420000 | 17 |
| NA | 1-Secured by a first lien | 293000 | 91 |
| NA | 1-Secured by a first lien | 365000 | NA |
| NA | 1-Secured by a first lien | 255000 | 75 |
| NA | 1-Secured by a first lien | 1200000 | 80 |
| NA | 1-Secured by a first lien | 500000 | 85 |
| NA | 1-Secured by a first lien | 360000 | 65 |
| NA | 1-Secured by a first lien | 530000 | NA |
| NA | 1-Secured by a first lien | 1175000 | 48.34 |
| NA | 1-Secured by a first lien | 500000 | 79 |
| NA | 1-Secured by a first lien | 355000 | 85 |
| NA | 1-Secured by a first lien | 660000 | 50 |
| NA | 1-Secured by a first lien | 180000 | 73 |
| NA | 1-Secured by a first lien | 288000 | 75 |
| NA | 1-Secured by a first lien | 550000 | 75 |
| NA | 1-Secured by a first lien | 254000 | 80 |
| NA | 1-Secured by a first lien | 243000 | 80 |
| NA | 1-Secured by a first lien | 960000 | 85.000 |
| NA | 1-Secured by a first lien | 275000 | 80 |
| NA | 1-Secured by a first lien | 230000 | 98 |
| NA | 1-Secured by a first lien | 300000 | 80 |
| NA | 1-Secured by a first lien | 180000 | 96.5 |
| NA | 1-Secured by a first lien | 180000 | 56 |
| NA | 1-Secured by a first lien | 210000 | 97 |
| NA | 1-Secured by a first lien | 301000 | 97 |
| NA | 1-Secured by a first lien | 309000 | 96.5 |
| NA | 1-Secured by a first lien | 280000 | 54 |
| NA | 1-Secured by a first lien | 260000 | NA |
| NA | 1-Secured by a first lien | 185000 | 97 |
| NA | 1-Secured by a first lien | 285000 | NA |
| NA | 1-Secured by a first lien | 550000 | 59 |
| NA | 1-Secured by a first lien | 107000 | 80 |
| NA | 1-Secured by a first lien | 165000 | NA |
| NA | 1-Secured by a first lien | 259500 | NA |
| NA | 1-Secured by a first lien | 225000 | 95 |
| NA | 1-Secured by a first lien | 275000 | 74 |
| NA | 1-Secured by a first lien | 400000 | NA |
| NA | 1-Secured by a first lien | 204000 | 51 |
| NA | 1-Secured by a first lien | 320000 | 96.5 |
| NA | 1-Secured by a first lien | 119995 | 95 |
| NA | 1-Secured by a first lien | 255000 | NA |
| NA | 1-Secured by a first lien | 110000 | 55 |
| NA | 1-Secured by a first lien | 368000 | 95 |
| NA | 1-Secured by a first lien | 285000 | 100 |
| NA | 1-Secured by a first lien | 249000 | 84 |
| NA | 1-Secured by a first lien | 1650000 | 61.45 |
| NA | 1-Secured by a first lien | 775000 | 37 |
| NA | 1-Secured by a first lien | 262000 | 80 |
| NA | 1 -Secured by a first lien | 319000 | 75 |


|  | 10-Not applicable |
| :---: | :---: |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
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|  | 1-Debt-to-income ratio |
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|  | 4-Collateral |
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|  | 1-Debt-to-income ratio |
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|  | 4-Collateral |
|  | 9 -Other |
|  | 1-Debt-to-income ratio |
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| 6-Information not provided by applicant in mail, internet, or telephone application |  |
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| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 21-Asian Indian |  |
| 22-Chinese |  |
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|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 21-Asian Indian |
|  | 21-Asian Indian |
|  | 21-Asian Indian |
|  | 21-Asian Indian |
|  | 23-Filipino |
|  | 5-White |
|  | 5-White |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
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|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Asian |
|  | 26-Vietnamese |
|  | 8-No co-applicant |
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|  | 2-Not Hispanic or Latino |
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|  | 1-Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 11-Mexican |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 1-Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 1-Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
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|  | 2-Not Hispanic or Latino |
|  | 14-Other Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
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| 2-Not Hispanic or Latino |  |
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|  | 1-Hispanic or Latino |
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| 2-Not Hispanic or Latino |  |
| 2-Not Hispanic or Latino |  |
| 2-Not Hispanic or Latino |  |
| 2-Not Hispanic or Latino |  |
| 2-Not Hispanic or Latino |  |
| 2-Not Hispanic or Latino |  |
| 11-Mexican |  |
| 2-Not Hispanic or Latino |  |
| 3-Information not provided by applicant in mail, internet, or telephone application |  |
| 1-Hispanic or Latino |  |
| 3-Information not provided by applicant in mail, internet, or telephone application |  |
| 3-Information not provided by applicant in mail, internet, or telephone application |  |
| 3-Information not provided by applicant in mail, internet, or telephone application |  |
| 1-Hispanic or Latino |  |
| 3-Information not provided by applicant in mail, internet, or telephone application |  |
| 2-Not Hispanic or Latino |  |
| 1-Hispanic or Latino |  |
| 2-Not Hispanic or Latino |  |
| 2-Not Hispanic or Latino |  |
| 5-No co-applicant |  |
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| 715.00 | 3-Application denied | 1 |
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| 8390.00 | 3-Application denied | 1 |
| 2205.00 | 3-Application denied | 1 |
| 629.00 | 3-Application denied | 1 |
| 8325.00 | 3-Application denied | 1 |
| 8330.00 | 3-Application denied | 1 |
| 8400.00 | 3-Application denied | 1 |
| 208.02 | 1-Loan originated | 1 |
| 1007.00 | 1-Loan originated | 1 |
| 6504.00 | 6-Purchased loan | 1 |
| 2922.00 | 6-Purchased loan | 2 |
| 8437.00 | 1-Loan originated | 1 |
| 7003.02 | 1-Loan originated | 1 |
| 633.02 | 1-Loan originated | 1 |
| 104.00 | 6-Purchased loan | 1 |
| 207.02 | 6-Purchased loan | 1 |
| 408.00 | 6-Purchased loan | 1 |
| 804.00 | 6-Purchased loan | 1 |
| 8430.00 | 6-Purchased loan | 1 |
| 2203.00 | 1-Loan originated | 1 |
| 2226.00 | 6-Purchased loan | 1 |
| 1603.00 | 1-Loan originated | 1 |
| 6201.00 | 1-Loan originated | 1 |
| 402.02 | 1-Loan originated | 1 |
| 6503.01 | 1-Loan originated | 1 |
| 634.00 | 1-Loan originated | 1 |
| 2304.00 | 1-Loan originated | 2 |
| 817.00 | 1-Loan originated | 1 |
| 2212.00 | 1-Loan originated | 1 |
| 814.03 | 1-Loan originated | 1 |
| 1002.00 | 1-Loan originated | 1 |
| 2414.00 | 6-Purchased loan | 1 |
| 3301.02 | 1-Loan originated | 1 |
| 3301.02 | 1-Loan originated | 1 |
| 1606.02 | 6-Purchased loan | 1 |
| 705.00 | 1-Loan originated | 1 |
| 6405.00 | 1-Loan originated | 1 |
| 501.00 | 1-Loan originated | 1 |
| 1605.01 | 1-Loan originated | 1 |
| 6401.00 | 1-Loan originated | 1 |
| 2819.00 | 6-Purchased loan | 1 |
| 6611.00 | 1-Loan originated | 1 |
| 2435.00 | 1-Loan originated | 1 |
| 6501.00 | 1-Loan originated | 1 |
| 1607.00 | 1-Loan originated | 1 |
| 703.00 | 1-Loan originated | 1 |
| 2101.00 | 1-Loan originated | 1 |
| 6502.00 | 1-Loan originated | 1 |
| 8428.00 | 1-Loan originated | 1 |
| 2432.00 | 1-Loan originated | 1 |
| 8325.00 | 1-Loan originated | 1 |
| 8319.00 | 1-Loan originated | 2 |
| 308.00 | 1-Loan originated | 1 |
| 1204.00 | 1-Loan originated | 1 |
| 1604.00 | 1-Loan originated | 1 |
| 313.00 | 6-Purchased loan | 1 |
| 2435.00 | 1-Loan originated | 1 |
| 201.00 | 1-Loan originated | 1 |
| 315.01 | 1-Loan originated | 1 |


| VA, RHS, or FSA) | 32-Cash Out |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purcha |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improven |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purch |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | ut |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | ut |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | me Purch |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32 |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchas |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |


| 2-Not an open-end line of credit | 103470 | 20220902 | NA | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2 -Not an open-end line of credit | 222494 | 20211010 | NA | 240 |
| $2-$ Not an open-end line of credit | 367008 | 20211223 | NA | 360 |
| $2-$ Not an open-end line of credit | 398000 | 20211229 | NA | 360 |
| 2 -Not an open-end line of credit | 180000 | 20220307 | NA | 360 |
| $2-$ Not an open-end line of credit | 325000 | 20220518 | NA | 360 |
| 2-Not an open-end line of credit | 600000 | 20220908 | NA | 360 |
| $2-$ Not an open-end line of credit | 142000 | 20211208 | 3.625 | 360 |
| $2-$ Not an open-end line of credit | 205000 | 20220124 | 3.875 | 360 |
| $2-$ Not an open-end line of credit | 243750 | NA | 3.875 | 360 |
| $2-$ Not an open-end line of credit | 233250 | NA | 4 | 360 |
| $2-$ Not an open-end line of credit | 212800 | 20220103 | 2.625 | 180 |
| 2 -Not an open-end line of credit | 105148 | 20220603 | 5.625 | 360 |
| $2-$ Not an open-end line of credit | 168400 | 20210801 | 2.375 | 180 |
| 2-Not an open-end line of credit | 248000 | NA | 3.65 | 360 |
| 2-Not an open-end line of credit | 331200 | NA | 7.625 | 360 |
| 2-Not an open-end line of credit | 1162500 | NA | 2.75 | 360 |
| 2-Not an open-end line of credit | 375000 | NA | 3 | 360 |
| 2-Not an open-end line of credit | 235710 | NA | 6.375 | 360 |
| 2-Not an open-end line of credit | 310000 | 20211217 | 3.125 | 360 |
| 2-Not an open-end line of credit | 246000 | NA | 4.375 | 240 |
| 2-Not an open-end line of credit | 100063 | 20220323 | 5.5 | 360 |
| 2-Not an open-end line of credit | 150000 | 20220520 | 5.5 | 180 |
| 2-Not an open-end line of credit | 232500 | 20210723 | 3.125 | 360 |
| 2-Not an open-end line of credit | 153000 | 20220312 | 3.49 | 180 |
| 2-Not an open-end line of credit | 527000 | 20220113 | 2.625 | 360 |
| 2-Not an open-end line of credit | 224500 | 20211011 | 3.49 | 360 |
| 2-Not an open-end line of credit | 570000 | 20210323 | 4.5 | 360 |
| 2-Not an open-end line of credit | 416000 | 20220412 | 5 | 360 |
| 2-Not an open-end line of credit | 1220000 | 20211119 | 3 | 360 |
| 2-Not an open-end line of credit | 230000 | 20220114 | 3.49 | 360 |
| 2-Not an open-end line of credit | 678857.88 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 248000 | 20220214 | 3.49 | 180 |
| 2-Not an open-end line of credit | 356250 | 20220420 | 5.25 | 360 |
| 2-Not an open-end line of credit | 340000 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 604000 | 20220202 | 2.5 | 180 |
| 2-Not an open-end line of credit | 151200 | 20220419 | 5.5 | 360 |
| 2-Not an open-end line of credit | 1786000 | 20220221 | 3.25 | 360 |
| 2-Not an open-end line of credit | 210900 | 20220718 | 5.25 | 360 |
| 2-Not an open-end line of credit | 251100 | 20220305 | 3.875 | 360 |
| 2-Not an open-end line of credit | 142200 | NA | 7 | 360 |
| 2-Not an open-end line of credit | 225150 | 20220425 | 5.5 | 360 |
| 2-Not an open-end line of credit | 337500 | 20220312 | 4.25 | 360 |
| 2-Not an open-end line of credit | 194000 | 20211218 | 3.25 | 180 |
| 2-Not an open-end line of credit | 245999 | 20220817 | 5.375 | 360 |
| 2-Not an open-end line of credit | 400800 | 20220126 | 4.75 | 360 |
| 2-Not an open-end line of credit | 325000 | 20220316 | 5.125 | 360 |
| 2-Not an open-end line of credit | 240992 | 20220618 | 5.75 | 360 |
| 2-Not an open-end line of credit | 647200 | 20220111 | 2.125 | 180 |
| 2-Not an open-end line of credit | 304500 | 20220318 | 4.375 | 360 |
| 2-Not an open-end line of credit | 387125 | 20220628 | 6.125 | 360 |
| 2-Not an open-end line of credit | 612000 | 20220930 | 6.5 | 360 |
| 2-Not an open-end line of credit | 300000 | 20220822 | 4.875 | 360 |
| 2-Not an open-end line of credit | 392000 | 20220503 | 4.5 | 360 |
| 2-Not an open-end line of credit | 246619 | 20211109 | 3.125 | 360 |
| 2-Not an open-end line of credit | 108000 | NA | 4.99 | 360 |
| 2-Not an open-end line of credit | 555750 | 20220310 | 4.25 | 360 |
| 2-Not an open-end line of credit | 307000 | 20211201 | 3.5 | 360 |
| 2-Not an open-end line of credit | 164800 | 20211216 | 2.375 | 180 |


| NA | 1-Secured by a first lien | 250000 | 42 |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 272000 | 82 |
| NA | 1-Secured by a first lien | 430000 | 86 |
| NA | 1-Secured by a first lien | 430000 | 93 |
| NA | 1-Secured by a first lien | 360000 | 75 |
| NA | 1-Secured by a first lien | 500000 | 65 |
| NA | 1-Secured by a first lien | 950000 | 64 |
| NA | 1-Secured by a first lien | 149900 | 95 |
| NA | 1-Secured by a first lien | 465000 | 45 |
| NA | 1-Secured by a first lien | 345000 | NA |
| NA | 1-Secured by a first lien | 311000 | NA |
| NA | 1-Secured by a first lien | 266000 | 80 |
| NA | 1-Secured by a first lien | 108400 | 97 |
| NA | 1-Secured by a first lien | 240000 | 71 |
| NA | 1-Secured by a first lien | 310000 | NA |
| NA | 1-Secured by a first lien | 414000 | NA |
| NA | 1-Secured by a first lien | 1550000 | NA |
| NA | 1-Secured by a first lien | 499999 | NA |
| NA | 1-Secured by a first lien | 243000 | NA |
| NA | 1-Secured by a first lien | 415000 | 75 |
| NA | 1-Secured by a first lien | 410000 | NA |
| NA | 1-Secured by a first lien | 135000 | 75 |
| NA | 1-Secured by a first lien | 310000 | 49 |
| NA | 1-Secured by a first lien | 310000 | 75 |
| NA | 1-Secured by a first lien | 280000 | 55 |
| NA | 1-Secured by a first lien | 1093000 | 49 |
| NA | 1-Secured by a first lien | 430000 | 53 |
| NA | 1-Secured by a first lien | 600000 | 95 |
| NA | 1-Secured by a first lien | 520000 | 80 |
| NA | 1-Secured by a first lien | 1525000 | 80 |
| NA | 1-Secured by a first lien | 390000 | 59 |
| NA | 1-Secured by a first lien | 850000 | NA |
| NA | 1-Secured by a first lien | 310000 | 80 |
| NA | 1-Secured by a first lien | 375000 | 95 |
| NA | 1-Secured by a first lien | 490000 | NA |
| NA | 1-Secured by a first lien | 1200000 | 51 |
| NA | 1-Secured by a first lien | 189000 | 80 |
| NA | 1-Secured by a first lien | 2232500 | 80 |
| NA | 1-Secured by a first lien | 222000 | 95 |
| NA | 1-Secured by a first lien | 279000 | 90 |
| NA | 1-Secured by a first lien | 237000 | NA |
| NA | 1-Secured by a first lien | 237000 | 95 |
| NA | 1-Secured by a first lien | 375000 | 90 |
| NA | 1-Secured by a first lien | 243000 | 80 |
| NA | 1-Secured by a first lien | 426000 | 58 |
| NA | 1-Secured by a first lien | 501000 | 80 |
| NA | 1-Secured by a first lien | 475000 | 69 |
| NA | 1-Secured by a first lien | 300000 | 78.95 |
| NA | 1-Secured by a first lien | 1135000 | 58 |
| NA | 1-Secured by a first lien | 350000 | 87 |
| NA | 1-Secured by a first lien | 407500 | 95 |
| NA | 1-Secured by a first lien | 720000 | 85 |
| NA | 1-Secured by a first lien | 400000 | 75 |
| NA | 1-Secured by a first lien | 490000 | 80 |
| NA | 1-Secured by a first lien | 535000 | 53 |
| NA | 1-Secured by a first lien | 135000 | NA |
| NA | 1-Secured by a first lien | 585000 | 95 |
| NA | 1-Secured by a first lien | 421000 | 73 |
| NA | 1-Secured by a first lien | 206000 | 80 |


|  | 1-Debt-to-income ratio |
| :---: | :---: |
|  | 4-Collateral |
|  | 4-Collateral |
|  | 4-Collateral |
|  | 5-Insufficient cash (downpayment, closing costs) |
|  | 9-Other |
|  | 9-Other |
|  | 10-Not applicable |
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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
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|  | 1-Hispanic or Latino |
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| :---: | :---: |
| 14-Other Hispanic or Latino | - |
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| 11-Mexican | - |
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| 11-Mexican | - |
| 11-Mexican | - |
| 13-Cuban | - |
| 13-Cuban | - |
| 14-Other Hispanic or Latino | - |
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| 5-No co-applicant |
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| 619.01 | 1-Loan originated | 1 |
| :---: | :---: | :---: |
| 601.00 | 1-Loan originated | 1 |
| 2431.00 | 1-Loan originated | 1 |
| 8308.00 | 1-Loan originated | 1 |
| 7708.00 | 1-Loan originated | 1 |
| 2424.00 | 1-Loan originated | 1 |
| 7002.00 | 1-Loan originated | 1 |
| 1401.00 | 6-Purchased loan | 2 |
| 623.00 | 1-Loan originated | 1 |
| 8428.00 | 6-Purchased loan | 1 |
| 8326.00 | 1-Loan originated | 1 |
| 6121.00 | 1-Loan originated | 1 |
| 8311.00 | 1-Loan originated | 1 |
| 1407.01 | 1-Loan originated | 1 |
| 5607.00 | 1-Loan originated | 1 |
| 701.01 | 6-Purchased loan | 1 |
| 1202.00 | 1-Loan originated | 1 |
| 701.02 | 1-Loan originated | 1 |
| 505.00 | 1-Loan originated | 2 |
| 203.01 | 6-Purchased loan | 1 |
| 8423.00 | 6-Purchased loan | 1 |
| 1502.00 | 1-Loan originated | 1 |
| 2425.00 | 1-Loan originated | 1 |
| 3201.01 | 1-Loan originated | 1 |
| 8321.00 | 1-Loan originated | 1 |
| 6708.00 | 1-Loan originated | 1 |
| 6408.00 | 1-Loan originated | 1 |
| 5202.00 | 1-Loan originated | 3 |
| 8410.00 | 1-Loan originated | 1 |
| 1606.02 | 1-Loan originated | 1 |
| 6308.00 | 1-Loan originated | 1 |
| 4106.00 | 1-Loan originated | 1 |
| 8326.00 | 1-Loan originated | 1 |
| 8435.00 | 6-Purchased loan | 1 |
| 6501.00 | 1-Loan originated | 1 |
| 8325.00 | 1-Loan originated | 1 |
| 818.00 | 1-Loan originated | 1 |
| 8423.00 | 1-Loan originated | 1 |
| 2414.00 | 1-Loan originated | 3 |
| 3104.00 | 6-Purchased loan | 1 |
| 314.00 | 6-Purchased loan | 1 |
| 1005.00 | 6-Purchased loan | 1 |
| 1511.00 | 1-Loan originated | 1 |
| 704.00 | 6-Purchased loan | 1 |
| 513.00 | 1-Loan originated | 1 |
| 609.00 | 1-Loan originated | 1 |
| 2429.00 | 1-Loan originated | 1 |
| 818.00 | 3-Application denied | 1 |
| 3201.01 | 3-Application denied | 1 |
| 5204.00 | 6-Purchased loan | 1 |
| 6408.00 | 1-Loan originated | 1 |
| 818.00 | 1-Loan originated | 1 |
| 704.00 | 1-Loan originated | 1 |
| 8307.00 | 6-Purchased loan | 1 |
| 3301.01 | 1-Loan originated | 1 |
| 2416.00 | 6-Purchased loan | 4 |
| 619.02 | 6-Purchased loan | 1 |
| 8430.00 | 6-Purchased loan | 1 |
| 8410.00 | 1-Loan originated | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |


| 2-Not an open-end line of credit | 206400 | 20221021 | 7.375 | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 163120 | 20220113 | 3.25 | 360 |
| 2-Not an open-end line of credit | 680000 | 20220307 | 2.25 | 360 |
| 2-Not an open-end line of credit | 189966 | 20211222 | 3 | 360 |
| 2-Not an open-end line of credit | 137000 | 20220627 | 5 | 360 |
| 2-Not an open-end line of credit | 242250 | 20220516 | 5.125 | 360 |
| 2-Not an open-end line of credit | 133000 | 20220714 | 5.875 | 360 |
| 2-Not an open-end line of credit | 547386.45 | NA | 4.75 | 360 |
| 2-Not an open-end line of credit | 992000 | 20211210 | 2.625 | 360 |
| 2-Not an open-end line of credit | 272250 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 1300000 | 20220308 | 3.375 | 360 |
| 2-Not an open-end line of credit | 147250 | 20220719 | 4.875 | 360 |
| 2-Not an open-end line of credit | 285000 | 20220628 | 5.125 | 360 |
| 2-Not an open-end line of credit | 242250 | 20220324 | 4.375 | 360 |
| 2-Not an open-end line of credit | 73600 | 20220302 | 5.125 | 360 |
| 2-Not an open-end line of credit | 142500 | NA | 6.875 | 360 |
| 2-Not an open-end line of credit | 463000 | 20220118 | 3.49 | 240 |
| 2-Not an open-end line of credit | 178600 | 20211229 | 2.625 | 120 |
| 2-Not an open-end line of credit | 731250 | 20220620 | 5.49 | 360 |
| 2-Not an open-end line of credit | 138400 | NA | 6 | 360 |
| 2-Not an open-end line of credit | 506800 | NA | 4.49 | 240 |
| 2-Not an open-end line of credit | 360000 | 20220216 | 4.625 | 360 |
| 2-Not an open-end line of credit | 297000 | 20220725 | 5.5 | 360 |
| 2-Not an open-end line of credit | 700000 | 20220919 | 4.875 | 360 |
| 2-Not an open-end line of credit | 280500 | 20220223 | 3.875 | 360 |
| 2-Not an open-end line of credit | 170000 | 20221004 | 6.375 | 360 |
| 2-Not an open-end line of credit | 179000 | 20220118 | 4.125 | 360 |
| 2-Not an open-end line of credit | 170940 | 20211117 | 2.75 | 360 |
| 2-Not an open-end line of credit | 280250 | 20220504 | 4.875 | 360 |
| 2-Not an open-end line of credit | 62300 | 20211209 | 3.49 | 360 |
| 2-Not an open-end line of credit | 42500 | 20220127 | 3.625 | 120 |
| 2-Not an open-end line of credit | 168850 | 20220422 | 4.75 | 180 |
| 2-Not an open-end line of credit | 1140000 | 20220228 | 3.625 | 360 |
| 2-Not an open-end line of credit | 245000 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 210000 | 20220111 | 3.5 | 360 |
| 2-Not an open-end line of credit | 1688000 | 20220401 | 4 | 360 |
| 2-Not an open-end line of credit | 262000 | 20220330 | 4.75 | 360 |
| 2-Not an open-end line of credit | 270000 | 20211130 | 3.625 | 360 |
| 2-Not an open-end line of credit | 847500 | 20220308 | 4.625 | 360 |
| 2-Not an open-end line of credit | 379350 | NA | 3.625 | 360 |
| 2-Not an open-end line of credit | 148000 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 199800 | NA | 4.124 | 360 |
| 2-Not an open-end line of credit | 316000 | 20220809 | 4.875 | 240 |
| 2-Not an open-end line of credit | 749056.39 | NA | 4.75 | 360 |
| 2-Not an open-end line of credit | 281250 | 20220124 | 2.5 | 120 |
| 2-Not an open-end line of credit | 198000 | 20220319 | 5.5 | 360 |
| 2-Not an open-end line of credit | 824000 | 20220330 | 4.25 | 360 |
| 2-Not an open-end line of credit | 189000 | 20220607 | NA | 360 |
| 2-Not an open-end line of credit | 1800000 | 20220217 | NA | 360 |
| 2-Not an open-end line of credit | 107000 | NA | 3.125 | 180 |
| 2-Not an open-end line of credit | 294500 | 20220901 | 5.75 | 360 |
| 2-Not an open-end line of credit | 279000 | 20220510 | 4.875 | 360 |
| 2-Not an open-end line of credit | 308000 | 20211022 | 2.875 | 360 |
| 2-Not an open-end line of credit | 195000 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 363750 | 20220422 | 5.25 | 360 |
| 2-Not an open-end line of credit | 1056000 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 305000 | NA | 4.75 | 360 |
| 2-Not an open-end line of credit | 631140 | NA | 3.95 | 360 |
| 2-Not an open-end line of credit | 89600 | 20211217 | 3.49 | 360 |


| NA | 1-Secured by a first lien | 258000 | 80 |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 320000 | 51 |
| NA | 1-Secured by a first lien | 850000 | 80 |
| NA | 1-Secured by a first lien | 275000 | 70 |
| NA | 1-Secured by a first lien | 321000 | 43 |
| NA | 1-Secured by a first lien | 255000 | 95 |
| NA | 1-Secured by a first lien | 139200 | 96 |
| NA | 1-Secured by a first lien | 570000 | NA |
| NA | 1-Secured by a first lien | 1240000 | 80 |
| NA | 1-Secured by a first lien | 363000 | NA |
| NA | 1-Secured by a first lien | 1625000 | 80 |
| NA | 1-Secured by a first lien | 152650 | 97 |
| NA | 1-Secured by a first lien | 300000 | 95 |
| NA | 1-Secured by a first lien | 255000 | 95 |
| NA | 1-Secured by a first lien | 92000 | 80 |
| NA | 1-Secured by a first lien | 150000 | NA |
| NA | 1-Secured by a first lien | 700000 | 67 |
| NA | 1-Secured by a first lien | 538000 | 34 |
| NA | 1-Secured by a first lien | 975000 | 75 |
| NA | 1-Secured by a first lien | 173000 | NA |
| NA | 1-Secured by a first lien | 633500 | NA |
| NA | 1-Secured by a first lien | 381000 | 95 |
| NA | 1-Secured by a first lien | 495000 | 60 |
| NA | 1-Secured by a first lien | 1125000 | 63 |
| NA | 1-Secured by a first lien | 330000 | 85 |
| NA | 1-Secured by a first lien | 219900 | 78 |
| NA | 1-Secured by a first lien | 275000 | 66 |
| NA | 1-Secured by a first lien | 175000 | 96 |
| NA | 1-Secured by a first lien | 295000 | 95 |
| NA | 1-Secured by a first lien | 475200 | 14 |
| NA | 1-Secured by a first lien | 228000 | 19 |
| NA | 1-Secured by a first lien | 615000 | 28 |
| NA | 1-Secured by a first lien | 1425000 | 80 |
| NA | 1-Secured by a first lien | 265000 | NA |
| NA | 1-Secured by a first lien | 300000 | 70 |
| NA | 1-Secured by a first lien | 2110000 | 80 |
| NA | 1-Secured by a first lien | 300000 | 88 |
| NA | 1-Secured by a first lien | 590000 | 46 |
| NA | 1-Secured by a first lien | 1130000 | 75 |
| NA | 1-Secured by a first lien | 421500 | NA |
| NA | 1-Secured by a first lien | 185000 | NA |
| NA | 1-Secured by a first lien | 222000 | NA |
| NA | 1-Secured by a first lien | 395000 | 80 |
| NA | 1-Secured by a first lien | 2680000 | NA |
| NA | 1-Secured by a first lien | 850000 | 34 |
| NA | 1-Secured by a first lien | 264000 | 75 |
| NA | 1-Secured by a first lien | 1030000 | 80 |
| NA | 1-Secured by a first lien | 270000 | 70 |
| NA | 1-Secured by a first lien | 2100000 | 85.71 |
| NA | 1-Secured by a first lien | 155000 | NA |
| NA | 1-Secured by a first lien | 310000 | 95 |
| NA | 1-Secured by a first lien | 310000 | 90 |
| NA | 1-Secured by a first lien | 540000 | 57.037 |
| NA | 1-Secured by a first lien | 345000 | NA |
| NA | 1-Secured by a first lien | 485000 | 75 |
| NA | 1-Secured by a first lien | 1320000 | NA |
| NA | 1-Secured by a first lien | 610000 | NA |
| NA | 1-Secured by a first lien | 788925 | NA |
| NA | 1-Secured by a first lien | 132000 | 68 |


|  | 10-Not applicable |
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|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 2-Employment history |
|  | 9-Other |
|  | 10-Not applicable |
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|  | 10-Not applicable |
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|  | 6-Information not provided by applicant in mail, internet, or telephone application |
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| 2-Not Hispanic or Latino |
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| 2-Not Hispanic or Latino |
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| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 11-Mexican |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
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| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 11-Mexican |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
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| 2-Not Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 1-Hispanic or Latino |
| 1-Hispanic or Latino |
| 11-Mexican |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 14-Other Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |




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| 1711.00 | 1-Loan originated | 1 |
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| 3103.00 | 6-Purchased loan | 4 |
| 810.00 | 1-Loan originated | 1 |
| 3204.00 | 1-Loan originated | 1 |
| 5501.00 | 6-Purchased loan | 1 |
| 2435.00 | 6-Purchased loan | 1 |
| 6203.00 | 1-Loan originated | 1 |
| 8432.00 | 1-Loan originated | 1 |
| 314.00 | 1-Loan originated | 1 |
| 207.02 | 1-Loan originated | 3 |
| 3201.01 | 3-Application denied | 1 |
| 407.00 | 1-Loan originated | 2 |
| 2214.00 | 6-Purchased loan | 1 |
| 604.00 | 6-Purchased loan | 1 |
| 6607.00 | 1-Loan originated | 1 |
| 404.01 | 1-Loan originated | 1 |
| 601.00 | 6-Purchased loan | 1 |
| 8331.00 | 1-Loan originated | 1 |
| 1504.01 | 1-Loan originated | 1 |
| 2422.00 | 1-Loan originated | 1 |
| 2109.00 | 6-Purchased loan | 1 |
| 815.00 | 6-Purchased loan | 1 |
| 5305.03 | 1-Loan originated | 1 |
| 8378.00 | 6-Purchased loan | 3 |
| 5103.00 | 1-Loan originated | 1 |
| 814.03 | 1-Loan originated | 1 |
| 8315.00 | 1-Loan originated | 2 |
| 8425.00 | 1-Loan originated | 1 |
| 605.00 | 6-Purchased loan | 1 |
| 208.01 | 6-Purchased loan | 1 |
| 2422.00 | 1-Loan originated | 1 |
| 308.00 | 1-Loan originated | 1 |
| 1006.00 | 1-Loan originated | 1 |
| 8435.00 | 6-Purchased loan | 1 |
| 3301.03 | 1-Loan originated | 1 |
| 3301.02 | 6-Purchased loan | 1 |
| 7306.00 | 1-Loan originated | 1 |
| 8398.00 | 1-Loan originated | 1 |
| 707.00 | 1-Loan originated | 1 |
| 2421.00 | 1-Loan originated | 1 |
| 718.00 | 6-Purchased loan | 1 |
| 8330.00 | 1-Loan originated | 1 |
| 622.00 | 1-Loan originated | 1 |
| 209.01 | 1-Loan originated | 1 |
| 2216.00 | 1-Loan originated | 1 |
| 8428.00 | 1-Loan originated | 1 |
| 1703.00 | 1-Loan originated | 1 |
| 8326.00 | 1-Loan originated | 1 |
| 1001.00 | 1-Loan originated | 1 |
| 8321.00 | 1-Loan originated | 1 |
| 1005.00 | 1-Loan originated | 1 |
| 812.02 | 1-Loan originated | 1 |
| 2423.00 | 1-Loan originated | 1 |
| 8424.00 | 1-Loan originated | 1 |
| 621.00 | 1-Loan originated | 2 |
| 632.00 | 1-Loan originated | 1 |
| 1103.00 | 1-Loan originated | 1 |
| 8400.00 | 1-Loan originated | 1 |
| 7202.00 | 1-Loan originated | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
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| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 2-Federal Housing Administration insured (FHA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |


| 2-Not an open-end line of credit | 339934 | 20211211 | 2.875 | 360 |
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| 2-Not an open-end line of credit | 510000 | NA | 7.6 | 360 |
| 2-Not an open-end line of credit | 460750 | 20220217 | 4 | 360 |
| 2-Not an open-end line of credit | 1480000 | 20220324 | 3.250 | 360 |
| 2-Not an open-end line of credit | 300000 | NA | 4.875 | 180 |
| 2-Not an open-end line of credit | 552425 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 199999 | 20220222 | 4.25 | 360 |
| 2-Not an open-end line of credit | 294769 | 20220505 | 5.125 | 360 |
| 2-Not an open-end line of credit | 326250 | 20220303 | 3.875 | 360 |
| 2-Not an open-end line of credit | 430653 | 20211102 | 3.5 | 360 |
| 2-Not an open-end line of credit | 783984 | 20220224 | NA | 360 |
| 2-Not an open-end line of credit | 672000 | 20211028 | 3.25 | 360 |
| 2-Not an open-end line of credit | 394250 | NA | 5.75 | 360 |
| 2-Not an open-end line of credit | 433925 | NA | 3.75 | 360 |
| 2-Not an open-end line of credit | 114950 | 20220502 | 5.25 | 360 |
| 2-Not an open-end line of credit | 584910 | 20221116 | 6.625 | 360 |
| 2-Not an open-end line of credit | 225000 | NA | 4.375 | 360 |
| 2-Not an open-end line of credit | 412000 | 20220804 | 5.365 | 240 |
| 2-Not an open-end line of credit | 200000 | 20220709 | 6.75 | 360 |
| 2-Not an open-end line of credit | 558125 | 20220503 | 5.125 | 360 |
| 2-Not an open-end line of credit | 640000 | NA | 3.625 | 360 |
| 2-Not an open-end line of credit | 145600 | NA | 5.875 | 360 |
| 2-Not an open-end line of credit | 41578 | 20221101 | 7.99 | 360 |
| 2-Not an open-end line of credit | 512000 | NA | 7 | 360 |
| 2-Not an open-end line of credit | 70000 | 20220301 | 3.75 | 180 |
| 2-Not an open-end line of credit | 225000 | 20211212 | 3.75 | 300 |
| 2-Not an open-end line of credit | 323000 | 20220718 | 4.875 | 360 |
| 2-Not an open-end line of credit | 397700 | 20211202 | 3.375 | 360 |
| 2-Not an open-end line of credit | 472633.96 | NA | 2.625 | 360 |
| 2-Not an open-end line of credit | 396000 | NA | 3.925 | 360 |
| 2-Not an open-end line of credit | 688400 | 20220919 | 5.75 | 360 |
| 2-Not an open-end line of credit | 1000000 | 20220410 | 4.5 | 360 |
| 2-Not an open-end line of credit | 253000 | 20211217 | 2.125 | 180 |
| 2-Not an open-end line of credit | 532000 | NA | 4.375 | 360 |
| 2-Not an open-end line of credit | 964750 | 20220502 | 4.625 | 360 |
| 2-Not an open-end line of credit | 460750 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 239590 | 20221010 | 6.99 | 360 |
| 2-Not an open-end line of credit | 450000 | 20220830 | 6.375 | 360 |
| 2-Not an open-end line of credit | 413100 | 20220302 | 4.25 | 360 |
| 2-Not an open-end line of credit | 342250 | 20211110 | 3.125 | 360 |
| 2-Not an open-end line of credit | 1278389.58 | NA | 4.75 | 360 |
| 2-Not an open-end line of credit | 812500 | 20220525 | 3.75 | 360 |
| 2-Not an open-end line of credit | 320000 | 20220801 | 4.865 | 360 |
| 2-Not an open-end line of credit | 95000 | 20220329 | 6.625 | 360 |
| 2-Not an open-end line of credit | 1586544 | 20220322 | 3.625 | 360 |
| 2-Not an open-end line of credit | 385000 | 20220105 | 2.625 | 180 |
| 2-Not an open-end line of credit | 138700 | 20211215 | 2.625 | 180 |
| 2-Not an open-end line of credit | 750000 | 20220628 | 4.000 | 360 |
| 2-Not an open-end line of credit | 321500 | 20221004 | 6.625 | 360 |
| 2-Not an open-end line of credit | 310000 | 20220307 | 3.875 | 360 |
| 2-Not an open-end line of credit | 339403 | 20220725 | 5.125 | 360 |
| 2-Not an open-end line of credit | 843000 | 20220912 | 4.875 | 360 |
| 2-Not an open-end line of credit | 704000 | 20220223 | 4.75 | 360 |
| 2-Not an open-end line of credit | 118500 | 20220304 | 3.5 | 180 |
| 2-Not an open-end line of credit | 242000 | 20211210 | 3.625 | 360 |
| 2-Not an open-end line of credit | 178599 | 20220421 | 5.99 | 360 |
| 2-Not an open-end line of credit | 600000 | 20220624 | 4.75 | 180 |
| 2-Not an open-end line of credit | 300000 | 20220812 | 5.99 | 360 |
| 2-Not an open-end line of credit | 769250 | 20220527 | 5.375 | 360 |


| NA | 1-Secured by a first lien | 424917 | 80 |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 680000 | NA |
| NA | 1-Secured by a first lien | 485000 | 95 |
| NA | 1-Secured by a first lien | 1850000 | 80.000 |
| NA | 1-Secured by a first lien | 375000 | NA |
| NA | 1-Secured by a first lien | 581500 | NA |
| NA | 1-Secured by a first lien | 305000 | 66 |
| NA | 1-Secured by a first lien | 350000 | 82.77 |
| NA | 1-Secured by a first lien | 362500 | 90 |
| NA | 1-Secured by a first lien | 645000 | 66.76 |
| NA | 1-Secured by a first lien | 979981 | 79.99 |
| NA | 1-Secured by a first lien | 840000 | 80 |
| NA | 1-Secured by a first lien | 415000 | NA |
| NA | 1-Secured by a first lien | 510500 | NA |
| NA | 1-Secured by a first lien | 121000 | 95 |
| NA | 1-Secured by a first lien | 649900 | 90 |
| NA | 1-Secured by a first lien | 400000 | NA |
| NA | 1-Secured by a first lien | 515000 | 80 |
| NA | 1-Secured by a first lien | 395000 | 51 |
| NA | 1-Secured by a first lien | 587500 | 95 |
| NA | 1-Secured by a first lien | 812500 | NA |
| NA | 1-Secured by a first lien | 182000 | NA |
| NA | 1-Secured by a first lien | 140000 | 30 |
| NA | 1-Secured by a first lien | 640000 | NA |
| NA | 1-Secured by a first lien | 110000 | 64 |
| NA | 1-Secured by a first lien | 300000 | 75 |
| NA | 1-Secured by a first lien | 380000 | 85 |
| NA | 1-Secured by a first lien | 410000 | 97 |
| NA | 1-Secured by a first lien | 805000 | NA |
| NA | 1-Secured by a first lien | 440000 | NA |
| NA | 1-Secured by a first lien | 765000 | 89.98 |
| NA | 1-Secured by a first lien | 1250000 | 80 |
| NA | 1-Secured by a first lien | 350000 | 73 |
| NA | 1-Secured by a first lien | 560000 | NA |
| NA | 1-Secured by a first lien | 1135000 | 85 |
| NA | 1-Secured by a first lien | 485000 | NA |
| NA | 1-Secured by a first lien | 247000 | 97 |
| NA | 1-Secured by a first lien | 619000 | 73 |
| NA | 1-Secured by a first lien | 459000 | 90 |
| NA | 1-Secured by a first lien | 605000 | 57 |
| NA | 1-Secured by a first lien | 1600000 | NA |
| NA | 1-Secured by a first lien | 1250000 | 65 |
| NA | 1-Secured by a first lien | 640000 | 50 |
| NA | 1-Secured by a first lien | 100000 | 95 |
| NA | 1-Secured by a first lien | 1866523 | 85.000 |
| NA | 1-Secured by a first lien | 567000 | 68 |
| NA | 1-Secured by a first lien | 247700 | 56 |
| NA | 1-Secured by a first lien | 2400000 | 31.250 |
| NA | 1-Secured by a first lien | 339000 | 95 |
| NA | 1-Secured by a first lien | 550000 | 57 |
| NA | 1-Secured by a first lien | 349900 | 97 |
| NA | 1-Secured by a first lien | 2300000 | 36.652 |
| NA | 1-Secured by a first lien | 880000 | 80 |
| NA | 1-Secured by a first lien | 325000 | 37 |
| NA | 1-Secured by a first lien | 590000 | 42 |
| NA | 1-Secured by a first lien | 188000 | 95 |
| NA | 1-Secured by a first lien | 750000 | 80 |
| NA | 1-Secured by a first lien | 320000 | 94 |
| NA | 1 -Secured by a first lien | 905000 | 85 |


|  | 10-Not applicable |
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|  | $5-\mathrm{Insufficient} \mathrm{cash} \mathrm{(downpayment} ,\mathrm{closing} \mathrm{costs)}$ |
|  | 10-Not applicable |
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| 6-Information not provided by applicant in mail, internet, or telephone application |
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| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 21-Asian Indian |
| 21-Asian Indian |
| 1-American Indian or Alaska Native |
| 2-Asian |
| 3-Black or African American |
| 3-Black or African American |
| 3-Black or African American |
| 2-Asian |
| 2-Asian |
| 2-Asian |
| 2-Asian |
| 2-Asian |
| 2-Asian |
| 2-Asian |
| 3-Black or African American |
| 3-Black or African American |
| 3-Black or African American |
| 5-White |
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| 8-No co-applicant |
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| 8-No co-applicant |
| 5-White |
| 3-Black or African American |
| 8-No co-applicant |
| 8-No co-applicant |
| 5-White |
| 8-No co-applicant |
| 8-No co-applicant |
| 8-No co-applicant |
| 2-Asian |
| 8-No co-applicant |
| 8-No co-applicant |
| 3-Black or African American |
| 3-Black or African American |
| 3-Black or African American |
| 2-Asian |
| 5-White |
| 5-White |
| 5-White |
| 5-White |
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| 6-Information not provided by applicant in mail, internet, or telephone application |
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| 6-Information not provided by applicant in mail, internet, or telephone application |




| 1-Male |  |
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| 5-No co-applicant 5-No co-applicant |  |  |
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| 1-Male |  |  |
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| 5-No co-applicant5-No co-applicant |  |  |
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| 5-No co-applicant1-Male |  |  |
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|  | 12-Puerto Rican |
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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
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|  | 1-Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 12-Puerto Rican |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 11-Mexican |
|  | 1-Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |




| 5-No co-applicant |
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| 2-Not Hispanic or Latino |
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| 12-Puerto Rican |
| 2-Not Hispanic or Latino |
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| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
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| 1-Hispanic or Latino |
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| 12-Puerto Rican |
| 2-Not Hispanic or Latino |


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| 207.02 | 6-Purchased loan | 1 |
| :---: | :---: | :---: |
| 2305.00 | 3-Application denied | 1 |
| 1504.02 | 1-Loan originated | 1 |
| 3301.01 | 1-Loan originated | 1 |
| 3302.00 | 1-Loan originated | 1 |
| 718.00 | 1-Loan originated | 1 |
| 2228.00 | 6-Purchased loan | 1 |
| 206.02 | 3-Application denied | 2 |
| 1801.00 | 1-Loan originated | 1 |
| 801.00 | 6-Purchased loan | 1 |
| 8397.00 | 1-Loan originated | 1 |
| 5301.00 | 1-Loan originated | 2 |
| 6806.00 | 6-Purchased loan | 2 |
| 6309.00 | 1-Loan originated | 1 |
| 303.00 | 1-Loan originated | 1 |
| 5204.00 | 6-Purchased loan | 1 |
| 1401.00 | 1-Loan originated | 1 |
| 1003.00 | 1-Loan originated | 1 |
| 8390.00 | 1-Loan originated | 1 |
| 819.00 | 1-Loan originated | 1 |
| 632.00 | 1-Loan originated | 1 |
| 4701.00 | 3-Application denied | 1 |
| 801.00 | 3-Application denied | 1 |
| 4910.00 | 3-Application denied | 1 |
| 4313.02 | 3-Application denied | 1 |
| 8439.00 | 6-Purchased loan | 1 |
| 5203.00 | 6-Purchased loan | 1 |
| 6103.00 | 1-Loan originated | 1 |
| 8347.00 | 6-Purchased loan | 4 |
| 4605.00 | 6-Purchased loan | 1 |
| 8436.00 | 1-Loan originated | 1 |
| 4804.00 | 1-Loan originated | 1 |
| 4909.02 | 1-Loan originated | 1 |
| 8321.00 | 6-Purchased loan | 1 |
| 3902.00 | 1-Loan originated | 1 |
| 2503.00 | 1-Loan originated | 1 |
| 8344.00 | 1-Loan originated | 1 |
| 5303.00 | 1-Loan originated | 1 |
| 4314.00 | 1-Loan originated | 3 |
| 5305.03 | 1-Loan originated | 1 |
| 3901.00 | 1-Loan originated | 1 |
| 5203.00 | 1-Loan originated | 1 |
| 3104.00 | 1-Loan originated | 4 |
| 3510.00 | 1-Loan originated | 1 |
| 4409.00 | 6-Purchased loan | 2 |
| 7112.00 | 1-Loan originated | 2 |
| 4802.00 | 1-Loan originated | 1 |
| 3907.00 | 1-Loan originated | 1 |
| 3901.00 | 6-Purchased loan | 1 |
| 3814.00 | 6-Purchased loan | 1 |
| 1301.00 | 3-Application denied | 1 |
| 2426.00 | 3-Application denied | 3 |
| 1708.00 | 3-Application denied | 1 |
| 3005.00 | 3-Application denied | 1 |
| 715.00 | 3-Application denied | 1 |
| 1006.00 | 6-Purchased loan | 1 |
| 2925.00 | 6-Purchased loan | 1 |
| 301.04 | 1-Loan originated | 1 |
| 8413.00 | 6-Purchased loan | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |


| 2-Not an open-end line of credit | 126255 | NA | 6.125 | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 445230 | 20220201 | NA | 360 |
| 2-Not an open-end line of credit | 268650 | 20211014 | 2.49 | 180 |
| 2-Not an open-end line of credit | 287500 | 20220312 | 3.25 | 180 |
| 2-Not an open-end line of credit | 785000 | 20211213 | 2.75 | 360 |
| 2-Not an open-end line of credit | 656250 | 20220524 | 4.25 | 360 |
| 2-Not an open-end line of credit | 332000 | NA | 2.375 | 180 |
| 2-Not an open-end line of credit | 498400 | 20220715 | NA | 360 |
| 2-Not an open-end line of credit | 332000 | 20220129 | 3.5 | 360 |
| 2-Not an open-end line of credit | 146250 | NA | 5 | 360 |
| 2-Not an open-end line of credit | 520000 | 20220309 | 3.625 | 360 |
| 2-Not an open-end line of credit | 279812 | 20211112 | 3.75 | 360 |
| 2-Not an open-end line of credit | 77900 | NA | 5.625 | 360 |
| 2-Not an open-end line of credit | 104500 | 20211221 | 3.375 | 360 |
| 2-Not an open-end line of credit | 384000 | 20220216 | 3.99 | 360 |
| 2-Not an open-end line of credit | 199500 | NA | 7.125 | 360 |
| 2-Not an open-end line of credit | 464800 | 20221102 | 6.99 | 360 |
| 2-Not an open-end line of credit | 188500 | 20211216 | 2.75 | 180 |
| 2-Not an open-end line of credit | 264000 | 20220302 | 4 | 360 |
| 2-Not an open-end line of credit | 409500 | 20220228 | 3.99 | 360 |
| 2-Not an open-end line of credit | 135000 | 20220422 | 4.75 | 360 |
| 2-Not an open-end line of credit | 137868 | 20211210 | NA | 360 |
| 2-Not an open-end line of credit | 183658 | 20220509 | NA | 360 |
| 2-Not an open-end line of credit | 62700 | 20211206 | NA | 360 |
| 2-Not an open-end line of credit | 71000 | 20220517 | NA | 360 |
| 2-Not an open-end line of credit | 310165 | NA | 3.75 | 360 |
| 2-Not an open-end line of credit | 197600 | NA | 5.125 | 360 |
| 2-Not an open-end line of credit | 223000 | 20220518 | 5.99 | 360 |
| 2-Not an open-end line of credit | 389044 | NA | 5.875 | 360 |
| 2-Not an open-end line of credit | 251200 | NA | 4.875 | 360 |
| 2-Not an open-end line of credit | 279500 | 20220124 | 4 | 360 |
| 2-Not an open-end line of credit | 200000 | 20220915 | 7.125 | 360 |
| 2-Not an open-end line of credit | 78700 | 20220104 | 3.99 | 360 |
| 2-Not an open-end line of credit | 387000 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 229200 | 20220127 | 3.99 | 360 |
| 2-Not an open-end line of credit | 386141 | 20210923 | 2.625 | 360 |
| 2-Not an open-end line of credit | 194000 | 20211202 | 3.49 | 360 |
| 2-Not an open-end line of credit | 106516 | 20221111 | 5.125 | 360 |
| 2-Not an open-end line of credit | 272944 | 20211021 | 3.125 | 360 |
| 2-Not an open-end line of credit | 101250 | 20220607 | 6.625 | 360 |
| 2-Not an open-end line of credit | 125000 | 20220822 | 5.625 | 360 |
| 2-Not an open-end line of credit | 127187 | 20211123 | 3.25 | 360 |
| 2-Not an open-end line of credit | 275000 | 20220404 | 3.99 | 180 |
| 2-Not an open-end line of credit | 100000 | 20220526 | 5 | 360 |
| 2-Not an open-end line of credit | 292600 | NA | 4.625 | 360 |
| 2-Not an open-end line of credit | 204000 | 20220723 | 6.625 | 360 |
| 2-Not an open-end line of credit | 87300 | 20220511 | 4.99 | 360 |
| 2-Not an open-end line of credit | 208800 | 20221018 | 7.125 | 360 |
| 2-Not an open-end line of credit | 393500 | NA | 2.625 | 180 |
| 2-Not an open-end line of credit | 116250 | NA | 5.125 | 360 |
| 2-Not an open-end line of credit | 333653 | 20220124 | NA | 180 |
| 2-Not an open-end line of credit | 446000 | 20220308 | NA | 360 |
| 2-Not an open-end line of credit | 229600 | 20221109 | NA | 360 |
| 2-Not an open-end line of credit | 83600 | 20221103 | NA | 180 |
| 2-Not an open-end line of credit | 260625 | 20220207 | NA | 360 |
| 2-Not an open-end line of credit | 257580 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 157410 | NA | 5.5 | 360 |
| 2-Not an open-end line of credit | 124000 | 20220324 | 3.875 | 180 |
| 2-Not an open-end line of credit | 191250 | NA | 3.5 | 360 |


| NA | 1-Secured by a first lien | 132900 | NA |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 455000 | 98 |
| NA | 1-Secured by a first lien | 500000 | 54 |
| NA | 1-Secured by a first lien | 432500 | 67 |
| NA | 1-Secured by a first lien | 1193000 | 65.8 |
| NA | 1-Secured by a first lien | 875000 | 75 |
| NA | 1-Secured by a first lien | 415000 | NA |
| NA | 1-Secured by a first lien | 623000 | 80 |
| NA | 1-Secured by a first lien | 415000 | 80 |
| NA | 1-Secured by a first lien | 195000 | NA |
| NA | 1-Secured by a first lien | 650000 | 80 |
| NA | 1-Secured by a first lien | 285000 | 96.49 |
| NA | 1-Secured by a first lien | 82000 | NA |
| NA | 1-Secured by a first lien | 110000 | 95 |
| NA | 1-Secured by a first lien | 480000 | 80 |
| NA | 1-Secured by a first lien | 210000 | NA |
| NA | 1-Secured by a first lien | 560000 | 83 |
| NA | 1-Secured by a first lien | 375000 | 51 |
| NA | 1-Secured by a first lien | 330000 | 80 |
| NA | 1-Secured by a first lien | 455000 | 90 |
| NA | 1-Secured by a first lien | 205000 | 66 |
| NA | 1-Secured by a first lien | 160000 | 87 |
| NA | 1-Secured by a first lien | 190000 | 95 |
| NA | 1-Secured by a first lien | 83600 | 75 |
| NA | 1-Secured by a first lien | 74999 | 95 |
| NA | 1-Secured by a first lien | 364900 | NA |
| NA | 1-Secured by a first lien | 208000 | NA |
| NA | 1-Secured by a first lien | 230000 | 97 |
| NA | 1-Secured by a first lien | 396221 | NA |
| NA | 1-Secured by a first lien | 314000 | NA |
| NA | 1-Secured by a first lien | 378000 | 74 |
| NA | 1-Secured by a first lien | 270000 | 75 |
| NA | 1-Secured by a first lien | 192000 | 41 |
| NA | 1-Secured by a first lien | 430000 | NA |
| NA | 1-Secured by a first lien | 258000 | 95 |
| NA | 1-Secured by a first lien | 399500 | 94.99 |
| NA | 1-Secured by a first lien | 200000 | 97 |
| NA | 1-Secured by a first lien | 109000 | 96.04 |
| NA | 1-Secured by a first lien | 360000 | 74.51 |
| NA | 1-Secured by a first lien | 135000 | 75 |
| NA | 1-Secured by a first lien | 225000 | 56 |
| NA | 1-Secured by a first lien | 130000 | 96.15 |
| NA | 1-Secured by a first lien | 613000 | 45 |
| NA | 1-Secured by a first lien | 111300 | 90 |
| NA | 1-Secured by a first lien | 308000 | NA |
| NA | 1-Secured by a first lien | 240000 | 85 |
| NA | 1-Secured by a first lien | 90000 | 97 |
| NA | 1-Secured by a first lien | 232000 | 90 |
| NA | 1-Secured by a first lien | 620000 | NA |
| NA | 1-Secured by a first lien | 155000 | NA |
| NA | 1-Secured by a first lien | 700000 | 47.66 |
| NA | 1-Secured by a first lien | 680000 | 66 |
| NA | 1-Secured by a first lien | 287000 | 80 |
| NA | 1-Secured by a first lien | 88000 | 95 |
| NA | 1-Secured by a first lien | 347500 | 75 |
| NA | 1-Secured by a first lien | 318000 | NA |
| NA | 1-Secured by a first lien | 174900 | NA |
| NA | 1-Secured by a first lien | 155000 | 80 |
| NA | 1-Secured by a first lien | 225000 | NA |


|  | 10-Not applicable |
| :---: | :---: |
|  | 4-Collateral |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 4-Collateral |
|  | 10-Not applicable |
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|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 9-Other |
|  | 4-Collateral |
|  | 3-Credit history |
|  | 4-Collateral |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
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|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 4-Collateral |
|  | 1-Debt-to-income ratio |
|  | 4-Collateral |
|  | 4-Collateral |
|  | 4-Collateral |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |



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| 5-White |  |
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|  | 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 21-Asian Indian |  |
| 22-Chinese |  |
| 23-Filipino |  |
| 2-Asian |  |
| 3-Black or African American |  |
| 5-White |  |
| 5-White |  |
| 5-White |  |
| 5-White |  |
| 2-Asian |  |
| 2-Asian |  |
| 2-Asian |  |
| 2-Asian |  |
| 2-Asian |  |
| 3-Black or African American |  |
| 3-Black or African American |  |
| 3-Black or African American |  |
| 3-Black or African American |  |
| 3-Black or African American |  |
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|  | 23-Filipino |
| :---: | :---: |
|  | 5-White |
|  | 5-White |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 21-Asian Indian |
|  | 5-White |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 5-White |
|  | 3-Black or African American |
|  | 5-White |
|  | 5-White |
|  | 5-White |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 8-No co-applicant |
|  | 8-No co-applicant |
|  | 8-No co-applicant |
|  | 8-No co-applicant |
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|  | 8-No co-applicant |
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|  | 8-No co-applicant |





|  | 1-Male |
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|  | 1-Male |
|  | 1-Male |
|  | 1-Male |
|  | 1-Male |
|  | 1-Male |
|  | 1-Male |
|  | 1-Male |
|  | 2-Female |
|  | 2-Female |
|  | 2-Female |
|  | 2-Female |
|  | 2-Female |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 5-No co-applicant |
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|  | 2-Not Hispanic or Latino |
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|  | 11-Mexican |
|  | 2-Not Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
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|  | 2-Not Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 5-No co-applicant |
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| 2801.00 | 1-Loan originated | 1 |
| :---: | :---: | :---: |
| 317.00 | 1-Loan originated | 1 |
| 307.03 | 1-Loan originated | 1 |
| 2801.00 | 1-Loan originated | 1 |
| 2421.00 | 1-Loan originated | 1 |
| 716.00 | 1-Loan originated | 1 |
| 106.00 | 1-Loan originated | 1 |
| 306.04 | 1-Loan originated | 1 |
| 5609.00 | 1-Loan originated | 1 |
| 2426.00 | 1-Loan originated | 1 |
| 313.00 | 1-Loan originated | 1 |
| 8315.00 | 1-Loan originated | 1 |
| 202.00 | 1-Loan originated | 1 |
| 4106.00 | 1-Loan originated | 1 |
| 715.00 | 6-Purchased loan | 1 |
| 6406.00 | 1-Loan originated | 1 |
| 5003.00 | 1-Loan originated | 1 |
| 2206.02 | 6 -Purchased loan | 1 |
| 5610.00 | 1-Loan originated | 1 |
| 6007.00 | 6-Purchased loan | 1 |
| 3301.01 | 1-Loan originated | 1 |
| 1007.00 | 6-Purchased loan | 1 |
| 107.02 | 1-Loan originated | 1 |
| 2422.00 | 1-Loan originated | 1 |
| 4302.00 | 6-Purchased loan | 1 |
| 8309.00 | 6-Purchased loan | 1 |
| 102.01 | 1-Loan originated | 1 |
| 2227.00 | 1-Loan originated | 1 |
| 5611.00 | 1-Loan originated | 1 |
| 308.00 | 1-Loan originated | 1 |
| 209.01 | 1-Loan originated | 1 |
| 802.01 | 1-Loan originated | 1 |
| 812.01 | 1-Loan originated | 1 |
| 818.00 | 1-Loan originated | 1 |
| 313.00 | 1-Loan originated | 1 |
| 2801.00 | 1-Loan originated | 1 |
| 802.02 | 1-Loan originated | 1 |
| 621.00 | 6-Purchased loan | 1 |
| 5202.00 | 1-Loan originated | 1 |
| 818.00 | 1-Loan originated | 1 |
| 8421.00 | 6-Purchased loan | 1 |
| 5608.00 | 1-Loan originated | 1 |
| 5604.00 | 1-Loan originated | 1 |
| 2421.00 | 6-Purchased loan | 1 |
| 1908.00 | 1-Loan originated | 1 |
| 707.00 | 1-Loan originated | 1 |
| 714.00 | 1-Loan originated | 1 |
| 1407.01 | 6 -Purchased loan | 1 |
| 1512.00 | 1-Loan originated | 1 |
| 2227.00 | 6-Purchased loan | 1 |
| 803.00 | 6-Purchased loan | 1 |
| 8331.00 | 6-Purchased loan | 1 |
| 305.00 | 6-Purchased loan | 1 |
| 629.00 | 1-Loan originated | 1 |
| 313.00 | 1-Loan originated | 1 |
| 2413.00 | 1-Loan originated | 1 |
| 2435.00 | 6-Purchased loan | 1 |
| 6308.00 | 1-Loan originated | 2 |
| 6502.00 | 1-Loan originated | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |


| 2-Not an open-end line of credit | 268000 | 20220107 | 3.5 | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 244500 | 20211119 | 2.49 | 180 |
| 2-Not an open-end line of credit | 144200 | 20220104 | 3.49 | 360 |
| 2-Not an open-end line of credit | 178000 | 20220315 | 3.75 | 360 |
| 2-Not an open-end line of credit | 344250 | 20220119 | 5 | 360 |
| 2-Not an open-end line of credit | 477000 | 20220128 | 4.125 | 360 |
| 2-Not an open-end line of credit | 135000 | 20220117 | 3.875 | 360 |
| 2-Not an open-end line of credit | 164000 | 20220803 | 4.99 | 360 |
| 2-Not an open-end line of credit | 274500 | 20220610 | 5.99 | 360 |
| 2-Not an open-end line of credit | 451250 | 20220130 | 3.625 | 360 |
| 2-Not an open-end line of credit | 118600 | 20211227 | 2.99 | 360 |
| 2-Not an open-end line of credit | 183000 | 20220203 | 3.75 | 360 |
| 2-Not an open-end line of credit | 170000 | 20211123 | 2.25 | 180 |
| 2-Not an open-end line of credit | 473000 | 20211108 | 2.99 | 360 |
| 2-Not an open-end line of credit | 408750 | NA | 4.75 | 360 |
| 2-Not an open-end line of credit | 250200 | 20220405 | 5.5 | 360 |
| 2-Not an open-end line of credit | 138000 | 20220106 | 3.875 | 360 |
| 2-Not an open-end line of credit | 212000 | NA | 3.625 | 360 |
| 2-Not an open-end line of credit | 298726 | 20220301 | 3.75 | 360 |
| 2-Not an open-end line of credit | 209679.49 | NA | 3.675 | 360 |
| 2-Not an open-end line of credit | 600000 | 20220824 | 4.625 | 180 |
| 2-Not an open-end line of credit | 370500 | NA | 3.975 | 360 |
| 2-Not an open-end line of credit | 277200 | 20220726 | 5.49 | 360 |
| 2-Not an open-end line of credit | 498600 | 20220523 | 5.125 | 360 |
| 2-Not an open-end line of credit | 219804 | NA | 6.575 | 360 |
| 2-Not an open-end line of credit | 353109.94 | NA | 5.75 | 360 |
| 2-Not an open-end line of credit | 300640 | 20220420 | 4.99 | 360 |
| 2-Not an open-end line of credit | 646000 | 20211222 | 2.875 | 360 |
| 2-Not an open-end line of credit | 217000 | 20220526 | 4.125 | 360 |
| 2-Not an open-end line of credit | 1060000 | 20220613 | 5.5 | 360 |
| 2-Not an open-end line of credit | 226950 | 20220224 | 4.125 | 360 |
| 2-Not an open-end line of credit | 211000 | 20211217 | 2.75 | 180 |
| 2-Not an open-end line of credit | 256500 | 20220217 | 3.75 | 360 |
| 2-Not an open-end line of credit | 297500 | 20220119 | 2.75 | 180 |
| 2-Not an open-end line of credit | 100300 | 20221003 | 8.125 | 360 |
| 2-Not an open-end line of credit | 275000 | 20220411 | 4.25 | 360 |
| 2-Not an open-end line of credit | 221000 | 20220503 | 4.375 | 360 |
| 2-Not an open-end line of credit | 328000 | NA | 3.75 | 360 |
| 2-Not an open-end line of credit | 98901 | 20211201 | 2.75 | 360 |
| 2-Not an open-end line of credit | 285000 | 20220201 | 4 | 360 |
| 2-Not an open-end line of credit | 380400.39 | NA | 3.5 | 360 |
| 2-Not an open-end line of credit | 312000 | 20220412 | 5.25 | 360 |
| 2-Not an open-end line of credit | 144632 | 20211209 | 3.25 | 360 |
| 2-Not an open-end line of credit | 437997.09 | NA | 3 | 360 |
| 2-Not an open-end line of credit | 276251 | 20221014 | 6.75 | 360 |
| 2-Not an open-end line of credit | 312000 | 20220316 | 4.25 | 360 |
| 2-Not an open-end line of credit | 166875 | 20220914 | 6 | 360 |
| 2-Not an open-end line of credit | 171000 | NA | 3.7 | 360 |
| 2-Not an open-end line of credit | 200000 | 20220830 | 5.625 | 360 |
| 2-Not an open-end line of credit | 382700 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 209000 | NA | 4.25 | 360 |
| 2-Not an open-end line of credit | 206522 | NA | 2.625 | 180 |
| 2-Not an open-end line of credit | 180500 | NA | 4.875 | 360 |
| 2-Not an open-end line of credit | 337250 | 20220112 | 3.5 | 360 |
| 2-Not an open-end line of credit | 90000 | 20220120 | 3.75 | 360 |
| 2-Not an open-end line of credit | 520000 | 20220504 | 5.875 | 360 |
| 2-Not an open-end line of credit | 495000 | NA | 2.75 | 360 |
| 2-Not an open-end line of credit | 170000 | 20220705 | 5.75 | 360 |
| 2-Not an open-end line of credit | 135000 | 20220112 | 3.25 | 180 |


| NA | 1-Secured by a first lien | 335000 | 80 |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 410000 | 62 |
| NA | 1-Secured by a first lien | 342926 | 43 |
| NA | 1-Secured by a first lien | 425000 | 42 |
| NA | 1-Secured by a first lien | 459000 | 75 |
| NA | 1-Secured by a first lien | 636000 | 75 |
| NA | 1-Secured by a first lien | 210000 | 65 |
| NA | 1-Secured by a first lien | 232000 | 71 |
| NA | 1-Secured by a first lien | 334500 | 83 |
| NA | 1-Secured by a first lien | 475000 | 95 |
| NA | 1-Secured by a first lien | 220000 | 54 |
| NA | 1-Secured by a first lien | 322000 | 57 |
| NA | 1-Secured by a first lien | 450000 | 43 |
| NA | 1-Secured by a first lien | 700000 | 68 |
| NA | 1-Secured by a first lien | 545000 | NA |
| NA | 1-Secured by a first lien | 278000 | 90 |
| NA | 1-Secured by a first lien | 172500 | 80 |
| NA | 1-Secured by a first lien | 265000 | NA |
| NA | 1-Secured by a first lien | 314450 | 95 |
| NA | 1-Secured by a first lien | 280000 | NA |
| NA | 1-Secured by a first lien | 1000000 | 60 |
| NA | 1-Secured by a first lien | 390000 | NA |
| NA | 1-Secured by a first lien | 346500 | 80 |
| NA | 1-Secured by a first lien | 554000 | 90 |
| NA | 1-Secured by a first lien | 525000 | NA |
| NA | 1-Secured by a first lien | 360000 | NA |
| NA | 1-Secured by a first lien | 375800 | 80 |
| NA | 1-Secured by a first lien | 760000 | 85 |
| NA | 1-Secured by a first lien | 310000 | 70 |
| NA | 1-Secured by a first lien | 1325000 | 80 |
| NA | 1-Secured by a first lien | 260000 | 88 |
| NA | 1-Secured by a first lien | 390000 | 55 |
| NA | 1-Secured by a first lien | 270000 | 95 |
| NA | 1-Secured by a first lien | 845000 | 36 |
| NA | 1-Secured by a first lien | 118000 | 85 |
| NA | 1-Secured by a first lien | 500000 | 55 |
| NA | 1-Secured by a first lien | 260000 | 85 |
| NA | 1-Secured by a first lien | 410000 | NA |
| NA | 1-Secured by a first lien | 108000 | 90 |
| NA | 1-Secured by a first lien | 300000 | 95 |
| NA | 1-Secured by a first lien | 500000 | NA |
| NA | 1-Secured by a first lien | 390000 | 80 |
| NA | 1-Secured by a first lien | 200000 | 73 |
| NA | 1-Secured by a first lien | 585000 | NA |
| NA | 1-Secured by a first lien | 350000 | 77.57 |
| NA | 1-Secured by a first lien | 390000 | 80 |
| NA | 1-Secured by a first lien | 222500 | 75 |
| NA | 1-Secured by a first lien | 180000 | NA |
| NA | 1-Secured by a first lien | 385000 | 52 |
| NA | 1-Secured by a first lien | 650000 | NA |
| NA | 1-Secured by a first lien | 220000 | NA |
| NA | 1-Secured by a first lien | 317000 | NA |
| NA | 1-Secured by a first lien | 190000 | NA |
| NA | 1-Secured by a first lien | 355000 | 95 |
| NA | 1-Secured by a first lien | 100000 | 90 |
| NA | 1-Secured by a first lien | 650000 | 80 |
| NA | 1-Secured by a first lien | 675000 | NA |
| NA | 1-Secured by a first lien | 290000 | 59 |
| NA | 1 -Secured by a first lien | 220000 | 62 |


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| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
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| 1612.00 | 1-Loan originated | 2 |
| :---: | :---: | :---: |
| 703.00 | 6-Purchased loan | 1 |
| 5204.00 | 1-Loan originated | 2 |
| 202.00 | 1-Loan originated | 1 |
| 5801.00 | 1-Loan originated | 1 |
| 404.02 | 6-Purchased loan | 1 |
| 2435.00 | 1-Loan originated | 1 |
| 801.00 | 1-Loan originated | 1 |
| 818.00 | 1-Loan originated | 1 |
| 308.00 | 1-Loan originated | 1 |
| 811.00 | 1-Loan originated | 1 |
| 1403.02 | 6-Purchased loan | 1 |
| 703.00 | 1-Loan originated | 1 |
| 2423.00 | 1-Loan originated | 1 |
| 8422.00 | 1-Loan originated | 1 |
| 301.02 | 1-Loan originated | 1 |
| 715.00 | 6-Purchased loan | 1 |
| 2838.00 | 1-Loan originated | 1 |
| 105.01 | 1-Loan originated | 1 |
| 626.00 | 1-Loan originated | 1 |
| 3302.00 | 1-Loan originated | 1 |
| 1505.02 | 6-Purchased loan | 1 |
| 2406.00 | 1-Loan originated | 1 |
| 817.00 | 1-Loan originated | 1 |
| 7608.01 | 6-Purchased loan | 1 |
| 2206.01 | 1-Loan originated | 2 |
| 6407.00 | 6-Purchased loan | 1 |
| 707.00 | 6-Purchased loan | 1 |
| 1005.00 | 1-Loan originated | 1 |
| 812.01 | 1-Loan originated | 1 |
| 1103.00 | 1-Loan originated | 1 |
| 1105.02 | 1-Loan originated | 1 |
| 8381.00 | 1-Loan originated | 1 |
| 1203.00 | 6-Purchased loan | 1 |
| 505.00 | 6-Purchased loan | 1 |
| 902.00 | 1-Loan originated | 1 |
| 622.00 | 6-Purchased loan | 2 |
| 1408.00 | 1-Loan originated | 1 |
| 3201.01 | 1-Loan originated | 1 |
| 628.00 | 6-Purchased loan | 1 |
| 1503.00 | 6-Purchased loan | 1 |
| 2513.00 | 6-Purchased loan | 2 |
| 7404.00 | 6-Purchased loan | 1 |
| 813.00 | 1-Loan originated | 1 |
| 3901.00 | 6-Purchased loan | 1 |
| 402.01 | 1-Loan originated | 1 |
| 3301.02 | 6-Purchased loan | 1 |
| 8432.00 | 1-Loan originated | 1 |
| 102.01 | 6-Purchased loan | 1 |
| 2409.00 | 1-Loan originated | 1 |
| 318.00 | 6-Purchased loan | 1 |
| 8423.00 | 1-Loan originated | 1 |
| 621.00 | 1-Loan originated | 1 |
| 5303.00 | 6-Purchased loan | 1 |
| 8322.00 | 6-Purchased loan | 2 |
| 2301.00 | 6-Purchased loan | 2 |
| 8309.00 | 6-Purchased loan | 1 |
| 622.00 | 6-Purchased loan | 1 |
| 629.00 | 6-Purchased loan | 1 |


| Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
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| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinanc |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |


| 2-Not an open-end line of credit | 346500 | 20220722 | 6.625 | 360 |
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| 2-Not an open-end line of credit | 195000 | NA | 5.6 | 360 |
| 2-Not an open-end line of credit | 274926 | 20220508 | 5.25 | 360 |
| 2-Not an open-end line of credit | 233000 | 20220520 | 5.5 | 360 |
| 2-Not an open-end line of credit | 115000 | 20220728 | 4.125 | 360 |
| 2-Not an open-end line of credit | 180225 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 712000 | 20211130 | 2.875 | 360 |
| 2-Not an open-end line of credit | 110000 | 20220115 | 3.75 | 360 |
| 2-Not an open-end line of credit | 258500 | 20220127 | 3.625 | 360 |
| 2-Not an open-end line of credit | 255000 | 20220921 | 6.99 | 360 |
| 2-Not an open-end line of credit | 310400 | 20220106 | 3.25 | 360 |
| 2-Not an open-end line of credit | 305000 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 866400 | 20220424 | 4.75 | 360 |
| 2-Not an open-end line of credit | 422000 | 20211228 | 2.875 | 240 |
| 2-Not an open-end line of credit | 380000 | 20220125 | 3.75 | 360 |
| 2-Not an open-end line of credit | 110500 | 20220716 | 5.625 | 360 |
| 2-Not an open-end line of credit | 468000 | NA | 3.975 | 360 |
| 2-Not an open-end line of credit | 256500 | 20220310 | 4.25 | 360 |
| 2-Not an open-end line of credit | 177000 | 20220224 | 4.625 | 360 |
| 2-Not an open-end line of credit | 338000 | 20220303 | 3.875 | 360 |
| 2-Not an open-end line of credit | 862500 | 20211105 | 3 | 180 |
| 2-Not an open-end line of credit | 285000 | NA | 3.75 | 360 |
| 2-Not an open-end line of credit | 253600 | 20211220 | 2.875 | 360 |
| 2-Not an open-end line of credit | 477000 | 20220126 | 3.375 | 360 |
| 2-Not an open-end line of credit | 190800 | NA | 2.75 | 180 |
| 2-Not an open-end line of credit | 547800 | 20220811 | 5.375 | 360 |
| 2-Not an open-end line of credit | 193903 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 915000 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 164000 | 20220120 | 3.75 | 360 |
| 2-Not an open-end line of credit | 200000 | 20220308 | 4.125 | 360 |
| 2-Not an open-end line of credit | 190127 | 20220117 | 2.75 | 180 |
| 2-Not an open-end line of credit | 135000 | 20210928 | 4.49 | 360 |
| 2-Not an open-end line of credit | 305000 | 20220114 | 3.5 | 360 |
| 2-Not an open-end line of credit | 508250 | NA | 3.375 | 360 |
| 2-Not an open-end line of credit | 1759200 | NA | 5 | 360 |
| 2-Not an open-end line of credit | 270200 | 20220705 | 4.875 | 180 |
| 2-Not an open-end line of credit | 726750 | NA | 3.85 | 360 |
| 2-Not an open-end line of credit | 160000 | 20220706 | 5.49 | 360 |
| 1-Open-end line of credit | 1000000 | 20220314 | 3.750 | 360 |
| 2-Not an open-end line of credit | 1439920 | NA | 4.625 | 360 |
| 2-Not an open-end line of credit | 312000 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 104234 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 295732.41 | NA | 6.5 | 360 |
| 2-Not an open-end line of credit | 2606250 | 20211217 | 2.500 | 360 |
| 2-Not an open-end line of credit | 302000 | NA | 3.375 | 360 |
| 2-Not an open-end line of credit | 232750 | 20220604 | 5.375 | 360 |
| 2-Not an open-end line of credit | 294500 | NA | 3 | 360 |
| 2-Not an open-end line of credit | 244000 | 20220405 | 4.875 | 360 |
| 2-Not an open-end line of credit | 165000 | NA | 3.5 | 360 |
| 2-Not an open-end line of credit | 326032 | 20220201 | 3.875 | 360 |
| 2-Not an open-end line of credit | 345100 | NA | 4.875 | 360 |
| 2-Not an open-end line of credit | 759000 | 20211022 | 3.375 | 360 |
| 2-Not an open-end line of credit | 184300 | 20220411 | 4.375 | 360 |
| 2-Not an open-end line of credit | 111200 | NA | 6.5 | 360 |
| 2-Not an open-end line of credit | 517500 | NA | 2.875 | 360 |
| 2-Not an open-end line of credit | 530219 | NA | 5.25 | 360 |
| 2-Not an open-end line of credit | 454500 | NA | 2.99 | 360 |
| 2-Not an open-end line of credit | 264000 | NA | 2.625 | 360 |
| 2-Not an open-end line of credit | 381600 | NA | 3.125 | 360 |


| NA | 1-Secured by a first lien | 495000 | 70 |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 380000 | NA |
| NA | 1-Secured by a first lien | 280000 | 96.5 |
| NA | 1-Secured by a first lien | 490000 | 48 |
| NA | 1-Secured by a first lien | 265000 | 44 |
| NA | 1-Secured by a first lien | 225000 | NA |
| NA | 1-Secured by a first lien | 905000 | 78.67 |
| NA | 1-Secured by a first lien | 200000 | 55 |
| NA | 1-Secured by a first lien | 350000 | 74 |
| NA | 1-Secured by a first lien | 300000 | 85 |
| NA | 1-Secured by a first lien | 388000 | 80 |
| NA | 1-Secured by a first lien | 325000 | NA |
| NA | 1-Secured by a first lien | 1083000 | 80 |
| NA | 1-Secured by a first lien | 900000 | 47 |
| NA | 1-Secured by a first lien | 475000 | 80 |
| NA | 1-Secured by a first lien | 127000 | 87 |
| NA | 1-Secured by a first lien | 520000 | NA |
| NA | 1-Secured by a first lien | 270000 | 95 |
| NA | 1-Secured by a first lien | 227000 | 78 |
| NA | 1-Secured by a first lien | 422500 | 80 |
| NA | 1-Secured by a first lien | 1200000 | 71.87 |
| NA | 1-Secured by a first lien | 300000 | NA |
| NA | 1-Secured by a first lien | 317000 | 80 |
| NA | 1-Secured by a first lien | 530000 | 90 |
| NA | 1-Secured by a first lien | 212000 | NA |
| NA | 1-Secured by a first lien | 660000 | 83 |
| NA | 1-Secured by a first lien | 199900 | NA |
| NA | 1-Secured by a first lien | 1100000 | NA |
| NA | 1-Secured by a first lien | 380000 | 44 |
| NA | 1-Secured by a first lien | 230000 | 87 |
| NA | 1-Secured by a first lien | 375000 | 51 |
| NA | 1-Secured by a first lien | 150000 | 90 |
| NA | 1-Secured by a first lien | 340000 | 90 |
| NA | 1-Secured by a first lien | 535000 | NA |
| NA | 1-Secured by a first lien | 2199000 | NA |
| NA | 1-Secured by a first lien | 360000 | 76 |
| NA | 1-Secured by a first lien | 969000 | NA |
| NA | 1-Secured by a first lien | 200000 | 80 |
| NA | 1-Secured by a first lien | 2100000 | 47.619 |
| NA | 1-Secured by a first lien | 1799900 | NA |
| NA | 1-Secured by a first lien | 390000 | NA |
| NA | 1-Secured by a first lien | 219000 | NA |
| NA | 1-Secured by a first lien | 370000 | NA |
| NA | 1-Secured by a first lien | 3475000 | 75.000 |
| NA | 1-Secured by a first lien | 420000 | NA |
| NA | 1-Secured by a first lien | 245000 | 95 |
| NA | 1-Secured by a first lien | 310000 | NA |
| NA | 1-Secured by a first lien | 305000 | 80 |
| NA | 1-Secured by a first lien | 300000 | NA |
| NA | 1-Secured by a first lien | 420000 | 78 |
| NA | 1-Secured by a first lien | 406000 | NA |
| NA | 1-Secured by a first lien | 1220000 | 62.213 |
| NA | 1-Secured by a first lien | 194000 | 95 |
| NA | 1-Secured by a first lien | 139000 | NA |
| NA | 1-Secured by a first lien | 750000 | NA |
| NA | 1-Secured by a first lien | 540000 | NA |
| NA | 1-Secured by a first lien | 505000 | NA |
| NA | 1-Secured by a first lien | 410000 | NA |
| NA | 1-Secured by a first lien | 477000 | NA |


|  | 10-Not applicable |
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|  | 6-Information not provided by applicant in mail, internet, or telephone application |
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|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 21-Asian Indian |
|  | 23-Filipino |
|  | 25-Korean |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
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|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 7-Not applicable |
|  | 3-Black or African American |
|  | 1-American Indian or Alaska Native |
|  | 3-Black or African American |
|  | 3-Black or African American |
|  | 2-Asian |
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| 5-White | - | - |
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| 21-Asian Indian | - | - |
| 22-Chinese | - | - |
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| 6-Information not provided by applicant in mail, internet, or telephone application |
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| 8-No co-applicant |
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| 8-Nhite |
| 8-No co-applicant |
| 8-No co-applicant |
| 3-Black or African American |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 5-White |




|  | 2-Female |
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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 4-Not applicable |
|  | 1-Male |
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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 5-No co-applicant |
|  | 5-No co-applicant |
|  | 5-No co-applicant |
|  | 5-No co-applicant |
|  | 5-No co-applicant |
|  | 5-No co-applicant |
|  | 5-No co-applicant |
|  | 5-No co-applicant |
|  | 1-Male |
|  | 2-Female |
|  | 2-Female |
|  | 5-No co-applicant |
|  | 2-Female |
|  | 2-Female |
|  | 5-No co-applicant |


| 1-Hispanic or Latino |
| :--- |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 14-Other Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 11-Mexican |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 11-Mexican |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 11-Mexican |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 11-Mexican |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
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| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 4-Not applicable |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 13-Cuban |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |




| 5-No co-applicant |
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| 5-No co-applicant |
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| 3-Information not provided by applicant in mail, internet, or telephone application |
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| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 5-No co-applicant |
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| 5-No co-applicant |
| 5-No co-applicant |
| 2-Not Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
| 5-No co-applicant |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 5-No co-applicant |


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| 307.01 | 3-Application denied | 1 |
| :---: | :---: | :---: |
| 314.00 | 1-Loan originated | 1 |
| 8104.00 | 6-Purchased loan | 1 |
| 8383.00 | 1-Loan originated | 1 |
| 2426.00 | 1-Loan originated | 3 |
| 2109.00 | 1-Loan originated | 1 |
| 404.01 | 1-Loan originated | 1 |
| 621.00 | 1-Loan originated | 1 |
| 2105.02 | 1-Loan originated | 2 |
| 814.01 | 1-Loan originated | 1 |
| 310.00 | 1-Loan originated | 1 |
| 609.00 | 1-Loan originated | 1 |
| 7402.00 | 1-Loan originated | 1 |
| 6308.00 | 6-Purchased loan | 1 |
| 301.02 | 1-Loan originated | 1 |
| 404.01 | 6-Purchased loan | 1 |
| 3201.01 | 1-Loan originated | 1 |
| 2214.00 | 1-Loan originated | 1 |
| 2109.00 | 1-Loan originated | 1 |
| 209.02 | 1-Loan originated | 1 |
| 1301.00 | 1-Loan originated | 1 |
| 704.00 | 1-Loan originated | 1 |
| 7202.00 | 3-Application denied | 1 |
| 7102.00 | 3-Application denied | 2 |
| 7302.01 | 1-Loan originated | 2 |
| 5303.00 | 1-Loan originated | 1 |
| 8395.00 | 1-Loan originated | 1 |
| 8439.00 | 1-Loan originated | 1 |
| 3109.00 | 1-Loan originated | 1 |
| 3301.02 | 6-Purchased loan | 1 |
| 2410.00 | 6-Purchased loan | 1 |
| 3018.03 | 3-Application denied | 2 |
| 8307.00 | 3-Application denied | 1 |
| 6304.00 | 3-Application denied | 2 |
| 310.00 | 3-Application denied | 1 |
| 2001.00 | 3-Application denied | 1 |
| 717.00 | 3-Application denied | 1 |
| 812.01 | 3-Application denied | 1 |
| 8331.00 | 3-Application denied | 1 |
| 8413.00 | 1-Loan originated | 1 |
| 1407.02 | 1-Loan originated | 2 |
| 1711.00 | 1-Loan originated | 1 |
| 2505.00 | 1-Loan originated | 1 |
| 632.00 | 1-Loan originated | 1 |
| 206.01 | 6-Purchased loan | 1 |
| 502.00 | 1-Loan originated | 1 |
| 816.00 | 1-Loan originated | 1 |
| 8104.00 | 1-Loan originated | 1 |
| 8421.00 | 1-Loan originated | 1 |
| 319.00 | 1-Loan originated | 1 |
| 3301.02 | 1-Loan originated | 1 |
| 718.00 | 6-Purchased loan | 1 |
| 1707.00 | 6-Purchased loan | 1 |
| 310.00 | 1-Loan originated | 1 |
| 1001.00 | 1-Loan originated | 1 |
| 1711.00 | 6-Purchased loan | 1 |
| 1003.00 | 6-Purchased loan | 1 |
| 812.01 | 1-Loan originated | 1 |
| 8437.00 | 1-Loan originated | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |


| 2-Not an open-end line of credit | 246400 | 20220708 | NA | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 174800 | 20220614 | 6.625 | 360 |
| 2-Not an open-end line of credit | 918842.51 | NA | 4.75 | 360 |
| 2-Not an open-end line of credit | 257000 | 20211201 | 3.125 | 360 |
| 2-Not an open-end line of credit | 705000 | 20220810 | 5.375 | 240 |
| 2-Not an open-end line of credit | 546250 | 20220224 | 4.75 | 360 |
| 2-Not an open-end line of credit | 509200 | 20220919 | 6.125 | 360 |
| 2-Not an open-end line of credit | 1063200 | 20220412 | 4.875 | 360 |
| 2-Not an open-end line of credit | 459000 | 20220406 | 4.875 | 360 |
| 2-Not an open-end line of credit | 436000 | 20220829 | 6.125 | 360 |
| 2-Not an open-end line of credit | 430000 | 20211124 | 2.75 | 360 |
| 2-Not an open-end line of credit | 231270 | 20220207 | 3.375 | 120 |
| 2-Not an open-end line of credit | 274926 | 20220315 | 4.25 | 360 |
| 2-Not an open-end line of credit | 184300 | NA | 7 | 360 |
| 2-Not an open-end line of credit | 90000 | 20220404 | 4.875 | 360 |
| 2-Not an open-end line of credit | 1034369.57 | NA | 3.5 | 360 |
| 2-Not an open-end line of credit | 600000 | 20220319 | 4.5 | 360 |
| 2-Not an open-end line of credit | 600000 | 20220315 | 4.125 | 360 |
| 2-Not an open-end line of credit | 460750 | 20211117 | 3.125 | 360 |
| 2-Not an open-end line of credit | 150000 | 20220623 | 5 | 360 |
| 2-Not an open-end line of credit | 376000 | 20220801 | 4.625 | 360 |
| 2-Not an open-end line of credit | 1679200 | 20220822 | 5.25 | 360 |
| 2-Not an open-end line of credit | 211744 | 20220801 | NA | 360 |
| 2-Not an open-end line of credit | 148000 | 20220426 | NA | 360 |
| 2-Not an open-end line of credit | 315425 | 20220325 | 5.625 | 360 |
| 2-Not an open-end line of credit | 125819 | 20221101 | 7 | 180 |
| 2-Not an open-end line of credit | 356000 | 20210916 | 3.99 | 360 |
| 2-Not an open-end line of credit | 780000 | 20220929 | 5.75 | 360 |
| 2-Not an open-end line of credit | 394250 | 20220523 | 5.49 | 360 |
| 2-Not an open-end line of credit | 520000 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 584250 | NA | 3.525 | 360 |
| 2-Not an open-end line of credit | 110000 | 20220208 | NA | 360 |
| 2-Not an open-end line of credit | 197000 | 20220621 | NA | 360 |
| 2-Not an open-end line of credit | 192446 | 20220729 | NA | 360 |
| 2-Not an open-end line of credit | 161405 | 20221109 | NA | 360 |
| 2-Not an open-end line of credit | 163000 | 20220110 | NA | 360 |
| 2-Not an open-end line of credit | 888000 | 20220513 | NA | 360 |
| 2-Not an open-end line of credit | 260000 | 20220330 | NA | 360 |
| 2-Not an open-end line of credit | 429513 | 20220118 | NA | 360 |
| 2-Not an open-end line of credit | 360000 | 20220110 | 3.875 | 240 |
| 2-Not an open-end line of credit | 307500 | 20211206 | 4.5 | 360 |
| 2-Not an open-end line of credit | 294500 | 20221024 | 7 | 360 |
| 2-Not an open-end line of credit | 470250 | 20220121 | 3.5 | 360 |
| 2-Not an open-end line of credit | 639000 | 20220415 | 4.25 | 180 |
| 2-Not an open-end line of credit | 380000 | NA | 3.5 | 360 |
| 2-Not an open-end line of credit | 1000000 | 20220901 | 4.5 | 360 |
| 2-Not an open-end line of credit | 265000 | 20220328 | 4.75 | 360 |
| 2-Not an open-end line of credit | 305000 | 20211109 | 2.375 | 180 |
| 2-Not an open-end line of credit | 155500 | 20211221 | 2.625 | 120 |
| 2-Not an open-end line of credit | 698998 | 20220119 | 2.75 | 360 |
| 2-Not an open-end line of credit | 584625 | 20220328 | 4.75 | 360 |
| 2-Not an open-end line of credit | 1190000 | NA | 4.5 | 360 |
| 2-Not an open-end line of credit | 200000 | NA | 4.25 | 360 |
| 2-Not an open-end line of credit | 261000 | 20220203 | 3.75 | 360 |
| 2-Not an open-end line of credit | 276000 | 20220120 | 3.25 | 180 |
| 2-Not an open-end line of credit | 218600 | NA | 4.375 | 360 |
| 2-Not an open-end line of credit | 251000 | NA | 3.25 | 240 |
| 2-Not an open-end line of credit | 1870000 | 20220119 | 2.875 | 180 |
| 2-Not an open-end line of credit | 175266 | 20211207 | 2.5 | 180 |


| NA | 1-Secured by a first lien | 280000 | 88 |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 184000 | 95 |
| NA | 1-Secured by a first lien | 1150000 | NA |
| NA | 1-Secured by a first lien | 400000 | 65 |
| NA | 1-Secured by a first lien | 940000 | 75 |
| NA | 1-Secured by a first lien | 575000 | 95 |
| NA | 1-Secured by a first lien | 760000 | 67 |
| NA | 1-Secured by a first lien | 1329000 | 80 |
| NA | 1-Secured by a first lien | 605000 | 76 |
| NA | 1-Secured by a first lien | 545000 | 80 |
| NA | 1-Secured by a first lien | 780000 | 56 |
| NA | 1-Secured by a first lien | 361000 | 65 |
| NA | 1-Secured by a first lien | 280000 | 96.5 |
| NA | 1-Secured by a first lien | 190000 | NA |
| NA | 1-Secured by a first lien | 100000 | 90 |
| NA | 1-Secured by a first lien | 1295000 | NA |
| NA | 1-Secured by a first lien | 750000 | 80 |
| NA | 1-Secured by a first lien | 750000 | 80 |
| NA | 1-Secured by a first lien | 485000 | 95 |
| NA | 1-Secured by a first lien | 280000 | 54 |
| NA | 1-Secured by a first lien | 470000 | 80 |
| NA | 1-Secured by a first lien | 2099000 | 80 |
| NA | 1-Secured by a first lien | 410000 | 52 |
| NA | 1-Secured by a first lien | 225000 | 66 |
| NA | 1-Secured by a first lien | 330000 | 93.94 |
| NA | 1-Secured by a first lien | 160000 | 79 |
| NA | 1-Secured by a first lien | 550000 | 65 |
| NA | 1-Secured by a first lien | 975000 | 80 |
| NA | 1-Secured by a first lien | 415000 | 95 |
| NA | 1-Secured by a first lien | 650000 | NA |
| NA | 1-Secured by a first lien | 615000 | NA |
| NA | 1-Secured by a first lien | 250000 | 44 |
| NA | 1-Secured by a first lien | 380000 | 52 |
| NA | 1-Secured by a first lien | 196000 | 96.5 |
| NA | 1-Secured by a first lien | 169900 | 95 |
| NA | 1-Secured by a first lien | 360000 | 46 |
| NA | 1-Secured by a first lien | 1000000 | 88.8 |
| NA | 1-Secured by a first lien | 410000 | 64 |
| NA | 1-Secured by a first lien | 550000 | 79 |
| NA | 1-Secured by a first lien | 452000 | 80 |
| NA | 1-Secured by a first lien | 410000 | 75 |
| NA | 1-Secured by a first lien | 310000 | 95 |
| NA | 1-Secured by a first lien | 495000 | 95 |
| NA | 1-Secured by a first lien | 710000 | 90 |
| NA | 1-Secured by a first lien | 651000 | NA |
| NA | 1-Secured by a first lien | 1250000 | 80 |
| NA | 1-Secured by a first lien | 443000 | 59.81 |
| NA | 1-Secured by a first lien | 430000 | 71 |
| NA | 1-Secured by a first lien | 360000 | 44 |
| NA | 1-Secured by a first lien | 1136000 | 61.53 |
| NA | 1-Secured by a first lien | 779500 | 75 |
| NA | 1-Secured by a first lien | 1487500 | NA |
| NA | 1-Secured by a first lien | 250000 | NA |
| NA | 1-Secured by a first lien | 290000 | 90 |
| NA | 1-Secured by a first lien | 400000 | 69 |
| NA | 1-Secured by a first lien | 320000 | NA |
| NA | 1-Secured by a first lien | 420000 | NA |
| NA | 1-Secured by a first lien | 4675000 | 40 |
| NA | 1-Secured by a first lien | 310000 | 57 |


|  | 4-Collateral |
| :---: | :---: |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
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|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 9 -Other |
|  | 1-Debt-to-income ratio |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 4-Collateral |
|  | 6-Unverifiable information |
|  | 9-Other |
|  | 1-Debt-to-income ratio |
|  | 1-Debt-to-income ratio |
|  | 4-Collateral |
|  | 4-Collateral |
|  | 9-Other |
|  | 10-Not applicable |
|  | 10-Not applicable |
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|  | 5-White |
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|  | 5-White |
|  | 5-White |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Asian |
|  | 2-Asian |
|  | 2-Asian |
|  | 2-Asian |
|  | 2-Asian |
|  | 2-Asian |
|  | 3-Black or African American |
|  | 3-Black or African American |
|  | 3-Black or African American |
|  | 3-Black or African American |
|  | 3-Black or African American |
|  | 3-Black or African American |
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| 23-Filipino | 24-Japanese | - |
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| 23-Filipino |  | - |
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| 8-No co-applicant |
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| 8-No co-applicant |
| 2-Asian |
| 5-White |
| 5-White |
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| 5-White |
| 5-White |
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| 5-White |
| 5-White |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 2-Asian |
| 2-Asian |
| 2-Asian |
| 2-Asian |
| 2-Asian |
| 2-Asian |
| 1-American Indian or Alaska Native |
| 3-Black or African American |
| 3-Black or African American |
| 3-Black or African American |
| 3-Black or African American |
| 5-White |
| 23-Filipino |
| 2-Asian |
| 25-Korean |
| 5-White |
| 5-White |
| 5-White |
| 5-White |
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|  | 2-Not Hispanic or Latino |
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|  | 2-Not Hispanic or Latino |
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|  | 2-Not Hispanic or Latino |
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|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
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| 5-No co-applicant |
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| 5-No co-applicant |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
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| 1-Hispanic or Latino |
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| 11-Mexican | - |
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| 11-Mexican | - |
| 14-Other Hispanic or Latino | - |
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| 209.02 | 1-Loan originated | 1 |
| :---: | :---: | :---: |
| 8399.00 | 1-Loan originated | 1 |
| 1603.00 | 1-Loan originated | 1 |
| 2434.00 | 1-Loan originated | 1 |
| 8391.00 | 1-Loan originated | 1 |
| 315.01 | 1-Loan originated | 1 |
| 2505.00 | 1-Loan originated | 1 |
| 1705.00 | 6-Purchased loan | 1 |
| 6405.00 | 1-Loan originated | 1 |
| 8322.00 | 6-Purchased loan | 1 |
| 2309.00 | 1-Loan originated | 1 |
| 4301.02 | 1-Loan originated | 1 |
| 717.00 | 6-Purchased loan | 1 |
| 701.02 | 1-Loan originated | 1 |
| 8322.00 | 1-Loan originated | 4 |
| 626.00 | 1-Loan originated | 1 |
| 1203.00 | 1-Loan originated | 1 |
| 7403.00 | 6-Purchased loan | 1 |
| 8429.00 | 1-Loan originated | 1 |
| 2819.00 | 1-Loan originated | 1 |
| 810.00 | 1-Loan originated | 1 |
| 2424.00 | 1-Loan originated | 1 |
| 1202.00 | 1-Loan originated | 1 |
| 8330.00 | 1-Loan originated | 1 |
| 1101.00 | 1-Loan originated | 1 |
| 8424.00 | 1-Loan originated | 1 |
| 201.00 | 6-Purchased loan | 1 |
| 8307.00 | 1-Loan originated | 1 |
| 8306.00 | 6-Purchased loan | 1 |
| 7004.01 | 1-Loan originated | 1 |
| 3906.00 | 6-Purchased loan | 1 |
| 2301.00 | 6-Purchased loan | 1 |
| 1005.00 | 6-Purchased loan | 1 |
| 8325.00 | 6-Purchased loan | 1 |
| 1611.00 | 1-Loan originated | 1 |
| 1604.00 | 1-Loan originated | 1 |
| 1201.00 | 1-Loan originated | 1 |
| 816.00 | 1-Loan originated | 1 |
| 706.00 | 1-Loan originated | 1 |
| 619.01 | 1-Loan originated | 1 |
| 1604.00 | 1-Loan originated | 1 |
| 2207.02 | 1-Loan originated | 1 |
| 8307.00 | 1-Loan originated | 1 |
| 902.00 | 6-Purchased loan | 1 |
| 814.03 | 1-Loan originated | 1 |
| 513.00 | 6-Purchased loan | 1 |
| 1003.00 | 1-Loan originated | 1 |
| 3201.02 | 1-Loan originated | 1 |
| 514.00 | 6-Purchased loan | 1 |
| 6203.00 | 1-Loan originated | 1 |
| 1506.00 | 1-Loan originated | 1 |
| 631.00 | 1-Loan originated | 1 |
| 8438.00 | 1-Loan originated | 1 |
| 701.02 | 1-Loan originated | 1 |
| 8447.00 | 1-Loan originated | 1 |
| 8429.00 | 1-Loan originated | 1 |
| 2428.00 | 1-Loan originated | 1 |
| 3302.00 | 1-Loan originated | 1 |
| 1702.00 | 1-Loan originated | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |


| 2-Not an open-end line of credit | 63000 | 20211119 | 4.625 | 360 |
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| 2-Not an open-end line of credit | 250000 | 20220203 | 2.875 | 180 |
| 2-Not an open-end line of credit | 220000 | 20220217 | 4.125 | 360 |
| 2-Not an open-end line of credit | 591200 | 20220401 | 4.5 | 360 |
| 2-Not an open-end line of credit | 328410 | 20220607 | 5.49 | 360 |
| 2-Not an open-end line of credit | 375200 | 20220328 | 5.125 | 360 |
| 2-Not an open-end line of credit | 242400 | 20211129 | 2.375 | 180 |
| 2-Not an open-end line of credit | 332500 | NA | 3.5 | 360 |
| 2-Not an open-end line of credit | 72000 | 20220525 | 5.49 | 360 |
| 2-Not an open-end line of credit | 647200 | NA | 3.375 | 360 |
| 2-Not an open-end line of credit | 106975 | 20220113 | 3.25 | 360 |
| 2-Not an open-end line of credit | 122000 | 20220405 | 4 | 360 |
| 2-Not an open-end line of credit | 634000.65 | NA | 3.5 | 360 |
| 2-Not an open-end line of credit | 456000 | 20220427 | 5.375 | 360 |
| 2-Not an open-end line of credit | 993750 | 20220725 | 5.375 | 360 |
| 2-Not an open-end line of credit | 1162875 | 20220223 | 2.875 | 120 |
| 2-Not an open-end line of credit | 460000 | 20220713 | 4.49 | 180 |
| 2-Not an open-end line of credit | 265000 | NA | 3.375 | 240 |
| 2-Not an open-end line of credit | 1120000 | 20220215 | 3.625 | 360 |
| 2-Not an open-end line of credit | 225000 | 20210610 | 3.75 | 360 |
| 2-Not an open-end line of credit | 361550 | 20220115 | 3.875 | 360 |
| 2-Not an open-end line of credit | 256000 | 20220214 | 4.5 | 360 |
| 2-Not an open-end line of credit | 457500 | 20211208 | 2.99 | 360 |
| 2-Not an open-end line of credit | 562500 | 20220404 | 4 | 360 |
| 2-Not an open-end line of credit | 230400 | 20220301 | 3.75 | 180 |
| 2-Not an open-end line of credit | 215000 | 20220206 | 4.125 | 360 |
| 2-Not an open-end line of credit | 339500 | NA | 3.99 | 360 |
| 2-Not an open-end line of credit | 374900 | 20210914 | 2.875 | 360 |
| 2-Not an open-end line of credit | 135000 | NA | 4.75 | 360 |
| 2-Not an open-end line of credit | 131050 | 20220222 | 4.125 | 360 |
| 2-Not an open-end line of credit | 675377.14 | NA | 3 | 360 |
| 2-Not an open-end line of credit | 647200 | NA | 6.125 | 360 |
| 2-Not an open-end line of credit | 433200 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 382000 | NA | 4.49 | 360 |
| 2-Not an open-end line of credit | 103500 | 20220706 | 5.99 | 360 |
| 2-Not an open-end line of credit | 486360 | 20220506 | 5.25 | 360 |
| 2-Not an open-end line of credit | 396000 | 20220428 | 5.375 | 360 |
| 2-Not an open-end line of credit | 551000 | 20211208 | 3.25 | 360 |
| 2-Not an open-end line of credit | 500000 | 20220228 | 3.75 | 360 |
| 2-Not an open-end line of credit | 172975 | 20220224 | 4.25 | 360 |
| 2-Not an open-end line of credit | 301500 | 20211130 | 2.25 | 180 |
| 2-Not an open-end line of credit | 455000 | 20220917 | 5.875 | 360 |
| 2-Not an open-end line of credit | 290625 | 20220503 | 5.25 | 360 |
| 2-Not an open-end line of credit | 123750 | NA | 4.49 | 360 |
| 2-Not an open-end line of credit | 153750 | 20220905 | 7 | 360 |
| 2-Not an open-end line of credit | 423300 | NA | 3.9 | 360 |
| 2-Not an open-end line of credit | 284905 | 20220314 | 4.625 | 360 |
| 2-Not an open-end line of credit | 280000 | 20220405 | 4.625 | 360 |
| 2-Not an open-end line of credit | 918400 | NA | 4.125 | 360 |
| 2-Not an open-end line of credit | 238000 | 20220617 | 5.375 | 360 |
| 2-Not an open-end line of credit | 123300 | 20220608 | 5.49 | 360 |
| 2-Not an open-end line of credit | 355500 | 20220920 | 6.875 | 360 |
| 2-Not an open-end line of credit | 308750 | 20220622 | 5.99 | 360 |
| 2-Not an open-end line of credit | 954000 | 20220314 | 4 | 180 |
| 2-Not an open-end line of credit | 220924 | 20220907 | 6.25 | 360 |
| 2-Not an open-end line of credit | 440000 | 20220502 | 5.25 | 360 |
| 2-Not an open-end line of credit | 465000 | 20220510 | 4.875 | 240 |
| 2-Not an open-end line of credit | 520000 | 20220530 | 4.875 | 360 |
| 2-Not an open-end line of credit | 339500 | 20220329 | 5.25 | 360 |


| NA | 1-Secured by a first lien | 84000 | 75 |
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| NA | 1-Secured by a first lien | 500000 | 50 |
| NA | 1-Secured by a first lien | 275000 | 80 |
| NA | 1-Secured by a first lien | 739000 | 80 |
| NA | 1-Secured by a first lien | 364900 | 90 |
| NA | 1-Secured by a first lien | 469000 | 80 |
| NA | 1-Secured by a first lien | 303000 | 80 |
| NA | 1-Secured by a first lien | 350000 | NA |
| NA | 1-Secured by a first lien | 90000 | 80 |
| NA | 1-Secured by a first lien | 685500 | NA |
| NA | 1-Secured by a first lien | 280000 | 39 |
| NA | 1-Secured by a first lien | 179850 | 68 |
| NA | 1-Secured by a first lien | 735000 | NA |
| NA | 1-Secured by a first lien | 570000 | 80 |
| NA | 1-Secured by a first lien | 1325000 | 75 |
| NA | 1-Secured by a first lien | 2085000 | 70.67 |
| NA | 1-Secured by a first lien | 575000 | 80 |
| NA | 1-Secured by a first lien | 352000 | NA |
| NA | 1-Secured by a first lien | 1397450 | 80.14 |
| NA | 1-Secured by a first lien | 250000 | 90 |
| NA | 1-Secured by a first lien | 443000 | 82 |
| NA | 1-Secured by a first lien | 320000 | 80 |
| NA | 1-Secured by a first lien | 610000 | 75 |
| NA | 1-Secured by a first lien | 750000 | 75 |
| NA | 1-Secured by a first lien | 288000 | 80 |
| NA | 1-Secured by a first lien | 362000 | 59.39 |
| NA | 1-Secured by a first lien | 350000 | NA |
| NA | 1-Secured by a first lien | 480000 | 79 |
| NA | 1-Secured by a first lien | 180000 | NA |
| NA | 1-Secured by a first lien | 211000 | 63 |
| NA | 1-Secured by a first lien | 1005000 | NA |
| NA | 1-Secured by a first lien | 965000 | NA |
| NA | 1-Secured by a first lien | 456000 | NA |
| NA | 1-Secured by a first lien | 515000 | NA |
| NA | 1-Secured by a first lien | 138000 | 75 |
| NA | 1-Secured by a first lien | 579000 | 84 |
| NA | 1-Secured by a first lien | 495000 | 80 |
| NA | 1-Secured by a first lien | 580000 | 95 |
| NA | 1-Secured by a first lien | 770000 | 65 |
| NA | 1-Secured by a first lien | 195000 | 87.18 |
| NA | 1-Secured by a first lien | 470000 | 65 |
| NA | 1-Secured by a first lien | 680000 | 67 |
| NA | 1-Secured by a first lien | 387500 | 75 |
| NA | 1-Secured by a first lien | 165000 | NA |
| NA | 1-Secured by a first lien | 205000 | 75 |
| NA | 1-Secured by a first lien | 498000 | NA |
| NA | 1-Secured by a first lien | 299900 | 95 |
| NA | 1-Secured by a first lien | 310000 | 91 |
| NA | 1-Secured by a first lien | 1312000 | NA |
| NA | 1-Secured by a first lien | 251000 | 95 |
| NA | 1-Secured by a first lien | 137000 | 90 |
| NA | 1-Secured by a first lien | 735000 | 49 |
| NA | 1-Secured by a first lien | 325000 | 95 |
| NA | 1-Secured by a first lien | 1192500 | 80 |
| NA | 1-Secured by a first lien | 225000 | 96.5 |
| NA | 1-Secured by a first lien | 500000 | 88 |
| NA | 1-Secured by a first lien | 620000 | 75 |
| NA | 1-Secured by a first lien | 650000 | 80 |
| NA | 1-Secured by a first lien | 350000 | 97 |


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| 633.02 | 6-Purchased loan | 1 |
| 814.01 | 1-Loan originated | 1 |
| 402.01 | 6-Purchased loan | 1 |
| 803.00 | 1-Loan originated | 1 |
| 1602.00 | 1-Loan originated | 1 |
| 8390.00 | 1-Loan originated | 1 |
| 2801.00 | 6-Purchased loan | 1 |
| 8428.00 | 6-Purchased loan | 1 |
| 1902.00 | 6-Purchased loan | 1 |
| 1105.01 | 1-Loan originated | 1 |
| 8321.00 | 1-Loan originated | 4 |
| 702.00 | 6-Purchased loan | 1 |
| 2421.00 | 1-Loan originated | 3 |
| 8104.00 | 1-Loan originated | 1 |
| 7708.00 | 1-Loan originated | 1 |
| 817.00 | 1-Loan originated | 1 |
| 816.00 | 1-Loan originated | 1 |
| 8425.00 | 1-Loan originated | 1 |
| 313.00 | 1-Loan originated | 1 |
| 8420.00 | 1-Loan originated | 1 |
| 314.00 | 1-Loan originated | 1 |
| 2433.00 | 1-Loan originated | 1 |
| 8362.00 | 1-Loan originated | 1 |
| 8331.00 | 1-Loan originated | 1 |
| 3206.00 | 6-Purchased loan | 1 |
| 7301.00 | 3-Application denied | 1 |
| 4207.00 | 3-Application denied | 5 |
| 8343.00 | 3-Application denied | 1 |
| 4608.00 | 3-Application denied | 2 |
| 7108.00 | 3-Application denied | 2 |
| 4910.00 | 3-Application denied | 1 |
| 7005.01 | 1-Loan originated | 1 |
| 203.02 | 1-Loan originated | 1 |
| 7113.00 | 1-Loan originated | 1 |
| 7110.00 | 1-Loan originated | 2 |
| 7207.00 | 1-Loan originated | 1 |
| 818.00 | 1-Loan originated | 1 |
| 4805.00 | 1-Loan originated | 2 |
| 8233.04 | 6-Purchased loan | 1 |
| 3510.00 | 1-Loan originated | 1 |
| 4906.00 | 1-Loan originated | 1 |
| 6708.00 | 1-Loan originated | 1 |
| 3818.00 | 6-Purchased loan | 1 |
| 8374.00 | 3-Application denied | 1 |
| 6505.00 | 3-Application denied | 1 |
| 301.02 | 3-Application denied | 1 |
| 301.02 | 3-Application denied | 1 |
| 8423.00 | 3-Application denied |  |
| 1913.02 | 3-Application denied | 1 |
| 1607.00 | 1-Loan originated | 2 |
| 6605.00 | 1-Loan originated | 1 |
| 2922.00 | 6-Purchased loan | 3 |
| 1801.00 | 1-Loan originated | 1 |
| 1605.02 | 1-Loan originated | 1 |
| 710.00 | 6-Purchased loan | 1 |
| 1510.02 | 1-Loan originated | 1 |
| 318.00 | 1-Loan originated | 1 |
| 5203.00 | 1-Loan originated | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purch |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 3-Veterans Affairs guaranteed (VA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improvement |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improvement |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improvement |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchas |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |


| 2-Not an open-end line of credit | 560000 | NA | 3.375 | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 370500 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 146870 | 20220112 | 2.75 | 180 |
| 2-Not an open-end line of credit | 437000 | NA | 4.25 | 360 |
| 2-Not an open-end line of credit | 414000 | 20220128 | 3.625 | 360 |
| 2-Not an open-end line of credit | 113575 | 20211215 | 2.625 | 180 |
| 2-Not an open-end line of credit | 154750 | 20220223 | 4.625 | 360 |
| 2-Not an open-end line of credit | 286900 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 466400 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 381510 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 404000 | 20220418 | 6.25 | 360 |
| 2-Not an open-end line of credit | 872500 | 20211216 | 3.375 | 360 |
| 2-Not an open-end line of credit | 625000 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 724000 | 20220110 | 3.625 | 360 |
| 2-Not an open-end line of credit | 324000 | 20211123 | 3.125 | 360 |
| 2-Not an open-end line of credit | 140135 | 20220216 | 3.75 | 240 |
| 2-Not an open-end line of credit | 265075 | 20211007 | 3.5 | 360 |
| 2-Not an open-end line of credit | 1000000 | 20220328 | 3.875 | 360 |
| 2-Not an open-end line of credit | 260000 | 20221208 | 5.99 | 360 |
| 2-Not an open-end line of credit | 155700 | 20220404 | 4.625 | 360 |
| 2-Not an open-end line of credit | 323100 | 20220726 | 5.75 | 360 |
| 2-Not an open-end line of credit | 86250 | 20211206 | 3.375 | 360 |
| 2-Not an open-end line of credit | 265500 | 20220715 | 4.875 | 360 |
| 2-Not an open-end line of credit | 1924337 | 20220208 | 2.75 | 360 |
| 2-Not an open-end line of credit | 663000 | 20220708 | 5 | 360 |
| 2-Not an open-end line of credit | 405650 | NA | 4.075 | 360 |
| 2-Not an open-end line of credit | 140000 | 20211102 | NA | 360 |
| 2-Not an open-end line of credit | 264000 | 20221115 | NA | 360 |
| 2-Not an open-end line of credit | 152116 | 20220523 | NA | 360 |
| 2-Not an open-end line of credit | 264650 | 20220811 | NA | 360 |
| 2-Not an open-end line of credit | 324022 | 20220803 | NA | 360 |
| 2-Not an open-end line of credit | 87500 | 20221011 | NA | 360 |
| 2-Not an open-end line of credit | 200000 | 20211126 | 3.99 | 360 |
| 2-Not an open-end line of credit | 85270 | 20211114 | 2.875 | 180 |
| 2-Not an open-end line of credit | 128000 | 20220601 | 5.875 | 360 |
| 2-Not an open-end line of credit | 206000 | 20211201 | 3.99 | 360 |
| 2-Not an open-end line of credit | 139500 | 20211104 | 2.99 | 240 |
| 2-Not an open-end line of credit | 451250 | 20220630 | 5.49 | 360 |
| 2-Not an open-end line of credit | 111000 | 20220921 | 7.5 | 360 |
| 2-Not an open-end line of credit | 90122.32 | NA | 6.125 | 360 |
| 2-Not an open-end line of credit | 339100 | 20210825 | 2.75 | 300 |
| 2-Not an open-end line of credit | 111000 | 20220614 | 5.5 | 180 |
| 2-Not an open-end line of credit | 40000 | 20220722 | 6.99 | 360 |
| 2-Not an open-end line of credit | 153000 | NA | 4.625 | 360 |
| 2-Not an open-end line of credit | 135000 | 20220526 | NA | 360 |
| 2-Not an open-end line of credit | 137463 | 20220408 | NA | 360 |
| 2-Not an open-end line of credit | 189900 | 20220324 | NA | 360 |
| 2-Not an open-end line of credit | 92000 | 20220613 | NA | 360 |
| 2-Not an open-end line of credit | 1064350 | 20220308 | NA | 360 |
| 2-Not an open-end line of credit | 223400 | 20220331 | NA | 360 |
| 2-Not an open-end line of credit | 157125 | 20211201 | 3.875 | 360 |
| 2-Not an open-end line of credit | 93147 | 20220513 | 4.5 | 120 |
| 2-Not an open-end line of credit | 232500 | NA | 4.75 | 360 |
| 2-Not an open-end line of credit | 296000 | 20210825 | 2.875 | 360 |
| 2-Not an open-end line of credit | 113050 | 20220811 | 5.5 | 360 |
| 2-Not an open-end line of credit | 736000 | NA | 4 | 360 |
| 2-Not an open-end line of credit | 185000 | 20211215 | 3.375 | 360 |
| 2-Not an open-end line of credit | 192500 | 20211216 | 2.625 | 120 |
| 2-Not an open-end line of credit | 155800 | 20220228 | 3.49 | 360 |


| NA | 1-Secured by a first lien | 700000 | NA |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 390000 | NA |
| NA | 1-Secured by a first lien | 482700 | 31 |
| NA | 1-Secured by a first lien | 460000 | NA |
| NA | 1-Secured by a first lien | 460000 | 90 |
| NA | 1-Secured by a first lien | 750000 | 16 |
| NA | 1-Secured by a first lien | 240000 | 65 |
| NA | 1-Secured by a first lien | 302000 | NA |
| NA | 1-Secured by a first lien | 583000 | NA |
| NA | 1-Secured by a first lien | 423900 | NA |
| NA | 1-Secured by a first lien | 505000 | 80 |
| NA | 1-Secured by a first lien | 1340000 | 66 |
| NA | 1-Secured by a first lien | 700000 | NA |
| NA | 1-Secured by a first lien | 1325000 | 55 |
| NA | 1-Secured by a first lien | 450000 | 72 |
| NA | 1-Secured by a first lien | 290000 | 49 |
| NA | 1-Secured by a first lien | 357000 | 75 |
| NA | 1-Secured by a first lien | 2235000 | 44.74 |
| NA | 1-Secured by a first lien | 395000 | 66 |
| NA | 1-Secured by a first lien | 173000 | 90 |
| NA | 1-Secured by a first lien | 359000 | 90 |
| NA | 1-Secured by a first lien | 115000 | 75 |
| NA | 1-Secured by a first lien | 295000 | 90 |
| NA | 1-Secured by a first lien | 4175000 | 53.3 |
| NA | 1-Secured by a first lien | 780000 | 85 |
| NA | 1-Secured by a first lien | 427000 | NA |
| NA | 1-Secured by a first lien | 142000 | 99 |
| NA | 1-Secured by a first lien | 330000 | 80 |
| NA | 1-Secured by a first lien | 155000 | 96.45 |
| NA | 1-Secured by a first lien | 289000 | 90 |
| NA | 1-Secured by a first lien | 330000 | 96.5 |
| NA | 1-Secured by a first lien | 87500 | 100 |
| NA | 1-Secured by a first lien | 306000 | 66 |
| NA | 1-Secured by a first lien | 169000 | 51 |
| NA | 1-Secured by a first lien | 160000 | 80 |
| NA | 1-Secured by a first lien | 300000 | 69 |
| NA | 1-Secured by a first lien | 307000 | 46 |
| NA | 1-Secured by a first lien | 475000 | 95 |
| NA | 1-Secured by a first lien | 148000 | 75 |
| NA | 1-Secured by a first lien | 93000 | NA |
| NA | 1-Secured by a first lien | 595000 | 57 |
| NA | 1-Secured by a first lien | 148000 | 75 |
| NA | 1-Secured by a first lien | 120000 | 34 |
| NA | 1-Secured by a first lien | 180000 | NA |
| NA | 1-Secured by a first lien | 210000 | 65 |
| NA | 1-Secured by a first lien | 140000 | 96.5 |
| NA | 1-Secured by a first lien | 175000 | 109 |
| NA | 1-Secured by a first lien | 115000 | 80 |
| NA | 1-Secured by a first lien | 1225000 | 86.88 |
| NA | 1-Secured by a first lien | 343000 | 66 |
| NA | 1-Secured by a first lien | 370000 | 43 |
| NA | 1-Secured by a first lien | 250000 | 38 |
| NA | 1-Secured by a first lien | 310000 | NA |
| NA | 1-Secured by a first lien | 425000 | 75 |
| NA | 1-Secured by a first lien | 119000 | 95 |
| NA | 1-Secured by a first lien | 920000 | NA |
| NA | 1-Secured by a first lien | 420000 | 45 |
| NA | 1-Secured by a first lien | 485000 | 40 |
| NA | 1-Secured by a first lien | 164000 | 95 |


|  | 10-Not applicable |
| :---: | :---: |
|  | 10-Not applicable |
|  | 10-Not applicable |
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|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 3-Credit history |
|  | 4-Collateral |
|  | 1-Debt-to-income ratio |
|  | 1-Debt-to-income ratio |
|  | 1-Debt-to-income ratio |
|  | 9-Other |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
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|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 2-Employment history |
|  | 2-Employment history |
|  | 4-Collateral |
|  | 4-Collateral |
|  | 4-Collateral |
|  | 4-Collateral |
|  | 10-Not applicable |
|  | 10-Not applicable |
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| 4-Collateral | - |
| 5-Insufficient cash (downpayment, closing costs) | - |
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| 1-Debt-to-income ratio | - |
| 1-Debt-to-income ratio | - |
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| 5-White |  |
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| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 21-Asian Indian |  |
| 23-Filipino |  |
| 1-American Indian or Alaska Native |  |
| 2-Asian |  |
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| 2-Asian |  |
| 2-Asian |  |
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| 3-Black or African American |  |
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| 6-Information not provided by applicant in mail, internet, or telephone application |
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| 6-Information not provided by applicant in mail, internet, or telephone application |
| 23-Filipino |
| 23-Filipino |
| 23-Filipino |
| 25-Korean |
| 25-Korean |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 21-Asian Indian |
| 23-Filipino |
| 8-No co-applicant |
| 8-No co-applicant |
| 8-No co-applicant |
| 8-No co-applicant |
| 8-No co-applicant |
| 8-No co-applicant |
| 8-No co-applicant |
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| 3-Information not provided by applicant in mail, internet, or telephone application |  |
| 2-Not Hispanic or Latino |  |
| 2-Not Hispanic or Latino |  |
| 2-Not Hispanic or Latino |  |
| 2-Not Hispanic or Latino |  |
| 2-Not Hispanic or Latino |  |
| 3-Information not provided by applicant in mail, internet, or telephone application |  |
| 2-Not Hispanic or Latino |  |
| 3-Information not provided by applicant in mail, internet, or telephone application |  |
| 3-Information not provided by applicant in mail, internet, or telephone application |  |
| 3-Information not provided by applicant in mail, internet, or telephone application |  |
| 2-Not Hispanic or Latino |  |
| 2-Not Hispanic or Latino |  |
| 2-Not Hispanic or Latino |  |
| 5-No co-applicant |  |
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| 303.00 | 1-Loan originated | 1 |
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| 3012.00 | 6-Purchased loan | 3 |
| 702.00 | 1-Loan originated | 4 |
| 812.02 | 1-Loan originated | 1 |
| 711.00 | 1-Loan originated | 1 |
| 6308.00 | 1-Loan originated | 1 |
| 2421.00 | 1-Loan originated | 1 |
| 8322.00 | 1-Loan originated | 3 |
| 8378.00 | 1-Loan originated | 1 |
| 6114.00 | 1-Loan originated | 4 |
| 8431.00 | 1-Loan originated | 1 |
| 7002.00 | 1-Loan originated | 1 |
| 1401.00 | 6-Purchased loan | 2 |
| 2410.00 | 1-Loan originated | 1 |
| 2225.00 | 6-Purchased loan | 1 |
| 803.00 | 1-Loan originated | 1 |
| 8233.04 | 1-Loan originated | 1 |
| 601.00 | 6-Purchased loan | 1 |
| 1604.00 | 1-Loan originated | 1 |
| 632.00 | 1-Loan originated | 1 |
| 8391.00 | 1-Loan originated | 1 |
| 713.00 | 1-Loan originated | 1 |
| 8104.00 | 1-Loan originated | 1 |
| 7003.01 | 1-Loan originated | 1 |
| 1006.00 | 1-Loan originated | 1 |
| 712.00 | 6-Purchased loan | 1 |
| 1001.00 | 1-Loan originated | 1 |
| 2433.00 | 6-Purchased loan | 1 |
| 810.00 | 6-Purchased loan | 1 |
| 1512.00 | 1-Loan originated | 1 |
| 801.00 | 6-Purchased loan | 1 |
| 3301.01 | 1-Loan originated | 1 |
| 1610.00 | 1-Loan originated | 1 |
| 6503.02 | 1-Loan originated | 1 |
| 2505.00 | 1-Loan originated | 1 |
| 2426.00 | 6-Purchased loan | 1 |
| 818.00 | 1-Loan originated | 1 |
| 505.00 | 1-Loan originated | 1 |
| 312.00 | 6-Purchased loan | 1 |
| 714.00 | 1-Loan originated | 1 |
| 814.03 | 1-Loan originated | 1 |
| 3301.01 | 6-Purchased loan | 1 |
| 812.01 | 1-Loan originated | 1 |
| 718.00 | 1-Loan originated | 1 |
| 3201.02 | 1-Loan originated | 1 |
| 627.00 | 1-Loan originated | 1 |
| 2426.00 | 1-Loan originated | 1 |
| 1002.00 | 6-Purchased loan | 1 |
| 5802.00 | 1-Loan originated | 1 |
| 703.00 | 1-Loan originated | 1 |
| 321.00 | 1-Loan originated | 1 |
| 8408.01 | 1-Loan originated | 1 |
| 1913.02 | 1-Loan originated | 1 |
| 2421.00 | 1-Loan originated | 1 |
| 3206.00 | 6-Purchased loan | 1 |
| 715.00 | 1-Loan originated | 1 |
| 5611.00 | 1-Loan originated | 1 |
| 321.00 | 6-Purchased loan | 1 |
| 8430.00 | 6 -Purchased loan | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
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| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |


| 2-Not an open-end line of credit | 216000 | 20220921 | 5.875 | 180 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 581250 | NA | 3.75 | 360 |
| 2-Not an open-end line of credit | 1392000 | 20211209 | 3.25 | 360 |
| 2-Not an open-end line of credit | 516000 | 20220806 | 5.125 | 360 |
| 2-Not an open-end line of credit | 312900 | 20220309 | 4.625 | 360 |
| 2-Not an open-end line of credit | 199750 | 20220804 | 5.375 | 360 |
| 2-Not an open-end line of credit | 380000 | 20220104 | 2.875 | 360 |
| 2-Not an open-end line of credit | 500000 | 20211031 | 3 | 240 |
| 2-Not an open-end line of credit | 350437 | 20211130 | 3.25 | 360 |
| 2-Not an open-end line of credit | 343660 | 20220524 | 4.625 | 360 |
| 2-Not an open-end line of credit | 74414 | 20220301 | 3.875 | 180 |
| 2-Not an open-end line of credit | 113500 | 20220324 | 3.875 | 180 |
| 2-Not an open-end line of credit | 476215 | NA | 5.125 | 360 |
| 2-Not an open-end line of credit | 247500 | 20220519 | 6.125 | 360 |
| 2-Not an open-end line of credit | 565150 | NA | 4.125 | 360 |
| 2-Not an open-end line of credit | 790000 | 20220209 | 3.125 | 360 |
| 2-Not an open-end line of credit | 209000 | 20220425 | 5.375 | 360 |
| 2-Not an open-end line of credit | 259657.62 | NA | 4.5 | 360 |
| 2-Not an open-end line of credit | 794750 | 20220712 | 5.125 | 360 |
| 2-Not an open-end line of credit | 672500 | 20220914 | 5.125 | 360 |
| 2-Not an open-end line of credit | 260000 | 20220319 | 4.875 | 360 |
| 2-Not an open-end line of credit | 247139 | 20211126 | 2.49 | 180 |
| 2-Not an open-end line of credit | 350000 | 20211206 | 2.99 | 360 |
| 2-Not an open-end line of credit | 182860 | 20220331 | 4.75 | 180 |
| 2-Not an open-end line of credit | 501000 | 20211214 | 2.25 | 360 |
| 2-Not an open-end line of credit | 176000 | NA | 2.375 | 180 |
| 2-Not an open-end line of credit | 102143 | 20211231 | 2.875 | 180 |
| 2-Not an open-end line of credit | 157500 | NA | 4 | 360 |
| 2-Not an open-end line of credit | 242500 | NA | 3.99 | 360 |
| 2-Not an open-end line of credit | 204500 | 20220211 | 4.375 | 360 |
| 2-Not an open-end line of credit | 392500 | NA | 5 | 360 |
| 2-Not an open-end line of credit | 658000 | 20220525 | 4.5 | 360 |
| 2-Not an open-end line of credit | 750000 | 20220523 | 4.875 | 360 |
| 2-Not an open-end line of credit | 221000 | 20220119 | 3.25 | 180 |
| 2-Not an open-end line of credit | 262000 | 20220309 | 3.625 | 360 |
| 2-Not an open-end line of credit | 348750 | NA | 5.425 | 360 |
| 2-Not an open-end line of credit | 126400 | 20211026 | 2.375 | 120 |
| 2-Not an open-end line of credit | 350000 | 20220518 | 4.875 | 240 |
| 2-Not an open-end line of credit | 253500 | NA | 3.75 | 360 |
| 2-Not an open-end line of credit | 203000 | 20211220 | 2.75 | 180 |
| 2-Not an open-end line of credit | 520000 | 20211227 | 2.25 | 180 |
| 2-Not an open-end line of credit | 280528.03 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 232000 | 20220804 | 4.99 | 360 |
| 2-Not an open-end line of credit | 3600000 | 20220426 | 4.250 | 360 |
| 2-Not an open-end line of credit | 200000 | 20221202 | 6.49 | 360 |
| 2-Not an open-end line of credit | 318000 | 20220426 | 5.49 | 360 |
| 2-Not an open-end line of credit | 599200 | 20220304 | 3.875 | 360 |
| 2-Not an open-end line of credit | 180000 | NA | 5 | 240 |
| 2-Not an open-end line of credit | 76200 | 20210715 | 2.375 | 180 |
| 2-Not an open-end line of credit | 255660 | 20211221 | 3.25 | 360 |
| 2-Not an open-end line of credit | 134094 | 20220113 | 3.25 | 360 |
| 2-Not an open-end line of credit | 181000 | 20220214 | 4.125 | 360 |
| 2-Not an open-end line of credit | 196000 | 20220811 | 6.125 | 360 |
| 2-Not an open-end line of credit | 310000 | 20211020 | 2.365 | 360 |
| 2-Not an open-end line of credit | 211152.35 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 290250 | 20220222 | 4.25 | 360 |
| 2-Not an open-end line of credit | 270750 | 20220105 | 2.99 | 360 |
| 2-Not an open-end line of credit | 494000 | NA | 2.75 | 360 |
| 2-Not an open-end line of credit | 1018857.04 | NA | 5.375 | 360 |


| NA | 1-Secured by a first lien | 270000 | 80 |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 775000 | NA |
| NA | 1-Secured by a first lien | 2495000 | 55.79 |
| NA | 1-Secured by a first lien | 645000 | 80 |
| NA | 1-Secured by a first lien | 447000 | 70 |
| NA | 1-Secured by a first lien | 235000 | 85 |
| NA | 1-Secured by a first lien | 548000 | 70 |
| NA | 1-Secured by a first lien | 850000 | 59 |
| NA | 1-Secured by a first lien | 372000 | 95 |
| NA | 1-Secured by a first lien | 350000 | 96.5 |
| NA | 1-Secured by a first lien | 230000 | 33 |
| NA | 1-Secured by a first lien | 235000 | 49 |
| NA | 1-Secured by a first lien | 485000 | NA |
| NA | 1-Secured by a first lien | 330000 | 75 |
| NA | 1-Secured by a first lien | 635000 | NA |
| NA | 1-Secured by a first lien | 1420000 | 55.634 |
| NA | 1-Secured by a first lien | 220000 | 95 |
| NA | 1-Secured by a first lien | 325000 | NA |
| NA | 1-Secured by a first lien | 935000 | 85 |
| NA | 1-Secured by a first lien | 972500 | 69.15 |
| NA | 1-Secured by a first lien | 325000 | 80 |
| NA | 1-Secured by a first lien | 615000 | 41 |
| NA | 1-Secured by a first lien | 370000 | 95 |
| NA | 1-Secured by a first lien | 271000 | 68 |
| NA | 1-Secured by a first lien | 725000 | 70 |
| NA | 1-Secured by a first lien | 235000 | NA |
| NA | 1-Secured by a first lien | 350000 | 30 |
| NA | 1-Secured by a first lien | 210000 | NA |
| NA | 1-Secured by a first lien | 250000 | NA |
| NA | 1-Secured by a first lien | 350000 | 59 |
| NA | 1-Secured by a first lien | 562500 | NA |
| NA | 1-Secured by a first lien | 822500 | 80 |
| NA | 1-Secured by a first lien | 1200000 | 62.5 |
| NA | 1-Secured by a first lien | 300000 | 74 |
| NA | 1-Secured by a first lien | 420000 | 63 |
| NA | 1-Secured by a first lien | 465000 | NA |
| NA | 1-Secured by a first lien | 340000 | 38 |
| NA | 1-Secured by a first lien | 695000 | 51 |
| NA | 1-Secured by a first lien | 338000 | NA |
| NA | 1-Secured by a first lien | 292000 | 70 |
| NA | 1-Secured by a first lien | 730000 | 72 |
| NA | 1-Secured by a first lien | 550000 | NA |
| NA | 1-Secured by a first lien | 290000 | 80 |
| NA | 1-Secured by a first lien | 4500000 | 80.000 |
| NA | 1-Secured by a first lien | 225000 | 89 |
| NA | 1-Secured by a first lien | 397500 | 80 |
| NA | 1-Secured by a first lien | 749000 | 80 |
| NA | 1-Secured by a first lien | 375000 | NA |
| NA | 1-Secured by a first lien | 240000 | 47 |
| NA | 1-Secured by a first lien | 529700 | 49 |
| NA | 1-Secured by a first lien | 225000 | 60 |
| NA | 1-Secured by a first lien | 237000 | 77 |
| NA | 1-Secured by a first lien | 370000 | 52.97 |
| NA | 1-Secured by a first lien | 550000 | 57 |
| NA | 1-Secured by a first lien | 235000 | NA |
| NA | 1-Secured by a first lien | 322500 | 90 |
| NA | 1-Secured by a first lien | 285000 | 95 |
| NA | 1-Secured by a first lien | 1000000 | NA |
| NA | 1 -Secured by a first lien | 1275000 | NA |


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| 703.00 | 1-Loan originated | 1 |
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| 313.00 | 1-Loan originated | 1 |
| 8423.00 | 1-Loan originated | 1 |
| 5703.00 | 1-Loan originated | 1 |
| 1403.02 | 6-Purchased loan | 1 |
| 804.00 | 1-Loan originated | 1 |
| 4108.00 | 1-Loan originated | 1 |
| 1503.00 | 1-Loan originated | 1 |
| 5603.00 | 1-Loan originated | 1 |
| 631.00 | 6-Purchased loan | 1 |
| 608.00 | 1-Loan originated | 1 |
| 105.02 | 1-Loan originated | 1 |
| 6608.00 | 1-Loan originated | 1 |
| 8324.00 | 1-Loan originated | 1 |
| 2801.00 | 1-Loan originated | 1 |
| 1105.02 | 1-Loan originated | 1 |
| 707.00 | 1-Loan originated | 1 |
| 633.03 | 1-Loan originated | 1 |
| 507.00 | 6-Purchased loan | 1 |
| 7401.00 | 6-Purchased loan | 1 |
| 107.02 | 1-Loan originated | 1 |
| 8432.00 | 6-Purchased loan | 1 |
| 818.00 | 1-Loan originated | 1 |
| 7204.00 | 6-Purchased loan | 1 |
| 1913.01 | 1-Loan originated | 3 |
| 2416.00 | 1-Loan originated | 1 |
| 102.01 | 6-Purchased loan | 1 |
| 634.00 | 1-Loan originated | 1 |
| 6203.00 | 6-Purchased loan | 1 |
| 1105.02 | 1-Loan originated | 1 |
| 7204.00 | 6-Purchased loan | 1 |
| 2216.00 | 1-Loan originated | 1 |
| 8364.00 | 1-Loan originated | 1 |
| 701.02 | 6-Purchased loan | 1 |
| 507.00 | 6-Purchased loan | 1 |
| 8422.00 | 1-Loan originated | 1 |
| 3403.00 | 6-Purchased loan | 2 |
| 8326.00 | 1-Loan originated | 1 |
| 801.00 | 1-Loan originated | 1 |
| 2311.00 | 1-Loan originated | 1 |
| 7708.00 | 6-Purchased loan | 1 |
| 819.00 | 1-Loan originated | 1 |
| 2801.00 | 1-Loan originated | 1 |
| 1402.00 | 1-Loan originated | 1 |
| 208.01 | 1-Loan originated | 1 |
| 2504.00 | 3-Application denied | 2 |
| 3806.00 | 3-Application denied | 1 |
| 102.02 | 3-Application denied | 1 |
| 1906.02 | 3-Application denied | 2 |
| 5701.00 | 6-Purchased loan | 2 |
| 307.03 | 1-Loan originated | 1 |
| 2505.00 | 1-Loan originated | 1 |
| 310.00 | 1-Loan originated | 1 |
| 1904.01 | 1-Loan originated | 1 |
| 804.00 | 1-Loan originated | 1 |
| 5608.00 | 6-Purchased loan | 1 |
| 619.02 | 6-Purchased loan | 1 |
| 1801.00 | 1-Loan originated | 1 |
| 814.02 | 1-Loan originated | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 3 -Veterans Affairs guaranteed (VA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinanc |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |


| 2-Not an open-end line of credit | 253500 | 20220210 | 3.25 | 180 |
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| 2 -Not an open-end line of credit | 88550 | 20221031 | 6.75 | 180 |
| $2-$ Not an open-end line of credit | 232500 | 20221115 | 6.99 | 360 |
| $2-$ Not an open-end line of credit | 110500 | 20220312 | 3.75 | 120 |
| 2 -Not an open-end line of credit | 646000 | NA | 3.75 | 360 |
| $2-$ Not an open-end line of credit | 490500 | 20220707 | 5.75 | 360 |
| 2-Not an open-end line of credit | 122000 | 20220126 | 3.75 | 180 |
| $2-$ Not an open-end line of credit | 148000 | 20220823 | 7 | 360 |
| $2-$ Not an open-end line of credit | 310800 | 20220304 | 3.625 | 360 |
| $2-$ Not an open-end line of credit | 228658 | NA | 4.875 | 360 |
| $2-$ Not an open-end line of credit | 332500 | 20220316 | 4.5 | 360 |
| $2-$ Not an open-end line of credit | 107755 | 20211204 | 2.625 | 180 |
| 2 -Not an open-end line of credit | 188000 | 20220224 | 4.625 | 360 |
| $2-$ Not an open-end line of credit | 639200 | 20211101 | 4 | 360 |
| 2-Not an open-end line of credit | 240350 | 20220119 | 3.75 | 360 |
| 2-Not an open-end line of credit | 160000 | 20220613 | 5.875 | 360 |
| 2-Not an open-end line of credit | 937500 | 20211118 | 2.375 | 360 |
| 2-Not an open-end line of credit | 178500 | 20220311 | 4.74 | 360 |
| 2-Not an open-end line of credit | 1558210.62 | NA | 5.25 | 360 |
| 2-Not an open-end line of credit | 313500 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 105550 | 20220106 | 3.375 | 360 |
| 2-Not an open-end line of credit | 265905 | NA | 3.75 | 360 |
| 2-Not an open-end line of credit | 395000 | 20220420 | 4.75 | 360 |
| 2-Not an open-end line of credit | 250000 | NA | 4.125 | 240 |
| 2-Not an open-end line of credit | 245000 | 20211209 | 3.75 | 240 |
| 2-Not an open-end line of credit | 306300 | 20211213 | 3.125 | 360 |
| 2-Not an open-end line of credit | 192375 | NA | 5.374 | 360 |
| 2-Not an open-end line of credit | 470000 | 20220207 | 3.125 | 360 |
| 2-Not an open-end line of credit | 190000 | NA | 5.95 | 360 |
| 2-Not an open-end line of credit | 160000 | 20211112 | 2.375 | 180 |
| 2-Not an open-end line of credit | 239580 | NA | 5.75 | 360 |
| 2-Not an open-end line of credit | 1012000 | 20220920 | 5.125 | 360 |
| 2-Not an open-end line of credit | 216800 | 20221027 | 6.25 | 360 |
| 2-Not an open-end line of credit | 215000 | NA | 3.95 | 360 |
| 2-Not an open-end line of credit | 373275 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 140000 | 20211019 | 3.25 | 360 |
| 2-Not an open-end line of credit | 348197.35 | NA | 5.625 | 360 |
| 2-Not an open-end line of credit | 436500 | 20220307 | 3.875 | 360 |
| 2-Not an open-end line of credit | 700000 | 20220901 | 4.875 | 360 |
| 2-Not an open-end line of credit | 240000 | 20211229 | 3.375 | 360 |
| 2-Not an open-end line of credit | 150000 | NA | 3.25 | 180 |
| 2-Not an open-end line of credit | 369000 | 20220221 | 3.375 | 180 |
| 1-Open-end line of credit | 390000 | 20220722 | 5.000 | 360 |
| 2-Not an open-end line of credit | 241965 | 20220316 | 4.25 | 360 |
| 2-Not an open-end line of credit | 118400 | 20220323 | 3.75 | 360 |
| 2-Not an open-end line of credit | 255000 | 20211214 | NA | 360 |
| 2-Not an open-end line of credit | 232000 | 20220920 | NA | 360 |
| 2-Not an open-end line of credit | 122550 | 20220223 | NA | 360 |
| 2-Not an open-end line of credit | 214216 | 20220319 | NA | 360 |
| 2-Not an open-end line of credit | 326968 | NA | 5.75 | 360 |
| 2-Not an open-end line of credit | 111525 | 20220328 | 4.5 | 360 |
| 2-Not an open-end line of credit | 237000 | 20211226 | 3.25 | 360 |
| 2-Not an open-end line of credit | 198850 | 20220606 | 5.99 | 360 |
| 2-Not an open-end line of credit | 201700 | 20220224 | 3.875 | 360 |
| 2-Not an open-end line of credit | 492000 | 20220310 | 3.875 | 360 |
| 2-Not an open-end line of credit | 373350 | NA | 2.99 | 360 |
| 2-Not an open-end line of credit | 64000 | NA | 5.625 | 360 |
| 2-Not an open-end line of credit | 116110 | 20210511 | 2.99 | 360 |
| 2-Not an open-end line of credit | 205650 | 20220110 | 3.25 | 360 |


| NA | 1-Secured by a first lien | 630000 | 41 |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 126500 | 70 |
| NA | 1-Secured by a first lien | 310000 | 75 |
| NA | 1-Secured by a first lien | 300000 | 37 |
| NA | 1-Secured by a first lien | 680000 | NA |
| NA | 1-Secured by a first lien | 545000 | 90 |
| NA | 1-Secured by a first lien | 165000 | 74 |
| NA | 1-Secured by a first lien | 185000 | 80 |
| NA | 1-Secured by a first lien | 300000 | 100 |
| NA | 1-Secured by a first lien | 249900 | NA |
| NA | 1-Secured by a first lien | 350000 | 95 |
| NA | 1-Secured by a first lien | 179000 | 61 |
| NA | 1-Secured by a first lien | 262000 | 72 |
| NA | 1-Secured by a first lien | 799000 | 80 |
| NA | 1-Secured by a first lien | 253000 | 95 |
| NA | 1-Secured by a first lien | 200000 | 80 |
| NA | 1-Secured by a first lien | 1390000 | 78.26 |
| NA | 1-Secured by a first lien | 255000 | 70 |
| NA | 1-Secured by a first lien | 1950000 | NA |
| NA | 1-Secured by a first lien | 330000 | NA |
| NA | 1-Secured by a first lien | 165800 | 64 |
| NA | 1-Secured by a first lien | 279900 | NA |
| NA | 1-Secured by a first lien | 545000 | 73 |
| NA | 1-Secured by a first lien | 358000 | NA |
| NA | 1-Secured by a first lien | 425000 | 58 |
| NA | 1-Secured by a first lien | 425000 | 73 |
| NA | 1-Secured by a first lien | 202500 | NA |
| NA | 1-Secured by a first lien | 1035000 | 46 |
| NA | 1-Secured by a first lien | 200000 | NA |
| NA | 1-Secured by a first lien | 200000 | 80 |
| NA | 1-Secured by a first lien | 244000 | NA |
| NA | 1-Secured by a first lien | 1265000 | 80 |
| NA | 1-Secured by a first lien | 271000 | 80 |
| NA | 1-Secured by a first lien | 365000 | NA |
| NA | 1-Secured by a first lien | 414750 | NA |
| NA | 1-Secured by a first lien | 235000 | 60 |
| NA | 1-Secured by a first lien | 355000 | NA |
| NA | 1-Secured by a first lien | 485000 | 90 |
| NA | 1-Secured by a first lien | 1550000 | 45.161 |
| NA | 1-Secured by a first lien | 300000 | 80 |
| NA | 1-Secured by a first lien | 250000 | NA |
| NA | 1-Secured by a first lien | 410000 | 90 |
| NA | 2-Secured by a subordinate lien | 1300000 | 80.000 |
| NA | 1-Secured by a first lien | 254700 | 95 |
| NA | 1-Secured by a first lien | 148000 | 80 |
| NA | 1-Secured by a first lien | 330000 | 78 |
| NA | 1-Secured by a first lien | 271000 | 86 |
| NA | 1-Secured by a first lien | 127870 | 96 |
| NA | 1-Secured by a first lien | 410000 | 53 |
| NA | 1-Secured by a first lien | 333000 | NA |
| NA | 1-Secured by a first lien | 181000 | 62 |
| NA | 1-Secured by a first lien | 327800 | 73 |
| NA | 1-Secured by a first lien | 205000 | 97 |
| NA | 1-Secured by a first lien | 310000 | 66 |
| NA | 1-Secured by a first lien | 615000 | 80 |
| NA | 1-Secured by a first lien | 393000 | NA |
| NA | 1-Secured by a first lien | 118000 | NA |
| NA | 1-Secured by a first lien | 175000 | 67 |
| NA | 1-Secured by a first lien | 310000 | 67 |


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| 2-Not Hispanic or Latino |
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| 2-Not Hispanic or Latino |
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| 1-Hispanic or Latino |
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| 2-Not Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
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| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
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| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 1-Hispanic or Latino |
| 11-Mexican |
| 1-Hispanic or Latino |
| 1-Hispanic or Latino |
| 11-Mexican |
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| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 1-Hispanic or Latino |
| 11-Mexican |
| 1-Hispanic or Latino |




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| 8331.00 | 1-Loan originated | 1 |
| :---: | :---: | :---: |
| 1611.00 | 1-Loan originated | 1 |
| 206.01 | 1-Loan originated | 1 |
| 307.03 | 6-Purchased loan | 1 |
| 812.02 | 1-Loan originated | 1 |
| 501.00 | 1-Loan originated | 1 |
| 107.02 | 1-Loan originated | 1 |
| 804.00 | 3-Application denied | 1 |
| 202.00 | 1-Loan originated | 1 |
| 1508.00 | 6-Purchased loan | 1 |
| 2514.00 | 1-Loan originated | 1 |
| 8420.00 | 1-Loan originated | 1 |
| 5807.00 | 3-Application denied | 2 |
| 317.00 | 1-Loan originated | 1 |
| 621.00 | 1-Loan originated | 1 |
| 802.02 | 6-Purchased loan | 1 |
| 314.00 | 6-Purchased loan | 1 |
| 8426.00 | 3-Application denied | 4 |
| 208.02 | 1-Loan originated | 1 |
| 816.00 | 1-Loan originated | 1 |
| 3201.01 | 1-Loan originated | 1 |
| 2207.02 | 1-Loan originated | 1 |
| 7505.00 | 1-Loan originated | 1 |
| 7203.00 | 1-Loan originated | 1 |
| 7203.00 | 1-Loan originated | 1 |
| 7003.01 | 3-Application denied | 1 |
| 609.00 | 3-Application denied | 1 |
| 7003.01 | 3-Application denied | 1 |
| 5703.00 | 6-Purchased loan | 1 |
| 312.00 | 6-Purchased loan | 1 |
| 7404.00 | 6-Purchased loan | 1 |
| 1105.02 | 1-Loan originated | 1 |
| 1506.00 | 1-Loan originated | 1 |
| 205.00 | 1-Loan originated | 1 |
| 1407.02 | 1-Loan originated | 1 |
| 317.00 | 1-Loan originated | 1 |
| 2433.00 | 1-Loan originated | 1 |
| 8425.00 | 1-Loan originated | 1 |
| 314.00 | 1-Loan originated | 3 |
| 7002.00 | 1-Loan originated | 1 |
| 8382.00 | 1-Loan originated | 1 |
| 8319.00 | 6-Purchased loan | 2 |
| 1401.00 | 6-Purchased loan | 1 |
| 8331.00 | 1-Loan originated | 1 |
| 1507.00 | 1-Loan originated | 1 |
| 1002.00 | 1-Loan originated | 1 |
| 8331.00 | 1-Loan originated | 1 |
| 6503.01 | 1-Loan originated | 1 |
| 2415.00 | 1-Loan originated | 1 |
| 513.00 | 1-Loan originated | 1 |
| 8437.00 | 1-Loan originated | 1 |
| 1301.00 | 1-Loan originated | 1 |
| 707.00 | 6-Purchased loan | 1 |
| 203.01 | 1-Loan originated | 1 |
| 2405.00 | 1-Loan originated | 1 |
| 2309.00 | 1-Loan originated | 1 |
| 205.00 | 1-Loan originated | 3 |
| 6201.00 | 1-Loan originated | 1 |
| 2106.02 | 6-Purchased loan | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |


| 2-Not an open-end line of credit | 820250 | 20220908 | 5.125 | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 480000 | 20220518 | 5.25 | 360 |
| 2-Not an open-end line of credit | 168300 | 20211211 | 2.875 | 360 |
| 2-Not an open-end line of credit | 152000 | NA | 4.875 | 360 |
| 2-Not an open-end line of credit | 92000 | 20220125 | 4.125 | 360 |
| 2-Not an open-end line of credit | 500050 | 20211221 | 2.75 | 240 |
| 2-Not an open-end line of credit | 143560 | 20220419 | 5.375 | 360 |
| 2-Not an open-end line of credit | 644000 | 20211104 | NA | 360 |
| 2-Not an open-end line of credit | 360000 | 20220104 | 4.49 | 360 |
| 2-Not an open-end line of credit | 314910 | NA | 3.65 | 360 |
| 2-Not an open-end line of credit | 208500 | 20211102 | 2.99 | 360 |
| 2-Not an open-end line of credit | 304000 | 20220627 | 5.375 | 360 |
| 2-Not an open-end line of credit | 228750 | 20221004 | NA | 180 |
| 2-Not an open-end line of credit | 211596 | 20220125 | 3.99 | 360 |
| 2-Not an open-end line of credit | 462600 | 20220222 | 4.25 | 360 |
| 2-Not an open-end line of credit | 161250 | NA | 3.625 | 360 |
| 2-Not an open-end line of credit | 128562.41 | NA | 5.625 | 360 |
| 2-Not an open-end line of credit | 294566 | 20220808 | NA | 360 |
| 2-Not an open-end line of credit | 110000 | 20220808 | 5.625 | 360 |
| 2-Not an open-end line of credit | 400000 | 20220109 | 3.375 | 360 |
| 2-Not an open-end line of credit | 823000 | 20220527 | 4.5 | 360 |
| 2-Not an open-end line of credit | 446400 | 20220416 | 5.625 | 360 |
| 2-Not an open-end line of credit | 226750 | 20220513 | 5.5 | 360 |
| 2-Not an open-end line of credit | 240000 | 20220304 | 2.875 | 180 |
| 2-Not an open-end line of credit | 285000 | 20211129 | 3.25 | 240 |
| 2-Not an open-end line of credit | 313500 | 20220928 | NA | 360 |
| 2-Not an open-end line of credit | 242000 | 20211203 | NA | 360 |
| 2-Not an open-end line of credit | 313500 | 20220819 | NA | 360 |
| 2-Not an open-end line of credit | 269709.28 | NA | 5.25 | 360 |
| 2-Not an open-end line of credit | 191700 | NA | 3.75 | 360 |
| 2-Not an open-end line of credit | 212000 | NA | 3.375 | 360 |
| 2-Not an open-end line of credit | 205000 | 20220411 | 5.125 | 360 |
| 2-Not an open-end line of credit | 427500 | 20211025 | 3.25 | 360 |
| 2-Not an open-end line of credit | 138000 | 20220325 | 4.99 | 360 |
| 2-Not an open-end line of credit | 719015 | 20220505 | 4.875 | 360 |
| 2-Not an open-end line of credit | 394250 | 20220307 | 4.875 | 360 |
| 2-Not an open-end line of credit | 672000 | 20220615 | 5.75 | 360 |
| 2-Not an open-end line of credit | 355000 | 20220303 | 3.5 | 180 |
| 2-Not an open-end line of credit | 1125000 | 20220525 | 4 | 360 |
| 2-Not an open-end line of credit | 106000 | 20220821 | 6.125 | 360 |
| 2-Not an open-end line of credit | 516000 | 20220630 | 4.875 | 360 |
| 2-Not an open-end line of credit | 878703.58 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 331000 | NA | 4.375 | 360 |
| 2-Not an open-end line of credit | 794929 | 20220324 | 4.625 | 360 |
| 2-Not an open-end line of credit | 347500 | 20220125 | 5.125 | 360 |
| 2-Not an open-end line of credit | 127500 | 20220226 | 4.25 | 360 |
| 2-Not an open-end line of credit | 300000 | 20220915 | 6.125 | 360 |
| 2-Not an open-end line of credit | 242403 | 20221010 | 7.5 | 360 |
| 2-Not an open-end line of credit | 647200 | 20220308 | 4.24 | 360 |
| 2-Not an open-end line of credit | 380000 | 20220307 | 5.125 | 360 |
| 2-Not an open-end line of credit | 767000 | 20211006 | 2.5 | 360 |
| 2-Not an open-end line of credit | 296400 | 20220809 | 4.875 | 360 |
| 2-Not an open-end line of credit | 277500 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 88000 | 20221103 | 7.49 | 360 |
| 2-Not an open-end line of credit | 710000 | 20211004 | 3.375 | 360 |
| 2-Not an open-end line of credit | 525000 | 20211227 | 2.99 | 360 |
| 2-Not an open-end line of credit | 357300 | 20220308 | 4.875 | 360 |
| 2-Not an open-end line of credit | 200000 | 20211026 | 2.625 | 180 |
| 2-Not an open-end line of credit | 629600 | NA | 3.625 | 360 |


| NA | 1-Secured by a first lien | 965000 | 85 |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 640000 | 75 |
| NA | 1-Secured by a first lien | 187000 | 90 |
| NA | 1-Secured by a first lien | 160000 | NA |
| NA | 1-Secured by a first lien | 115000 | 80 |
| NA | 1-Secured by a first lien | 1000000 | 50 |
| NA | 1-Secured by a first lien | 148000 | 97 |
| NA | 1-Secured by a first lien | 845000 | 76.21 |
| NA | 1-Secured by a first lien | 450000 | 80 |
| NA | 1-Secured by a first lien | 349900 | NA |
| NA | 1-Secured by a first lien | 315000 | 67 |
| NA | 1-Secured by a first lien | 380000 | 80 |
| NA | 1-Secured by a first lien | 300000 | 77 |
| NA | 1-Secured by a first lien | 215500 | 96.5 |
| NA | 1-Secured by a first lien | 514000 | 90 |
| NA | 1-Secured by a first lien | 215000 | NA |
| NA | 1-Secured by a first lien | 143000 | NA |
| NA | 1-Secured by a first lien | 300000 | 96.5 |
| NA | 1-Secured by a first lien | 245000 | 45 |
| NA | 1-Secured by a first lien | 725000 | 56 |
| NA | 1-Secured by a first lien | 1678500 | 49.03 |
| NA | 1-Secured by a first lien | 465000 | 96 |
| NA | 1-Secured by a first lien | 425000 | 54 |
| NA | 1-Secured by a first lien | 450000 | 54 |
| NA | 1-Secured by a first lien | 399000 | 72 |
| NA | 1-Secured by a first lien | 330000 | 95 |
| NA | 1-Secured by a first lien | 650000 | 38 |
| NA | 1-Secured by a first lien | 330000 | 95 |
| NA | 1-Secured by a first lien | 275000 | NA |
| NA | 1-Secured by a first lien | 213000 | NA |
| NA | 1-Secured by a first lien | 265000 | NA |
| NA | 1-Secured by a first lien | 295000 | 70 |
| NA | 1-Secured by a first lien | 532500 | 81 |
| NA | 1-Secured by a first lien | 172500 | 80 |
| NA | 1-Secured by a first lien | 799000 | 89.98 |
| NA | 1-Secured by a first lien | 415000 | 95 |
| NA | 1-Secured by a first lien | 840000 | 80 |
| NA | 1-Secured by a first lien | 510000 | 70 |
| NA | 1-Secured by a first lien | 1500000 | 75 |
| NA | 1-Secured by a first lien | 210000 | 51 |
| NA | 1-Secured by a first lien | 645000 | 80 |
| NA | 1-Secured by a first lien | 1100000 | NA |
| NA | 1-Secured by a first lien | 351000 | NA |
| NA | 1-Secured by a first lien | 935211 | 84.99 |
| NA | 1-Secured by a first lien | 580000 | 60 |
| NA | 1-Secured by a first lien | 170000 | 75 |
| NA | 1-Secured by a first lien | 975000 | 31 |
| NA | 1-Secured by a first lien | 249900 | 97 |
| NA | 1-Secured by a first lien | 850000 | 77 |
| NA | 1-Secured by a first lien | 475000 | 80 |
| NA | 1-Secured by a first lien | 1190000 | 64.45 |
| NA | 1-Secured by a first lien | 312000 | 95 |
| NA | 1-Secured by a first lien | 377500 | NA |
| NA | 1-Secured by a first lien | 110000 | 80 |
| NA | 1-Secured by a first lien | 899000 | 78.97 |
| NA | 1-Secured by a first lien | 725000 | 73 |
| NA | 1-Secured by a first lien | 476400 | 75 |
| NA | 1-Secured by a first lien | 280000 | 72 |
| NA | 1-Secured by a first lien | 787000 | NA |


|  | 10-Not applicable |
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|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 9-Other |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 4-Collateral |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 1-Debt-to-income ratio |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 3-Credit history |
|  | 3-Credit history |
|  | $9-$ Other |
|  | 10-Not applicable |
|  | 10-Not applicable |
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| 6-Unverifiable information | 1-Debt-to-income ratio |
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| 21-Asian Indian |
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| 21-Asian Indian |
| 21-Asian Indian |
| 21-Asian Indian |
| 21-Asian Indian |
| 23-Filipino |
| 23-Filipino |
| 25-Korean |
| 26-Vietnamese |
| 2-Asian |
| 3-Black or African American |
| 2-Asian |
| 2-Asian |
| 3-Black or African American |
| 5-White |
| 2-Asian |
| 5-White |
| 2-Asian |
| 2-Asian |
| 2-Asian |
| 2-Asian |
| 2-Asian |
| 3-Black or African American |
| 3-Black or African American |
| 3-Black or African American |
| 5-White |
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| 8-No co-applicant |
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| 8-No co-applicant |
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| 8-No co-applicant |
| 8-No co-applicant |
| 8-No co-applicant |
| 8-No co-applicant |
| 2-Asian |
| 8-No co-applicant |
| 8-No co-applicant |
| 8-No co-applicant |
| 8-No co-applicant |
| 5-White |
| 8-No co-applicant |
| 8-No co-applicant |
| 2-Asian |
| 2-Asian |
| 2-Asian |
| 2-Asian |
| 5-White |
| 3-Black or African American |
| 3-Black or African American |
| 3-Black or African American |
| 5-White |
| 5-White |
| 5-White |
| 5-White |
| 5-White |
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| 5-No co-applicant |  |
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| 2-Not Hispanic or Latino |
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| 14-Other Hispanic or Latino |
| 2-Not Hispanic or Latino |
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| 1-Hispanic or Latino |
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| 11-Mexican |
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| 5-No co-applicant |
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| 14-Other Hispanic or Latino |
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| 11-Mexican |
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| 14-Other Hispanic or Latino | - |
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| 705.00 | 6-Purchased Ioan | 1 |
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| 1201.00 | 1-Loan originated | 1 |
| 8429.00 | 1-Loan originated | 1 |
| 103.00 | 1-Loan originated | 1 |
| 508.00 | 6-Purchased loan | 1 |
| 8408.00 | 6-Purchased loan | 1 |
| 2204.00 | 1-Loan originated | 3 |
| 1506.00 | 1-Loan originated | 1 |
| 3206.00 | 6-Purchased loan | 1 |
| 8423.00 | 1-Loan originated | 1 |
| 705.00 | 1-Loan originated | 1 |
| 1505.01 | 1-Loan originated | 1 |
| 818.00 | 1-Loan originated | 1 |
| 620.00 | 6-Purchased loan | 1 |
| 6103.00 | 3-Application denied | 2 |
| 1613.00 | 3-Application denied | 2 |
| 1605.02 | 1-Loan originated | 2 |
| 2416.00 | 1-Loan originated | 1 |
| 813.00 | 1-Loan originated | 1 |
| 6502.00 | 1-Loan originated | 1 |
| 2226.00 | 1-Loan originated | 1 |
| 8344.00 | 1-Loan originated | 1 |
| 1204.00 | 1-Loan originated | 1 |
| 6122.00 | 1-Loan originated | 1 |
| 814.01 | 1-Loan originated | 1 |
| 3106.00 | 1-Loan originated | 3 |
| 1602.00 | 1-Loan originated | 1 |
| 206.01 | 1-Loan originated | 1 |
| 509.00 | 3-Application denied | 1 |
| 3301.02 | 6-Purchased loan | 1 |
| 8400.00 | 1-Loan originated | 1 |
| 2411.00 | 1-Loan originated | 1 |
| 707.00 | 3-Application denied | 1 |
| 8395.00 | 3-Application denied | 1 |
| 4304.00 | 3-Application denied | 1 |
| 3201.02 | 3-Application denied | 1 |
| 512.00 | 3-Application denied | 2 |
| 7306.00 | 1-Loan originated | 1 |
| 3907.00 | 1-Loan originated | 1 |
| 7305.00 | 1-Loan originated | 1 |
| 7305.00 | 1-Loan originated | 1 |
| 7004.02 | 1-Loan originated | 1 |
| 8343.00 | 6-Purchased loan | 1 |
| 4301.01 | 1-Loan originated | 1 |
| 7505.00 | 1-Loan originated | 1 |
| 813.00 | 6-Purchased loan | 1 |
| 8343.00 | 6-Purchased loan | 1 |
| 4402.02 | 1-Loan originated | 1 |
| 4910.00 | 6-Purchased loan | 1 |
| 7505.00 | 1-Loan originated | 1 |
| 8446.00 | 1-Loan originated | 1 |
| 8355.00 | 1-Loan originated | 1 |
| 4908.00 | 6-Purchased loan | 1 |
| 3301.01 | 6-Purchased loan | 1 |
| 8343.00 | 1-Loan originated | 1 |
| 2819.00 | 6-Purchased loan | 1 |
| 1508.00 | 3-Application denied | 2 |
| 1403.02 | 3-Application denied | 1 |
| 8392.00 | 3-Application denied | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 32-Cash Out |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 32-Cash Out |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |


| 2-Not an open-end line of credit | 644000 | NA | 3 | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 264000 | 20220323 | 5.49 | 360 |
| 2-Not an open-end line of credit | 1060000 | 20220411 | 4.625 | 360 |
| 2-Not an open-end line of credit | 349950 | 20211016 | 2 | 180 |
| 2-Not an open-end line of credit | 975359.04 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 270750 | NA | 4.7 | 360 |
| 2-Not an open-end line of credit | 600000 | 20220501 | 3.875 | 180 |
| 2-Not an open-end line of credit | 200000 | 20220212 | 2.875 | 180 |
| 2-Not an open-end line of credit | 340000 | NA | 3.25 | 180 |
| 2-Not an open-end line of credit | 437000 | 20220203 | 3.625 | 360 |
| 2-Not an open-end line of credit | 672000 | 20220718 | 4.875 | 360 |
| 2-Not an open-end line of credit | 317300 | 20220218 | 4 | 360 |
| 2-Not an open-end line of credit | 918000 | 20220128 | 3.375 | 360 |
| 2-Not an open-end line of credit | 589500 | NA | 3.525 | 360 |
| 2-Not an open-end line of credit | 201286 | 20220621 | NA | 360 |
| 2-Not an open-end line of credit | 197500 | 20220303 | NA | 180 |
| 2-Not an open-end line of credit | 196377 | 20211203 | 3.25 | 360 |
| 2-Not an open-end line of credit | 382500 | 20220301 | 4.625 | 360 |
| 2-Not an open-end line of credit | 228000 | 20211220 | 2.75 | 360 |
| 2-Not an open-end line of credit | 275000 | 20220614 | 6.625 | 360 |
| 2-Not an open-end line of credit | 332000 | 20220310 | 5.875 | 360 |
| 2-Not an open-end line of credit | 517500 | 20220715 | 4.875 | 360 |
| 2-Not an open-end line of credit | 130100 | 20220130 | 3.375 | 180 |
| 2-Not an open-end line of credit | 220000 | 20220428 | 5.49 | 360 |
| 2-Not an open-end line of credit | 50000 | 20221015 | 8 | 360 |
| 2-Not an open-end line of credit | 226000 | 20211118 | 3.375 | 360 |
| 2-Not an open-end line of credit | 357700 | 20211028 | 2.375 | 180 |
| 2-Not an open-end line of credit | 145396 | 20211116 | 2.625 | 180 |
| 2-Not an open-end line of credit | 1668000 | 20220701 | NA | 360 |
| 2-Not an open-end line of credit | 232373.04 | NA | 5.05 | 360 |
| 2-Not an open-end line of credit | 687500 | 20211129 | 2.375 | 180 |
| 2-Not an open-end line of credit | 562500 | 20220203 | 3.625 | 360 |
| 2-Not an open-end line of credit | 412087 | 20220510 | NA | 360 |
| 2-Not an open-end line of credit | 216015 | 20220223 | NA | 360 |
| 2-Not an open-end line of credit | 100732 | 20220106 | NA | 360 |
| 2-Not an open-end line of credit | 261180 | 20221114 | NA | 360 |
| 2-Not an open-end line of credit | 366000 | 20211208 | NA | 360 |
| 2-Not an open-end line of credit | 103254 | 20220315 | 3.875 | 180 |
| 2-Not an open-end line of credit | 472500 | 20220930 | 5.5 | 360 |
| 2-Not an open-end line of credit | 101650 | 20211129 | 3.375 | 360 |
| 2-Not an open-end line of credit | 230769 | 20220421 | 4.625 | 360 |
| 2-Not an open-end line of credit | 188950 | 20211104 | 3.375 | 360 |
| 2-Not an open-end line of credit | 137750 | NA | 3.625 | 360 |
| 2-Not an open-end line of credit | 168000 | 20221104 | 6.5 | 360 |
| 2-Not an open-end line of credit | 516800 | 20220906 | 5.5 | 360 |
| 2-Not an open-end line of credit | 115200 | NA | 4.75 | 360 |
| 2-Not an open-end line of credit | 236075 | NA | 4.75 | 360 |
| 2-Not an open-end line of credit | 193410 | 20220815 | 5 | 360 |
| 2-Not an open-end line of credit | 192808.59 | NA | 5.25 | 360 |
| 2-Not an open-end line of credit | 240000 | 20220621 | 5.75 | 360 |
| 2-Not an open-end line of credit | 146287 | 20221010 | 6.5 | 360 |
| 2-Not an open-end line of credit | 123000 | 20221013 | 7 | 180 |
| 2-Not an open-end line of credit | 194000 | NA | 5.075 | 360 |
| 2-Not an open-end line of credit | 313470 | NA | 2.75 | 180 |
| 2-Not an open-end line of credit | 148900 | 20220727 | 6 | 360 |
| 2-Not an open-end line of credit | 192000 | NA | 3.25 | 180 |
| 2-Not an open-end line of credit | 396825 | 20220202 | NA | 360 |
| 2-Not an open-end line of credit | 270000 | 20220514 | NA | 360 |
| 2-Not an open-end line of credit | 90400 | 20220826 | NA | 180 |


| NA | 1-Secured by a first lien | 700000 | NA |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 330000 | 80 |
| NA | 1-Secured by a first lien | 1325000 | 80 |
| NA | 1-Secured by a first lien | 700000 | 50 |
| NA | 1-Secured by a first lien | 1415000 | NA |
| NA | 1-Secured by a first lien | 285000 | NA |
| NA | 1-Secured by a first lien | 1325000 | 46 |
| NA | 1-Secured by a first lien | 440000 | 46 |
| NA | 1-Secured by a first lien | 435000 | NA |
| NA | 1-Secured by a first lien | 460000 | 95 |
| NA | 1-Secured by a first lien | 800000 | 84 |
| NA | 1-Secured by a first lien | 334000 | 95 |
| NA | 1-Secured by a first lien | 1080000 | 85 |
| NA | 1-Secured by a first lien | 655000 | NA |
| NA | 1-Secured by a first lien | 205000 | 96.5 |
| NA | 1-Secured by a first lien | 450000 | 44 |
| NA | 1-Secured by a first lien | 200000 | 96.5 |
| NA | 1-Secured by a first lien | 425000 | 90 |
| NA | 1-Secured by a first lien | 240000 | 95 |
| NA | 1-Secured by a first lien | 375000 | 74 |
| NA | 1-Secured by a first lien | 415000 | 80 |
| NA | 1-Secured by a first lien | 575000 | 90 |
| NA | 1-Secured by a first lien | 355000 | 37 |
| NA | 1-Secured by a first lien | 275000 | 88 |
| NA | 1-Secured by a first lien | 133500 | 38 |
| NA | 1-Secured by a first lien | 750000 | 31 |
| NA | 1-Secured by a first lien | 475000 | 76 |
| NA | 1-Secured by a first lien | 260000 | 56 |
| NA | 1-Secured by a first lien | 2085000 | 80 |
| NA | 1-Secured by a first lien | 247500 | NA |
| NA | 1-Secured by a first lien | 1058000 | 64.98 |
| NA | 1-Secured by a first lien | 625000 | 90 |
| NA | 1-Secured by a first lien | 460000 | 88.04 |
| NA | 1-Secured by a first lien | 220000 | 96.5 |
| NA | 1-Secured by a first lien | 140000 | 70.71 |
| NA | 1-Secured by a first lien | 266000 | 96.5 |
| NA | 1-Secured by a first lien | 690000 | 54 |
| NA | 1-Secured by a first lien | 145000 | 72 |
| NA | 1-Secured by a first lien | 525000 | 90 |
| NA | 1-Secured by a first lien | 140000 | 73 |
| NA | 1-Secured by a first lien | 252000 | 90 |
| NA | 1-Secured by a first lien | 260000 | 73 |
| NA | 1-Secured by a first lien | 145000 | NA |
| NA | 1-Secured by a first lien | 210000 | 80 |
| NA | 1-Secured by a first lien | 544000 | 95 |
| NA | 1-Secured by a first lien | 128000 | NA |
| NA | 1-Secured by a first lien | 248500 | NA |
| NA | 1-Secured by a first lien | 214900 | 90 |
| NA | 1-Secured by a first lien | 199000 | NA |
| NA | 1-Secured by a first lien | 300000 | 80 |
| NA | 1-Secured by a first lien | 236000 | 62 |
| NA | 1-Secured by a first lien | 205000 | 60 |
| NA | 1-Secured by a first lien | 200000 | NA |
| NA | 1-Secured by a first lien | 465000 | NA |
| NA | 1-Secured by a first lien | 155000 | 97 |
| NA | 1-Secured by a first lien | 280000 | NA |
| NA | 1-Secured by a first lien | 417000 | 93.53 |
| NA | 1-Secured by a first lien | 300000 | 90 |
| NA | 1-Secured by a first lien | 113000 | 80 |


|  | 10-Not applicable |
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|  | 10-Not applicable |
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|  | 4-Collateral |
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|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 5-Insufficient cash (downpayment, closing costs) |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 4-Collateral |
|  | 4-Collateral |
|  | 3-Credit history |
|  | 4-Collateral |
|  | 1-Debt-to-income ratio |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
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|  | 10-Not applicable |
|  | 2-Employment history |
|  | 6-Unverifiable information |
|  | 9-Other |


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| 1-Debt-to-income ratio | 5-Insufficient cash (downpayment, closing costs) |
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| 1-Debt-to-income ratio | 5-Insufficient cash (downpayment, closing costs) |
| 2-Employment history | 1-Debt-to-income ratio |
| 5-Insufficient cash (downpayment, closing costs) | - |
| 5-Insufficient cash (downpayment, closing costs) | - |
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| 1-Debt-to-income ratio | - |
| 1-Debt-to-income ratio | - |
| 2-Employment history | 1-Debt-to-income ratio |


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|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 5-White |
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|  | 5-White |
|  | 5-White |
|  | 21-Asian Indian |
|  | 26-Vietnamese |
|  | 2-Asian |
|  | 2-Asian |
|  | 2-Asian |
|  | 3-Black or African American |
|  | 3-Black or African American |
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|  | 2-Not Hispanic or Latino |
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|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 1-Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 11-Mexican |
|  | 1-Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
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|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 14-Other Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
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|  | 2-Not Hispanic or Latino |
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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
|  | 14-Other Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 1-Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 11-Mexican |
|  | 1-Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 11-Mexican |
|  | 2-Not Hispanic or Latino |
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| 306.04 | 3-Application denied | 1 |
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| 3905.00 | 3-Application denied | 1 |
| 2101.00 | 3-Application denied | 1 |
| 6112.00 | 3-Application denied | 1 |
| 2207.02 | 1-Loan originated | 1 |
| 6611.00 | 6-Purchased loan | 1 |
| 6503.01 | 6-Purchased loan | 1 |
| 1606.02 | 6-Purchased loan | 1 |
| 5603.00 | 6-Purchased loan | 1 |
| 8366.00 | 6-Purchased loan | 4 |
| 2004.02 | 6-Purchased loan | 2 |
| 8391.00 | 1-Loan originated | 1 |
| 814.03 | 1-Loan originated | 1 |
| 5305.03 | 1-Loan originated | 1 |
| 318.00 | 6-Purchased loan | 1 |
| 814.03 | 1-Loan originated | 1 |
| 8424.00 | 1-Loan originated | 1 |
| 8386.00 | 1-Loan originated | 2 |
| 622.00 | 1-Loan originated | 1 |
| 501.00 | 1-Loan originated | 1 |
| 714.00 | 1-Loan originated | 1 |
| 302.00 | 6-Purchased loan | 1 |
| 802.02 | 1-Loan originated | 1 |
| 5607.00 | 1-Loan originated | 1 |
| 8324.00 | 6-Purchased loan | 1 |
| 310.00 | 1-Loan originated | 1 |
| 8326.00 | 1-Loan originated | 1 |
| 6603.01 | 1-Loan originated | 1 |
| 701.01 | 1-Loan originated | 1 |
| 818.00 | 1-Loan originated | 1 |
| 5607.00 | 1-Loan originated | 1 |
| 5305.01 | 1-Loan originated | 1 |
| 104.00 | 1-Loan originated | 1 |
| 307.02 | 1-Loan originated | 1 |
| 706.00 | 6-Purchased loan | 1 |
| 1505.01 | 6-Purchased loan | 1 |
| 818.00 | 6-Purchased loan | 1 |
| 7003.01 | 1-Loan originated | 1 |
| 6609.00 | 1-Loan originated | 3 |
| 313.00 | 1-Loan originated | 1 |
| 102.02 | 1-Loan originated | 1 |
| 633.02 | 1-Loan originated | 1 |
| 403.00 | 1-Loan originated | 1 |
| 612.00 | 1-Loan originated | 1 |
| 1101.00 | 1-Loan originated | 1 |
| 2227.00 | 6-Purchased loan | 1 |
| 818.00 | 1-Loan originated | 1 |
| 813.00 | 1-Loan originated | 1 |
| 2714.00 | 1-Loan originated | 1 |
| 107.01 | 6-Purchased loan | 1 |
| 713.00 | 1-Loan originated | 1 |
| 514.00 | 6-Purchased loan | 1 |
| 301.02 | 1-Loan originated | 1 |
| 1510.02 | 1-Loan originated | 2 |
| 3206.00 | 6-Purchased loan | 1 |
| 8419.00 | 1-Loan originated | 1 |
| 208.01 | 1-Loan originated | 1 |
| 608.00 | 1-Loan originated | 1 |
| 2212.00 | 6-Purchased loan | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |


| 2-Not an open-end line of credit | 104025 | 20221011 | NA | 360 |
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| 2 -Not an open-end line of credit | 110000 | 20220609 | NA | 360 |
| $2-$ Not an open-end line of credit | 684000 | 20220926 | NA | 360 |
| $2-$ Not an open-end line of credit | 143600 | 20220602 | NA | 360 |
| 2 -Not an open-end line of credit | 308750 | 20220621 | 6.125 | 360 |
| 2-Not an open-end line of credit | 266600 | NA | 4.5 | 360 |
| 2-Not an open-end line of credit | 131100 | NA | 5.625 | 360 |
| $2-$ Not an open-end line of credit | 156750 | NA | 5 | 360 |
| $2-$ Not an open-end line of credit | 233750 | NA | 3.375 | 360 |
| $2-$ Not an open-end line of credit | 438796 | NA | 5.25 | 360 |
| $2-$ Not an open-end line of credit | 232000 | NA | 3.99 | 360 |
| $2-$ Not an open-end line of credit | 196875 | 20220828 | 5.99 | 360 |
| 2-Not an open-end line of credit | 501600 | 20221010 | 6.875 | 360 |
| $2-$ Not an open-end line of credit | 171690 | 20220226 | 5.25 | 360 |
| 2-Not an open-end line of credit | 345600 | NA | 3.5 | 360 |
| 2-Not an open-end line of credit | 330000 | 20220318 | 4.375 | 360 |
| 2-Not an open-end line of credit | 263025 | 20211211 | 2.625 | 360 |
| 2-Not an open-end line of credit | 257125 | 20221024 | 6.5 | 360 |
| 2-Not an open-end line of credit | 416250 | 20211221 | 2.99 | 360 |
| 2-Not an open-end line of credit | 131500 | 20211217 | 3.25 | 360 |
| 2-Not an open-end line of credit | 185000 | 20220228 | 4.625 | 360 |
| 2-Not an open-end line of credit | 164000 | NA | 3.99 | 360 |
| 2-Not an open-end line of credit | 300000 | 20220303 | 2.875 | 360 |
| 2-Not an open-end line of credit | 147415 | 20220314 | 4.875 | 360 |
| 2-Not an open-end line of credit | 332500 | NA | 3.375 | 360 |
| 2-Not an open-end line of credit | 535200 | 20220202 | 3.625 | 360 |
| 2-Not an open-end line of credit | 436000 | 20220828 | 5.99 | 360 |
| 2-Not an open-end line of credit | 138400 | 20220818 | 5.49 | 360 |
| 2-Not an open-end line of credit | 163930 | 20220214 | 4.25 | 360 |
| 2-Not an open-end line of credit | 375000 | 20220921 | 5.75 | 360 |
| 2-Not an open-end line of credit | 257000 | 20220112 | 2.75 | 180 |
| 2-Not an open-end line of credit | 80750 | 20220317 | 4.49 | 360 |
| 2-Not an open-end line of credit | 222500 | 20220714 | 5.49 | 360 |
| 2-Not an open-end line of credit | 80350 | 20211029 | 3.375 | 360 |
| 2-Not an open-end line of credit | 227500 | NA | 3.99 | 360 |
| 2-Not an open-end line of credit | 224000 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 560000 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 255287 | 20220311 | 3.875 | 360 |
| 2-Not an open-end line of credit | 240000 | 20220516 | 5.875 | 360 |
| 2-Not an open-end line of credit | 147282 | 20220616 | 5.75 | 360 |
| 2-Not an open-end line of credit | 76146 | 20220124 | 4.25 | 360 |
| 2-Not an open-end line of credit | 211500 | 20220113 | 3.875 | 240 |
| 2-Not an open-end line of credit | 364083 | 20211213 | 2.625 | 120 |
| 2-Not an open-end line of credit | 200000 | 20220531 | 4.875 | 360 |
| 2-Not an open-end line of credit | 220000 | 20220610 | 5.375 | 360 |
| 2-Not an open-end line of credit | 252000 | NA | 3.99 | 360 |
| 2-Not an open-end line of credit | 363000 | 20220412 | 4.74 | 360 |
| 2-Not an open-end line of credit | 431500 | 20220127 | 4.25 | 360 |
| 2-Not an open-end line of credit | 271000 | 20211005 | 2.125 | 180 |
| 2-Not an open-end line of credit | 127120 | NA | 3.75 | 360 |
| 2-Not an open-end line of credit | 650000 | 20220726 | 3.875 | 360 |
| 2-Not an open-end line of credit | 369750 | NA | 2.875 | 360 |
| 2-Not an open-end line of credit | 127800 | 20211220 | 3.25 | 360 |
| 2-Not an open-end line of credit | 203400 | 20220207 | 3.75 | 360 |
| 2-Not an open-end line of credit | 210000 | NA | 3.5 | 360 |
| 2-Not an open-end line of credit | 166906 | 20220124 | 3.25 | 180 |
| 2-Not an open-end line of credit | 98400 | 20221024 | 7.625 | 360 |
| 2-Not an open-end line of credit | 119920 | 20220307 | 4.125 | 360 |
| 2-Not an open-end line of credit | 362250 | NA | 3.875 | 360 |


| NA | 1-Secured by a first lien | 109500 | 95 |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 165000 | 67 |
| NA | 1-Secured by a first lien | 1140000 | 60 |
| NA | 1-Secured by a first lien | 179500 | 80 |
| NA | 1-Secured by a first lien | 325000 | 95 |
| NA | 1-Secured by a first lien | 275000 | NA |
| NA | 1-Secured by a first lien | 138000 | NA |
| NA | 1-Secured by a first lien | 165000 | NA |
| NA | 1-Secured by a first lien | 275000 | NA |
| NA | 1-Secured by a first lien | 575000 | NA |
| NA | 1-Secured by a first lien | 390000 | NA |
| NA | 1-Secured by a first lien | 262500 | 75 |
| NA | 1-Secured by a first lien | 530000 | 95 |
| NA | 1-Secured by a first lien | 177000 | 97 |
| NA | 1-Secured by a first lien | 432000 | NA |
| NA | 1-Secured by a first lien | 500000 | 66 |
| NA | 1-Secured by a first lien | 292250 | 90 |
| NA | 1-Secured by a first lien | 302500 | 85 |
| NA | 1-Secured by a first lien | 555000 | 75 |
| NA | 1-Secured by a first lien | 299000 | 44 |
| NA | 1-Secured by a first lien | 295000 | 63 |
| NA | 1-Secured by a first lien | 205000 | NA |
| NA | 1-Secured by a first lien | 400000 | 75 |
| NA | 1-Secured by a first lien | 293000 | 51 |
| NA | 1-Secured by a first lien | 350000 | NA |
| NA | 1-Secured by a first lien | 669000 | 80 |
| NA | 1-Secured by a first lien | 545000 | 80 |
| NA | 1-Secured by a first lien | 173000 | 80 |
| NA | 1-Secured by a first lien | 169000 | 97 |
| NA | 1-Secured by a first lien | 475000 | 79 |
| NA | 1-Secured by a first lien | 350000 | 74 |
| NA | 1-Secured by a first lien | 95000 | 85 |
| NA | 1-Secured by a first lien | 255000 | 88 |
| NA | 1-Secured by a first lien | 100000 | 84 |
| NA | 1-Secured by a first lien | 287500 | NA |
| NA | 1-Secured by a first lien | 280000 | NA |
| NA | 1-Secured by a first lien | 700000 | NA |
| NA | 1-Secured by a first lien | 260000 | 96.5 |
| NA | 1-Secured by a first lien | 340000 | 71 |
| NA | 1-Secured by a first lien | 150000 | 96.5 |
| NA | 1-Secured by a first lien | 140000 | 55 |
| NA | 1-Secured by a first lien | 295000 | 72 |
| NA | 1-Secured by a first lien | 810000 | 57 |
| NA | 1-Secured by a first lien | 610000 | 33 |
| NA | 1-Secured by a first lien | 470000 | 47 |
| NA | 1-Secured by a first lien | 315000 | NA |
| NA | 1-Secured by a first lien | 484000 | 75 |
| NA | 1-Secured by a first lien | 555000 | 78 |
| NA | 1-Secured by a first lien | 370000 | 74 |
| NA | 1-Secured by a first lien | 181600 | NA |
| NA | 1-Secured by a first lien | 1200000 | 54.16 |
| NA | 1-Secured by a first lien | 493000 | NA |
| NA | 1-Secured by a first lien | 142000 | 90 |
| NA | 1-Secured by a first lien | 425000 | 48 |
| NA | 1-Secured by a first lien | 300000 | NA |
| NA | 1-Secured by a first lien | 355000 | 48 |
| NA | 1-Secured by a first lien | 123000 | 80 |
| NA | 1-Secured by a first lien | 150000 | 80 |
| NA | 1-Secured by a first lien | 450000 | NA |


|  | 9-Other |
| :---: | :---: |
|  | 1-Debt-to-income ratio |
|  | 1-Debt-to-income ratio |
|  | 3-Credit history |
|  | 10-Not applicable |
|  | 10-Not applicable |
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| 6-Unverifiable information | 5-Insufficient cash (downpayment, closing costs) |
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| 12-Puerto Rican |  |
| 13-Cuban |  |
| 11-Mexican |  |
| 1-Hispanic or Latino |  |
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| 11-Mexican |  |
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| 818.00 | 1-Loan originated | 1 |
| :---: | :---: | :---: |
| 8330.00 | 1-Loan originated | 1 |
| 5701.00 | 1-Loan originated | 1 |
| 1105.01 | 1-Loan originated | 1 |
| 1406.02 | 1-Loan originated | 1 |
| 1005.00 | 1-Loan originated | 1 |
| 902.00 | 6-Purchased loan | 1 |
| 313.00 | 6-Purchased loan | 1 |
| 4907.00 | 6-Purchased loan | 1 |
| 6504.00 | 1-Loan originated | 1 |
| 2210.00 | 1-Loan originated | 1 |
| 702.00 | 1-Loan originated | 1 |
| 802.01 | 6-Purchased loan | 1 |
| 8438.00 | 6-Purchased loan | 1 |
| 2212.00 | 1-Loan originated | 1 |
| 1608.00 | 1-Loan originated | 2 |
| 619.02 | 1-Loan originated | 1 |
| 2435.00 | 6-Purchased loan | 1 |
| 3301.02 | 1-Loan originated | 1 |
| 1504.02 | 6-Purchased loan | 1 |
| 5611.00 | 1-Loan originated | 1 |
| 1104.00 | 6-Purchased loan | 1 |
| 209.01 | 1-Loan originated | 1 |
| 8323.00 | 1-Loan originated | 1 |
| 1004.00 | 6-Purchased loan | 1 |
| 1904.02 | 1-Loan originated | 1 |
| 7005.02 | 6-Purchased loan | 1 |
| 8363.00 | 1-Loan originated | 1 |
| 1511.00 | 6-Purchased loan | 1 |
| 8366.00 | 6-Purchased loan | 2 |
| 2312.00 | 1-Loan originated | 2 |
| 8430.00 | 6-Purchased loan | 1 |
| 609.00 | 3-Application denied | 1 |
| 812.01 | 1-Loan originated | 1 |
| 8331.00 | 1-Loan originated | 1 |
| 8390.00 | 1-Loan originated | 1 |
| 505.00 | 6-Purchased loan | 1 |
| 107.01 | 1-Loan originated | 1 |
| 712.00 | 1-Loan originated | 1 |
| 206.01 | 1-Loan originated | 1 |
| 813.00 | 3-Application denied | 1 |
| 701.02 | 6-Purchased loan | 1 |
| 8428.00 | 6-Purchased loan | 1 |
| 8322.00 | 1-Loan originated | 2 |
| 4112.00 | 6-Purchased loan | 1 |
| 2315.00 | 6-Purchased loan | 1 |
| 1510.02 | 6-Purchased loan | 1 |
| 813.00 | 6-Purchased loan | 1 |
| 2804.00 | 1-Loan originated | 1 |
| 609.00 | 6-Purchased loan | 1 |
| 2434.00 | 6-Purchased loan | 1 |
| 612.00 | 6-Purchased loan | 1 |
| 815.00 | 1-Loan originated | 1 |
| 812.01 | 1-Loan originated | 1 |
| 315.02 | 1-Loan originated | 4 |
| 1408.00 | 1-Loan originated | 1 |
| 4302.00 | 1-Loan originated | 1 |
| 1708.00 | 1-Loan originated | 1 |
| 8312.00 | 6-Purchased loan | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |


| 2-Not an open-end line of credit | 482400 | 20220203 | 5.375 | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 541500 | 20220725 | 4.99 | 360 |
| 2-Not an open-end line of credit | 296305 | 20220409 | 5 | 360 |
| 2-Not an open-end line of credit | 230011 | 20211118 | 2.875 | 240 |
| 2-Not an open-end line of credit | 109162 | 20220201 | 3.125 | 180 |
| 2-Not an open-end line of credit | 216000 | 20220301 | 3.875 | 360 |
| 2-Not an open-end line of credit | 170905 | NA | 5.125 | 360 |
| 2-Not an open-end line of credit | 258000 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 232750 | NA | 5.375 | 360 |
| 2-Not an open-end line of credit | 126400 | 20220113 | 3.125 | 180 |
| 2-Not an open-end line of credit | 93410 | 20211011 | 1.875 | 120 |
| 2-Not an open-end line of credit | 522500 | 20220112 | 5.125 | 360 |
| 2-Not an open-end line of credit | 235125 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 185000 | NA | 6.5 | 360 |
| 2-Not an open-end line of credit | 312000 | 20220426 | 5.49 | 360 |
| 2-Not an open-end line of credit | 300000 | 20220104 | 3.49 | 240 |
| 2-Not an open-end line of credit | 208200 | 20220121 | 3.125 | 360 |
| 2-Not an open-end line of credit | 150000 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 313200 | 20220525 | 5.375 | 240 |
| 2-Not an open-end line of credit | 223731.89 | NA | 6.875 | 360 |
| 2-Not an open-end line of credit | 304580 | 20220614 | 5.49 | 360 |
| 2-Not an open-end line of credit | 126653.83 | NA | 2.875 | 360 |
| 2-Not an open-end line of credit | 290250 | 20211213 | 3.25 | 360 |
| 2-Not an open-end line of credit | 432000 | 20220314 | 4.25 | 360 |
| 2-Not an open-end line of credit | 341905 | NA | 2.99 | 360 |
| 2-Not an open-end line of credit | 389500 | 20211208 | 3.125 | 360 |
| 2-Not an open-end line of credit | 177600 | NA | 5.99 | 360 |
| 2-Not an open-end line of credit | 302000 | 20211228 | 3.25 | 360 |
| 2-Not an open-end line of credit | 253000 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 319113 | NA | 4.625 | 360 |
| 2-Not an open-end line of credit | 43150 | 20220201 | 3.75 | 120 |
| 2-Not an open-end line of credit | 280000 | NA | 3.5 | 360 |
| 2-Not an open-end line of credit | 165000 | 20211020 | NA | 360 |
| 2-Not an open-end line of credit | 153000 | 20211207 | 2.625 | 180 |
| 2-Not an open-end line of credit | 450900 | 20220517 | 4.625 | 360 |
| 2-Not an open-end line of credit | 106875 | 20220202 | 3.49 | 120 |
| 2-Not an open-end line of credit | 220027 | NA | 5.375 | 360 |
| 2-Not an open-end line of credit | 94411 | 20220202 | 4.375 | 360 |
| 2-Not an open-end line of credit | 437500 | 20220831 | 4.99 | 360 |
| 2-Not an open-end line of credit | 329600 | 20211214 | 3.375 | 360 |
| 2-Not an open-end line of credit | 323000 | 20211029 | NA | 240 |
| 2-Not an open-end line of credit | 96000 | NA | 3.375 | 360 |
| 2-Not an open-end line of credit | 412250 | NA | 4.575 | 360 |
| 2-Not an open-end line of credit | 1000000 | 20220610 | 4.375 | 360 |
| 2-Not an open-end line of credit | 288000 | NA | 4.875 | 360 |
| 2-Not an open-end line of credit | 204250 | NA | 4.99 | 360 |
| 2-Not an open-end line of credit | 351920 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 96750 | NA | 5.575 | 360 |
| 2-Not an open-end line of credit | 239920 | 20211203 | 3.375 | 360 |
| 2-Not an open-end line of credit | 184775 | NA | 5.375 | 360 |
| 2-Not an open-end line of credit | 210000 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 205000 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 1062500 | 20211110 | 2.750 | 360 |
| 2-Not an open-end line of credit | 773500 | 20220428 | 3.625 | 360 |
| 2-Not an open-end line of credit | 725000 | 20211022 | 3.375 | 360 |
| 2-Not an open-end line of credit | 823000 | 20211217 | 2.75 | 240 |
| 2-Not an open-end line of credit | 680000 | 20220602 | 4.625 | 360 |
| 2-Not an open-end line of credit | 134300 | 20211009 | 2.625 | 180 |
| 2-Not an open-end line of credit | 361000 | NA | 3.8 | 360 |


| NA | 1-Secured by a first lien | 536000 | 90 |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 570000 | 95 |
| NA | 1-Secured by a first lien | 311900 | 95 |
| NA | 1-Secured by a first lien | 370000 | 63 |
| NA | 1-Secured by a first lien | 400000 | 28 |
| NA | 1-Secured by a first lien | 270000 | 80 |
| NA | 1-Secured by a first lien | 179900 | NA |
| NA | 1-Secured by a first lien | 344000 | NA |
| NA | 1-Secured by a first lien | 245000 | NA |
| NA | 1-Secured by a first lien | 205000 | 62 |
| NA | 1-Secured by a first lien | 380000 | 25 |
| NA | 1-Secured by a first lien | 550000 | 95 |
| NA | 1-Secured by a first lien | 247500 | NA |
| NA | 1-Secured by a first lien | 249000 | NA |
| NA | 1-Secured by a first lien | 390000 | 80 |
| NA | 1-Secured by a first lien | 455000 | 66 |
| NA | 1-Secured by a first lien | 355000 | 59 |
| NA | 1-Secured by a first lien | 295000 | NA |
| NA | 1-Secured by a first lien | 391500 | 80 |
| NA | 1-Secured by a first lien | 279900 | NA |
| NA | 1-Secured by a first lien | 314000 | 97 |
| NA | 1-Secured by a first lien | 155000 | NA |
| NA | 1-Secured by a first lien | 322500 | 90 |
| NA | 1-Secured by a first lien | 480000 | 90 |
| NA | 1-Secured by a first lien | 359900 | NA |
| NA | 1-Secured by a first lien | 410000 | 95 |
| NA | 1-Secured by a first lien | 222000 | NA |
| NA | 1-Secured by a first lien | 410000 | 74 |
| NA | 1-Secured by a first lien | 338000 | NA |
| NA | 1-Secured by a first lien | 325000 | NA |
| NA | 1-Secured by a first lien | 330000 | 14 |
| NA | 1-Secured by a first lien | 300000 | NA |
| NA | 1-Secured by a first lien | 220000 | 75 |
| NA | 1-Secured by a first lien | 170000 | 90 |
| NA | 1-Secured by a first lien | 501000 | 90 |
| NA | 1-Secured by a first lien | 142500 | 75 |
| NA | 1-Secured by a first lien | 275000 | NA |
| NA | 1-Secured by a first lien | 128000 | 74 |
| NA | 1-Secured by a first lien | 700000 | 63 |
| NA | 1-Secured by a first lien | 450000 | 74 |
| NA | 1-Secured by a first lien | 800000 | 41 |
| NA | 1-Secured by a first lien | 120000 | NA |
| NA | 1-Secured by a first lien | 485000 | NA |
| NA | 1-Secured by a first lien | 1000000 | 100.000 |
| NA | 1-Secured by a first lien | 320000 | NA |
| NA | 1-Secured by a first lien | 215000 | NA |
| NA | 1-Secured by a first lien | 439900 | NA |
| NA | 1-Secured by a first lien | 129000 | NA |
| NA | 1-Secured by a first lien | 299900 | 80 |
| NA | 1-Secured by a first lien | 194500 | NA |
| NA | 1-Secured by a first lien | 280000 | NA |
| NA | 1-Secured by a first lien | 305000 | NA |
| NA | 1-Secured by a first lien | 1250000 | 85.000 |
| NA | 1-Secured by a first lien | 910000 | 85.000 |
| NA | 1-Secured by a first lien | 1905000 | 38.058 |
| NA | 1-Secured by a first lien | 1260000 | 65.31 |
| NA | 1-Secured by a first lien | 850000 | 80 |
| NA | 1-Secured by a first lien | 235000 | 58 |
| NA | 1-Secured by a first lien | 380000 | NA |


|  | 10-Not applicable |
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|  | 3-Credit history |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
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|  | 4-Collateral |
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|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6 -Information not provided by applicant in mail, internet, or telephone application |
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|  | 6 -Information not provided by applicant in mail, internet, or telephone application |
|  | 6 -Information not provided by applicant in mail, internet, or telephone application |
|  | 21-Asian Indian |
|  | 21-Asian Indian |
|  | 21-Asian Indian |
|  | 21-Asian Indian |
|  | 22-Chinese |
|  | 22-Chinese |
|  | 22-Chinese |
|  | 25-Korean |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6 -Information not provided by applicant in mail, internet, or telephone application |
|  | 6 -Information not provided by applicant in mail, internet, or telephone application |
|  | 6 -Information not provided by applicant in mail, internet, or telephone application |
|  | 6 -Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Black or African American |
|  | 5-White |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6 -Information not provided by applicant in mail, internet, or telephone application |
|  | 6 -Information not provided by applicant in mail, internet, or telephone application |
|  | 6 -Information not provided by applicant in mail, internet, or telephone application |
|  | 6 -Information not provided by applicant in mail, internet, or telephone application |
|  | 7-Not applicable |
|  | 7-Not applicable |
|  | 7-Not applicable |
|  | 3-Black or African American |
|  | 3-Black or African American |
|  | 3-Black or African American |
|  | 2-Asian |


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| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
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| 6-Information not provided by applicant in mail, internet, or telephone application |
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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 4-Not applicable |
|  | 4-Not applicable |
|  | 4-Not applicable |
|  | 1-Male |
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| 2-Not Hispanic or Latino |
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| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 11-Mexican |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
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| 1-Hispanic or Latino |
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| 1-Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 1-Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 1-Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
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| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 4-Not applicable |
| 4-Not applicable |
| 4-Not applicable |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 11-Mexican |
| 2-Not Hispanic or Latino |




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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
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| 1002.00 | 6-Purchased loan | 2 |
| :---: | :---: | :---: |
| 209.02 | 1-Loan originated | 1 |
| 2413.00 | 1-Loan originated | 1 |
| 307.02 | 1-Loan originated | 1 |
| 8323.00 | 6-Purchased loan | 1 |
| 1003.00 | 6-Purchased loan | 1 |
| 1901.00 | 3-Application denied | 2 |
| 6305.00 | 3-Application denied | 1 |
| 704.00 | 1-Loan originated | 1 |
| 105.03 | 1-Loan originated | 2 |
| 204.00 | 1-Loan originated | 1 |
| 6610.00 | 1-Loan originated | 1 |
| 902.00 | 1-Loan originated | 1 |
| 711.00 | 1-Loan originated | 1 |
| 801.00 | 1-Loan originated | 1 |
| 1908.00 | 1-Loan originated | 3 |
| 7402.00 | 1-Loan originated | 1 |
| 6203.00 | 1-Loan originated | 1 |
| 817.00 | 1-Loan originated | 1 |
| 630.00 | 6-Purchased loan | 1 |
| 1103.00 | 1-Loan originated | 1 |
| 8397.00 | 1-Loan originated | 1 |
| 8420.00 | 1-Loan originated | 1 |
| 7107.00 | 1-Loan originated | 2 |
| 7110.00 | 1-Loan originated | 1 |
| 2519.00 | 1-Loan originated | 1 |
| 1608.00 | 3-Application denied | 2 |
| 7307.00 | 1-Loan originated | 1 |
| 3301.01 | 1-Loan originated | 1 |
| 8322.00 | 3-Application denied | 1 |
| 6007.00 | 3-Application denied | 2 |
| 2309.00 | 3-Application denied | 1 |
| 1508.00 | 3-Application denied | 1 |
| 706.00 | 3-Application denied | 1 |
| 2304.00 | 6-Purchased loan | 1 |
| 7402.00 | 1-Loan originated | 1 |
| 6408.00 | 1-Loan originated | 1 |
| 1004.00 | 6-Purchased loan | 1 |
| 4108.00 | 1-Loan originated | 1 |
| 634.00 | 6-Purchased loan | 1 |
| 8424.00 | 1-Loan originated | 1 |
| 6309.00 | 1-Loan originated | 1 |
| 2405.00 | 1-Loan originated | 1 |
| 1105.02 | 1-Loan originated | 1 |
| 8423.00 | 1-Loan originated | 1 |
| 5609.00 | 1-Loan originated | 1 |
| 1608.00 | 6-Purchased loan | 1 |
| 6504.00 | 6-Purchased loan | 1 |
| 1403.02 | 1-Loan originated | 1 |
| 8309.00 | 1-Loan originated | 1 |
| 8316.00 | 6-Purchased loan | 1 |
| 2101.00 | 1-Loan originated | 2 |
| 703.00 | 1-Loan originated | 1 |
| 710.00 | 1-Loan originated | 1 |
| 702.00 | 1-Loan originated | 1 |
| 1404.00 | 1-Loan originated | 1 |
| 2207.01 | 1-Loan originated | 1 |
| 8421.00 | 1-Loan originated | 1 |
| 2421.00 | 1-Loan originated | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improvement |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |


| 2-Not an open-end line of credit | 412000 | NA | 4.25 | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 154000 | 20220114 | 4 | 360 |
| 2-Not an open-end line of credit | 370500 | 20220516 | 5.875 | 360 |
| 2-Not an open-end line of credit | 119310 | 20221028 | 7.875 | 360 |
| 2-Not an open-end line of credit | 1194250 | NA | 4 | 360 |
| 2-Not an open-end line of credit | 197625 | NA | 6.25 | 360 |
| 2-Not an open-end line of credit | 215057 | 20220606 | NA | 360 |
| 2-Not an open-end line of credit | 294565 | 20220329 | NA | 360 |
| 2-Not an open-end line of credit | 152000 | 20220804 | 5.99 | 360 |
| 2-Not an open-end line of credit | 524000 | 20211216 | 2.5 | 240 |
| 2-Not an open-end line of credit | 88000 | 20220217 | 3.865 | 360 |
| 2-Not an open-end line of credit | 256500 | 20220824 | 5.625 | 360 |
| 2-Not an open-end line of credit | 816750 | 20220126 | 3.875 | 360 |
| 2-Not an open-end line of credit | 970000 | 20211001 | 2.75 | 360 |
| 2-Not an open-end line of credit | 225000 | 20220308 | 3.25 | 180 |
| 2-Not an open-end line of credit | 396825 | 20220520 | 4.625 | 360 |
| 2-Not an open-end line of credit | 204250 | 20211124 | 3.375 | 360 |
| 2-Not an open-end line of credit | 60000 | 20220405 | 4.25 | 240 |
| 2-Not an open-end line of credit | 221250 | 20220701 | 4.375 | 180 |
| 2-Not an open-end line of credit | 331000 | NA | 2.5 | 180 |
| 2-Not an open-end line of credit | 317200 | 20220725 | 4.875 | 360 |
| 2-Not an open-end line of credit | 503920 | 20220313 | 4.125 | 360 |
| 2-Not an open-end line of credit | 840000 | 20220706 | 4.375 | 360 |
| 2-Not an open-end line of credit | 203560 | 20220127 | 4.875 | 360 |
| 2-Not an open-end line of credit | 127000 | 20211213 | 4 | 360 |
| 2-Not an open-end line of credit | 195453 | 20220707 | 5.25 | 360 |
| 2-Not an open-end line of credit | 467500 | 20220916 | NA | 360 |
| 2-Not an open-end line of credit | 332908 | 20210727 | 2.99 | 360 |
| 2-Not an open-end line of credit | 328000 | 20220801 | 6.75 | 360 |
| 2-Not an open-end line of credit | 897000 | 20220322 | NA | 360 |
| 2-Not an open-end line of credit | 218000 | 20220920 | NA | 360 |
| 2-Not an open-end line of credit | 187000 | 20211221 | NA | 360 |
| 2-Not an open-end line of credit | 568000 | 20220110 | NA | 360 |
| 2-Not an open-end line of credit | 900000 | 20220420 | NA | 360 |
| 2-Not an open-end line of credit | 205000 | NA | 3.375 | 240 |
| 2-Not an open-end line of credit | 272000 | 20220606 | 6 | 240 |
| 2-Not an open-end line of credit | 94656 | 20211222 | 2.75 | 240 |
| 2-Not an open-end line of credit | 399500 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 202000 | 20220819 | 6.125 | 240 |
| 2-Not an open-end line of credit | 316200 | NA | 3.75 | 360 |
| 2-Not an open-end line of credit | 600000 | 20220222 | 3.75 | 360 |
| 2-Not an open-end line of credit | 153500 | 20220325 | 3.25 | 180 |
| 2-Not an open-end line of credit | 1086800 | 20220128 | 2.625 | 360 |
| 2-Not an open-end line of credit | 208000 | 20220831 | 6.99 | 360 |
| 2-Not an open-end line of credit | 550000 | 20220412 | 4.375 | 360 |
| 2-Not an open-end line of credit | 121600 | 20211029 | 3 | 360 |
| 2-Not an open-end line of credit | 421600 | NA | 3 | 360 |
| 2-Not an open-end line of credit | 171440 | NA | 4.5 | 360 |
| 2-Not an open-end line of credit | 184000 | 20220826 | 5.75 | 360 |
| 2-Not an open-end line of credit | 228341 | 20220419 | 4.625 | 180 |
| 2-Not an open-end line of credit | 165000 | NA | 2.625 | 180 |
| 2-Not an open-end line of credit | 166000 | 20211027 | 2.75 | 120 |
| 2-Not an open-end line of credit | 600000 | 20211213 | 2.875 | 360 |
| 2-Not an open-end line of credit | 360000 | 20220128 | 3.49 | 240 |
| 2-Not an open-end line of credit | 408000 | 20220911 | 5.875 | 360 |
| 2-Not an open-end line of credit | 287920 | 20220422 | 5.25 | 360 |
| 2-Not an open-end line of credit | 645000 | 20220209 | 4.875 | 360 |
| 2-Not an open-end line of credit | 287300 | 20211118 | 3 | 360 |
| 2-Not an open-end line of credit | 580000 | 20220501 | 5.25 | 360 |


| NA | 1-Secured by a first lien | 515000 | NA |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 192500 | 80 |
| NA | 1-Secured by a first lien | 390000 | 95 |
| NA | 1-Secured by a first lien | 123000 | 97 |
| NA | 1-Secured by a first lien | 1405000 | NA |
| NA | 1-Secured by a first lien | 232500 | NA |
| NA | 1-Secured by a first lien | 300000 | 72 |
| NA | 1-Secured by a first lien | 300000 | 96.5 |
| NA | 1-Secured by a first lien | 190000 | 80 |
| NA | 1-Secured by a first lien | 855000 | 62 |
| NA | 1-Secured by a first lien | 110000 | 80 |
| NA | 1-Secured by a first lien | 270000 | 95 |
| NA | 1-Secured by a first lien | 1089000 | 75 |
| NA | 1-Secured by a first lien | 1670000 | 64.9 |
| NA | 1-Secured by a first lien | 485000 | 47 |
| NA | 1-Secured by a first lien | 440000 | 88.64 |
| NA | 1-Secured by a first lien | 215000 | 95 |
| NA | 1-Secured by a first lien | 118900 | 51 |
| NA | 1-Secured by a first lien | 295000 | 75 |
| NA | 1-Secured by a first lien | 705000 | NA |
| NA | 1-Secured by a first lien | 396500 | 80 |
| NA | 1-Secured by a first lien | 629900 | 80 |
| NA | 1-Secured by a first lien | 1200000 | 70 |
| NA | 1-Secured by a first lien | 310000 | 66 |
| NA | 1-Secured by a first lien | 200000 | 64 |
| NA | 1-Secured by a first lien | 199060 | 96.5 |
| NA | 1-Secured by a first lien | 550000 | 85 |
| NA | 1-Secured by a first lien | 400000 | 84 |
| NA | 1-Secured by a first lien | 410000 | 80 |
| NA | 1-Secured by a first lien | 1200000 | 74.75 |
| NA | 1-Secured by a first lien | 330000 | 67 |
| NA | 1-Secured by a first lien | 289000 | 65 |
| NA | 1-Secured by a first lien | 710000 | 80 |
| NA | 1-Secured by a first lien | 1000000 | 90 |
| NA | 1-Secured by a first lien | 335000 | NA |
| NA | 1-Secured by a first lien | 340000 | 80 |
| NA | 1-Secured by a first lien | 280000 | 34 |
| NA | 1-Secured by a first lien | 425000 | NA |
| NA | 1-Secured by a first lien | 315000 | 65 |
| NA | 1-Secured by a first lien | 340000 | NA |
| NA | 1-Secured by a first lien | 800000 | 75 |
| NA | 1-Secured by a first lien | 246000 | 63 |
| NA | 1-Secured by a first lien | 1358500 | 80.000 |
| NA | 1-Secured by a first lien | 260000 | 80 |
| NA | 1-Secured by a first lien | 900000 | 62 |
| NA | 1-Secured by a first lien | 300000 | 41 |
| NA | 1-Secured by a first lien | 527000 | NA |
| NA | 1-Secured by a first lien | 214300 | NA |
| NA | 1-Secured by a first lien | 260000 | 71 |
| NA | 1-Secured by a first lien | 360000 | 64 |
| NA | 1-Secured by a first lien | 340000 | NA |
| NA | 1-Secured by a first lien | 590000 | 29 |
| NA | 1-Secured by a first lien | 1200000 | 50 |
| NA | 1-Secured by a first lien | 400000 | 90 |
| NA | 1-Secured by a first lien | 510000 | 80 |
| NA | 1-Secured by a first lien | 359900 | 80 |
| NA | 1-Secured by a first lien | 730000 | 89 |
| NA | 1-Secured by a first lien | 550000 | 53 |
| NA | 1-Secured by a first lien | 640000 | 91 |


|  | 10-Not applicable |
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|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 4-Collateral |
|  | 3-Credit history |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
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|  | 10-Not applicable |
|  | 4-Collateral |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 2-Employment history |
|  | 9-Other |
|  | 1-Debt-to-income ratio |
|  | 1-Debt-to-income ratio |
|  | 4-Collateral |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
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| 1-Debt-to-income ratio | 5-Insufficient cash (downpayment, closing costs) |
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| 1-Debt-to-income ratio | - |
| 3-Credit history | - |
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| 21-Asian Indian | - |
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| 22-Chinese | - |
| 23-Filipino | - |
| 23-Filipino | - |
| 27-Other Asian | - |
| 27-Other Asian | - |
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|  | 8-No co-applicant |
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|  | 8-No co-applicant |
|  | 8-No co-applicant |
|  | 8-No co-applicant |
|  | 5-White |
|  | 8-No co-applicant |
|  | 5-White |
|  | 5-White |
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|  | 5-White |
|  | 5-White |
|  | 5-White |
|  | 5-White |
|  | 21-Asian Indian |
|  | 2-Asian |
|  | 2-Asian |
|  | 2-Asian |
|  | 5-White |
|  | 3-Black or African American |
|  | 3-Black or African American |
|  | 3-Black or African American |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6 -Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Asian |
|  | 5-White |
|  | 5-White |
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| 1-Male1-Male |  |
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| 5-No co-applicant |
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| 5-No co-applicant |
| 5-No co-applicant |
| 5-No co-applicant |
| 2-Not Hispanic or Latino |
| 5-No co-applicant |
| 11-Mexican |
| 11-Mexican |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 14-Other Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 14-Other Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 11-Mexican |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 11-Mexican |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
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| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |



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| 317.00 | 1-Loan originated | 1 |
| :---: | :---: | :---: |
| 1611.00 | 6-Purchased loan | 1 |
| 8310.00 | 1-Loan originated | 1 |
| 1507.00 | 1-Loan originated | 1 |
| 2414.00 | 1-Loan originated | 1 |
| 2214.00 | 1-Loan originated | 1 |
| 204.00 | 6-Purchased loan | 1 |
| 317.00 | 1-Loan originated | 1 |
| 2413.00 | 1-Loan originated | 1 |
| 2405.00 | 1-Loan originated | 1 |
| 8104.00 | 6-Purchased loan | 1 |
| 1105.01 | 1-Loan originated | 1 |
| 3201.01 | 6-Purchased loan | 1 |
| 1612.00 | 1-Loan originated | 3 |
| 8423.00 | 1-Loan originated | 1 |
| 302.00 | 1-Loan originated | 1 |
| 8430.00 | 1-Loan originated | 1 |
| 706.00 | 1-Loan originated | 1 |
| 814.03 | 1-Loan originated | 1 |
| 512.00 | 1-Loan originated | 1 |
| 512.00 | 1-Loan originated | 3 |
| 902.00 | 6-Purchased loan | 2 |
| 8420.00 | 6-Purchased loan | 1 |
| 2301.00 | 6-Purchased loan | 2 |
| 1101.00 | 1-Loan originated | 1 |
| 604.00 | 1-Loan originated | 1 |
| 303.00 | 1-Loan originated | 1 |
| 2001.00 | 1-Loan originated | 1 |
| 703.00 | 1-Loan originated | 1 |
| 1913.02 | 1-Loan originated | 1 |
| 2422.00 | 6-Purchased loan | 1 |
| 812.02 | 1-Loan originated | 1 |
| 712.00 | 6-Purchased loan | 1 |
| 626.00 | 6-Purchased loan | 1 |
| 1201.00 | 1-Loan originated | 1 |
| 716.00 | 1-Loan originated | 1 |
| 812.02 | 1-Loan originated | 1 |
| 202.00 | 6-Purchased loan | 1 |
| 713.00 | 6-Purchased loan | 1 |
| 4112.00 | 1-Loan originated | 1 |
| 8324.00 | 1-Loan originated | 1 |
| 812.01 | 1-Loan originated | 1 |
| 6308.00 | 1-Loan originated | 1 |
| 1710.00 | 6-Purchased loan | 1 |
| 705.00 | 1-Loan originated | 1 |
| 902.00 | 1-Loan originated | 1 |
| 1203.00 | 1-Loan originated | 1 |
| 2819.00 | 6-Purchased loan | 1 |
| 5611.00 | 1-Loan originated | 1 |
| 703.00 | 1-Loan originated | 1 |
| 8428.00 | 6-Purchased loan | 1 |
| 8311.00 | 1-Loan originated | 1 |
| 2434.00 | 1-Loan originated | 1 |
| 208.02 | 1-Loan originated | 1 |
| 207.02 | 1-Loan originated | 4 |
| 704.00 | 1-Loan originated | 1 |
| 317.00 | 6-Purchased loan | 1 |
| 513.00 | 1-Loan originated | 1 |
| 321.00 | 6-Purchased loan | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refina |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |


| 2-Not an open-end line of credit | 342000 | 20211221 | 2.875 | 360 |
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| 2-Not an open-end line of credit | 1140000 | NA | 5 | 360 |
| 2-Not an open-end line of credit | 749700 | 20220606 | 4.5 | 360 |
| 2-Not an open-end line of credit | 148424 | 20220411 | 5.49 | 360 |
| 2-Not an open-end line of credit | 1596000 | 20220215 | 3.25 | 360 |
| 2-Not an open-end line of credit | 76000 | 20211116 | 2.625 | 120 |
| 2-Not an open-end line of credit | 238500 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 241680 | 20211018 | 3.25 | 360 |
| 2-Not an open-end line of credit | 660000 | 20220510 | 4.625 | 360 |
| 2-Not an open-end line of credit | 432500 | 20220202 | 3.375 | 180 |
| 2-Not an open-end line of credit | 575200 | NA | 2.375 | 180 |
| 2-Not an open-end line of credit | 166498 | 20220110 | 3.25 | 360 |
| 2-Not an open-end line of credit | 1677469.66 | NA | 3.75 | 360 |
| 2-Not an open-end line of credit | 412000 | 20211130 | 2.625 | 180 |
| 2-Not an open-end line of credit | 648000 | 20220222 | 3.375 | 360 |
| 2-Not an open-end line of credit | 336020 | 20211214 | 2.49 | 180 |
| 2-Not an open-end line of credit | 1044000 | 20220419 | 4 | 360 |
| 2-Not an open-end line of credit | 546000 | 20211110 | 2.75 | 360 |
| 2-Not an open-end line of credit | 647250 | 20220113 | 3.25 | 360 |
| 2-Not an open-end line of credit | 396350 | 20220120 | 2.875 | 360 |
| 2-Not an open-end line of credit | 688000 | 20210913 | 3 | 360 |
| 2-Not an open-end line of credit | 427500 | NA | 4.25 | 360 |
| 2-Not an open-end line of credit | 364000 | NA | 5.375 | 360 |
| 2-Not an open-end line of credit | 384000 | NA | 3.5 | 360 |
| 2-Not an open-end line of credit | 280000 | 20220208 | 3.49 | 180 |
| 2-Not an open-end line of credit | 647200 | 20220707 | 5.125 | 360 |
| 2-Not an open-end line of credit | 600000 | 20220504 | 5.375 | 360 |
| 2-Not an open-end line of credit | 304385 | 20220801 | 4.49 | 360 |
| 2-Not an open-end line of credit | 1083750 | 20220509 | 3.625 | 360 |
| 2-Not an open-end line of credit | 253650 | 20220407 | 5.25 | 360 |
| 2-Not an open-end line of credit | 647200 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 1425000 | 20220621 | 4.25 | 360 |
| 2-Not an open-end line of credit | 896000 | NA | 5.125 | 360 |
| 2-Not an open-end line of credit | 270000 | NA | 4.875 | 360 |
| 2-Not an open-end line of credit | 435000 | 20220210 | 3.875 | 360 |
| 2-Not an open-end line of credit | 479850 | 20211027 | 2.99 | 360 |
| 2-Not an open-end line of credit | 163000 | 20220222 | 4.25 | 360 |
| 2-Not an open-end line of credit | 456000 | NA | 3.99 | 360 |
| 2-Not an open-end line of credit | 774002.4 | NA | 4.625 | 360 |
| 2-Not an open-end line of credit | 520037 | 20211209 | 2.99 | 300 |
| 2-Not an open-end line of credit | 688000 | 20220924 | 6.125 | 360 |
| 2-Not an open-end line of credit | 464000 | 20220707 | 5.625 | 360 |
| 2-Not an open-end line of credit | 209000 | 20220920 | 6.375 | 360 |
| 2-Not an open-end line of credit | 451250 | NA | 4.55 | 360 |
| 2-Not an open-end line of credit | 776000 | 20220118 | 3.125 | 360 |
| 2-Not an open-end line of credit | 748000 | 20220215 | 4.625 | 360 |
| 2-Not an open-end line of credit | 275000 | 20220514 | 4.875 | 240 |
| 2-Not an open-end line of credit | 292500 | NA | 5 | 360 |
| 2-Not an open-end line of credit | 160859 | 20211129 | 2.375 | 180 |
| 2-Not an open-end line of credit | 1050000 | 20211201 | 3.125 | 360 |
| 2-Not an open-end line of credit | 504000 | NA | 3.925 | 360 |
| 2-Not an open-end line of credit | 310000 | 20220212 | 4.375 | 360 |
| 2-Not an open-end line of credit | 310000 | 20220414 | 4.875 | 360 |
| 2-Not an open-end line of credit | 252000 | 20211119 | 2.75 | 240 |
| 2-Not an open-end line of credit | 98900 | 20211218 | 2.5 | 180 |
| 2-Not an open-end line of credit | 1200000 | 20220214 | 2.625 | 360 |
| 2-Not an open-end line of credit | 280000 | NA | 4.49 | 360 |
| 2-Not an open-end line of credit | 2557449 | 20220216 | 3.625 | 360 |
| 2-Not an open-end line of credit | 325601 | NA | 4.375 | 360 |


| NA | 1-Secured by a first lien | 465000 | 74 |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 1425000 | NA |
| NA | 1-Secured by a first lien | 1249500 | 60 |
| NA | 1-Secured by a first lien | 270000 | 55 |
| NA | 1-Secured by a first lien | 1995000 | 80 |
| NA | 1-Secured by a first lien | 341000 | 23 |
| NA | 1-Secured by a first lien | 265000 | NA |
| NA | 1-Secured by a first lien | 320000 | 76 |
| NA | 1-Secured by a first lien | 825000 | 80 |
| NA | 1-Secured by a first lien | 1240000 | 35 |
| NA | 1-Secured by a first lien | 767000 | NA |
| NA | 1-Secured by a first lien | 350000 | 48 |
| NA | 1-Secured by a first lien | 2100000 | NA |
| NA | 1-Secured by a first lien | 515000 | 80 |
| NA | 1-Secured by a first lien | 810000 | 80 |
| NA | 1-Secured by a first lien | 800000 | 42 |
| NA | 1-Secured by a first lien | 1305002 | 79.99 |
| NA | 1-Secured by a first lien | 1250000 | 44 |
| NA | 1-Secured by a first lien | 900000 | 71.91 |
| NA | 1-Secured by a first lien | 700000 | 57 |
| NA | 1-Secured by a first lien | 860000 | 80 |
| NA | 1-Secured by a first lien | 570000 | NA |
| NA | 1-Secured by a first lien | 455000 | NA |
| NA | 1-Secured by a first lien | 480000 | NA |
| NA | 1-Secured by a first lien | 400000 | 70 |
| NA | 1-Secured by a first lien | 690000 | 94 |
| NA | 1-Secured by a first lien | 682500 | 88 |
| NA | 1-Secured by a first lien | 310000 | 96.5 |
| NA | 1-Secured by a first lien | 1275000 | 85 |
| NA | 1-Secured by a first lien | 267000 | 95 |
| NA | 1-Secured by a first lien | 685000 | NA |
| NA | 1-Secured by a first lien | 2850000 | 50 |
| NA | 1-Secured by a first lien | 1120000 | NA |
| NA | 1-Secured by a first lien | 668000 | NA |
| NA | 1-Secured by a first lien | 650000 | 67 |
| NA | 1-Secured by a first lien | 780000 | 64.83 |
| NA | 1-Secured by a first lien | 253000 | 65 |
| NA | 1-Secured by a first lien | 570000 | NA |
| NA | 1-Secured by a first lien | 1050000 | NA |
| NA | 1-Secured by a first lien | 800000 | 65 |
| NA | 1-Secured by a first lien | 860000 | 80 |
| NA | 1-Secured by a first lien | 580000 | 80 |
| NA | 1-Secured by a first lien | 309000 | 68 |
| NA | 1-Secured by a first lien | 475000 | NA |
| NA | 1-Secured by a first lien | 970000 | 80 |
| NA | 1-Secured by a first lien | 935000 | 80 |
| NA | 1-Secured by a first lien | 350000 | 79 |
| NA | 1-Secured by a first lien | 390000 | NA |
| NA | 1-Secured by a first lien | 295000 | 55 |
| NA | 1-Secured by a first lien | 1312500 | 80 |
| NA | 1-Secured by a first lien | 560000 | NA |
| NA | 1-Secured by a first lien | 390000 | 80 |
| NA | 1-Secured by a first lien | 675000 | 46 |
| NA | 1-Secured by a first lien | 440000 | 58 |
| NA | 1-Secured by a first lien | 615000 | 17 |
| NA | 1-Secured by a first lien | 1510000 | 79.47 |
| NA | 1-Secured by a first lien | 350000 | NA |
| NA | 1-Secured by a first lien | 3196812 | 80 |
| NA | 1-Secured by a first lien | 407001 | NA |


|  | 10-Not applicable |
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| 6-Information not provided by applicant in mail, internet, or telephone application |  |
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| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 21-Asian Indian |  |
| 22-Chinese |  |
| 27-Other Asian |  |
| 5-White |  |
|  | 5-White |


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| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 22-Chinese |
| 23-Filipino |
| 27-Other Asian |
| 5-White |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 21-Asian Indian |
| 22-Chinese |
| 27-Other Asian |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |




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|  | 2-Not Hispanic or Latino |
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|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 11-Mexican |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
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|  | 2-Not Hispanic or Latino |
|  | 1-Hispanic or Latino |
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|  | 2-Not Hispanic or Latino |
|  | 14-Other Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 11-Mexican |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 11-Mexican |
|  | 2-Not Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
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| 2-Not Hispanic or Latino |
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| 11-Mexican |
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| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
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| 14-Other Hispanic or Latino |
| 2-Not Hispanic or Latino |
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| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 13-Cuban |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
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| 1-Hispanic or Latino |
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| 14-Other Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 11-Mexican |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 12-Puerto Rican |
| 2-Not Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
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| 3-Information not provided by applicant |


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| 11-Mexican | - |
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| 14-Other Hispanic or Latino | - |
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| 8323.00 | 1-Loan originated | 1 |
| :---: | :---: | :---: |
| 305.00 | 1-Loan originated | 2 |
| 3301.01 | 1-Loan originated | 1 |
| 3301.02 | 1-Loan originated | 1 |
| 2422.00 | 1-Loan originated | 4 |
| 306.04 | 6-Purchased loan | 1 |
| 2431.00 | 1-Loan originated | 1 |
| 715.00 | 1-Loan originated | 1 |
| 2819.00 | 1-Loan originated | 1 |
| 3201.01 | 1-Loan originated | 1 |
| 2431.00 | 6-Purchased loan | 1 |
| 3907.00 | 3-Application denied | 1 |
| 3814.00 | 3-Application denied | 1 |
| 105.01 | 3-Application denied | 1 |
| 4207.00 | 3-Application denied | 2 |
| 5101.00 | 1-Loan originated | 1 |
| 5103.00 | 1-Loan originated | 1 |
| 7502.00 | 1-Loan originated | 1 |
| 3802.00 | 1-Loan originated | 1 |
| 8360.00 | 6-Purchased loan | 1 |
| 7305.00 | 6-Purchased loan | 1 |
| 201.00 | 1-Loan originated | 1 |
| 7112.00 | 1-Loan originated | 3 |
| 1301.00 | 1-Loan originated | 1 |
| 7505.00 | 1-Loan originated | 1 |
| 2809.00 | 1-Loan originated | 1 |
| 8343.00 | 1-Loan originated | 1 |
| 5609.00 | 6-Purchased loan | 1 |
| 1912.00 | 3-Application denied | 1 |
| 5705.00 | 3-Application denied | 3 |
| 609.00 | 3-Application denied | 1 |
| 3005.00 | 3-Application denied | 2 |
| 705.00 | 3-Application denied | 1 |
| 814.01 | 3-Application denied | 1 |
| 6203.00 | 3-Application denied | 1 |
| 2001.00 | 3-Application denied | 1 |
| 307.03 | 3-Application denied | 1 |
| 314.00 | 3-Application denied | 1 |
| 801.00 | 3-Application denied | 1 |
| 816.00 | 3-Application denied | 1 |
| 4608.00 | 3-Application denied | 3 |
| 1105.02 | 3-Application denied | 1 |
| 4608.00 | 6-Purchased loan | 3 |
| 6304.00 | 1-Loan originated | 3 |
| 1908.00 | 1-Loan originated | 1 |
| 5907.00 | 1-Loan originated | 3 |
| 2502.00 | 6-Purchased loan | 1 |
| 5807.00 | 1-Loan originated | 2 |
| 8367.00 | 6-Purchased loan | 2 |
| 8368.00 | 1-Loan originated | 2 |
| 619.01 | 1-Loan originated | 1 |
| 1006.00 | 1-Loan originated | 1 |
| 8317.00 | 6-Purchased loan | 1 |
| 2106.02 | 1-Loan originated | 2 |
| 818.00 | 1-Loan originated | 1 |
| 1910.00 | 1-Loan originated | 2 |
| 8420.00 | 1-Loan originated | 1 |
| 104.00 | 1-Loan originated | 1 |
| 8325.00 | 1-Loan originated | 1 |


| ( ${ }^{\text {, VA, RHS, or FSA) }}$ | 1-Home Purchase |
| :---: | :---: |
| 2-Federal Housing Administration insured (FHA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash O |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improvement |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1 -Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |


| 1-Open-end line of credit | 1014000 | 20220701 | 5.000 | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 448864 | 20220601 | 4.99 | 300 |
| 2-Not an open-end line of credit | 538000 | 20211021 | 2.25 | 180 |
| 2-Not an open-end line of credit | 241200 | 20220328 | 5.375 | 360 |
| 2-Not an open-end line of credit | 262000 | 20211101 | 2.875 | 360 |
| 2-Not an open-end line of credit | 162500 | NA | 4.75 | 180 |
| 2-Not an open-end line of credit | 630000 | 20220119 | 3.125 | 240 |
| 2-Not an open-end line of credit | 270000 | 20211213 | 2.5 | 180 |
| 2-Not an open-end line of credit | 170000 | 20220208 | 3.625 | 360 |
| 2-Not an open-end line of credit | 2000000 | 20211213 | 2.125 | 360 |
| 2-Not an open-end line of credit | 1264000 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 54974 | 20220722 | NA | 180 |
| 2-Not an open-end line of credit | 193500 | 20220714 | NA | 360 |
| 2-Not an open-end line of credit | 135800 | 20220822 | NA | 360 |
| 2-Not an open-end line of credit | 57997 | 20220614 | NA | 360 |
| 2-Not an open-end line of credit | 230743 | 20220801 | 5.625 | 360 |
| 2-Not an open-end line of credit | 142372 | 20220727 | 5.25 | 360 |
| 2-Not an open-end line of credit | 441750 | 20220606 | 5 | 240 |
| 2-Not an open-end line of credit | 397136 | 20220322 | 4.875 | 360 |
| 2-Not an open-end line of credit | 426550 | NA | 5.375 | 360 |
| 2-Not an open-end line of credit | 296400 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 122000 | 20220715 | 5.75 | 360 |
| 2-Not an open-end line of credit | 103800 | 20220126 | 4.25 | 120 |
| 2-Not an open-end line of credit | 205000 | 20220502 | 4.875 | 360 |
| 2-Not an open-end line of credit | 152000 | 20220131 | 3.75 | 180 |
| 2-Not an open-end line of credit | 293550 | 20221006 | 6.875 | 360 |
| 2-Not an open-end line of credit | 85500 | 20220308 | 4.875 | 360 |
| 2-Not an open-end line of credit | 249065.52 | NA | 2.874 | 360 |
| 2-Not an open-end line of credit | 175000 | 20220815 | NA | 360 |
| 2-Not an open-end line of credit | 314204 | 20211014 | NA | 360 |
| 2-Not an open-end line of credit | 1820000 | 20220610 | NA | 360 |
| 2-Not an open-end line of credit | 127757 | 20220125 | NA | 180 |
| 2-Not an open-end line of credit | 490000 | 20211116 | NA | 360 |
| 2-Not an open-end line of credit | 165750 | 20211118 | NA | 360 |
| 2-Not an open-end line of credit | 139650 | 20220629 | NA | 360 |
| 2-Not an open-end line of credit | 127070 | 20220107 | NA | 360 |
| 2-Not an open-end line of credit | 136326 | 20211025 | NA | 180 |
| 2-Not an open-end line of credit | 99000 | 20220629 | NA | 360 |
| 2-Not an open-end line of credit | 401000 | 20211019 | NA | 360 |
| 2-Not an open-end line of credit | 297500 | 20221006 | NA | 360 |
| 2-Not an open-end line of credit | 212000 | 20220622 | NA | 360 |
| 2-Not an open-end line of credit | 125000 | 20220629 | NA | 360 |
| 2-Not an open-end line of credit | 198750 | NA | 5.625 | 360 |
| 2-Not an open-end line of credit | 112000 | 20211020 | 3.375 | 240 |
| 2-Not an open-end line of credit | 219300 | 20220519 | 5.625 | 360 |
| 2-Not an open-end line of credit | 450000 | 20220622 | 6.375 | 360 |
| 2-Not an open-end line of credit | 295850 | NA | 4.5 | 360 |
| 2-Not an open-end line of credit | 213750 | 20220513 | 6.125 | 360 |
| 2-Not an open-end line of credit | 356250 | NA | 5.25 | 360 |
| 2-Not an open-end line of credit | 394718 | 20220907 | 5.5 | 360 |
| 2-Not an open-end line of credit | 210000 | 20220816 | 5.99 | 360 |
| 2-Not an open-end line of credit | 322400 | 20220601 | 5.375 | 360 |
| 2-Not an open-end line of credit | 578983.2 | NA | 2.875 | 360 |
| 2-Not an open-end line of credit | 224000 | 20220118 | 4.125 | 360 |
| 2-Not an open-end line of credit | 671500 | 20220705 | 4.000 | 180 |
| 2-Not an open-end line of credit | 180000 | 20210401 | 3.125 | 360 |
| 2-Not an open-end line of credit | 650000 | 20220214 | 3.250 | 360 |
| 2-Not an open-end line of credit | 97500 | 20211111 | 3.375 | 360 |
| 2-Not an open-end line of credit | 531000 | 20211104 | 2.625 | 360 |


| NA | 2-Secured by a subordinate lien | 1625000 | 79.949 |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 750000 | 58.82 |
| NA | 1-Secured by a first lien | 762000 | 71 |
| NA | 1-Secured by a first lien | 301500 | 80 |
| NA | 1-Secured by a first lien | 850000 | 31 |
| NA | 1-Secured by a first lien | 250000 | NA |
| NA | 1-Secured by a first lien | 1200000 | 53 |
| NA | 1-Secured by a first lien | 750000 | 36 |
| NA | 1-Secured by a first lien | 260000 | 66 |
| NA | 1-Secured by a first lien | 4000000 | 50 |
| NA | 1-Secured by a first lien | 1580000 | NA |
| NA | 1-Secured by a first lien | 200000 | 28 |
| NA | 1-Secured by a first lien | 215000 | 90 |
| NA | 1-Secured by a first lien | 140000 | 97 |
| NA | 1-Secured by a first lien | 60000 | 95 |
| NA | 1-Secured by a first lien | 235000 | 96.5 |
| NA | 1-Secured by a first lien | 145000 | 96.5 |
| NA | 1-Secured by a first lien | 465000 | 95 |
| NA | 1-Secured by a first lien | 535000 | 75 |
| NA | 1-Secured by a first lien | 449000 | NA |
| NA | 1-Secured by a first lien | 312000 | NA |
| NA | 1-Secured by a first lien | 152500 | 80 |
| NA | 1-Secured by a first lien | 173000 | 60 |
| NA | 1-Secured by a first lien | 295000 | 70 |
| NA | 1-Secured by a first lien | 190000 | 80 |
| NA | 1-Secured by a first lien | 309000 | 95 |
| NA | 1-Secured by a first lien | 90000 | 95 |
| NA | 1-Secured by a first lien | 315000 | NA |
| NA | 1-Secured by a first lien | 185000 | 95 |
| NA | 1-Secured by a first lien | 320000 | 96.5 |
| NA | 1-Secured by a first lien | 2275000 | 80.000 |
| NA | 1-Secured by a first lien | 250000 | 52 |
| NA | 1-Secured by a first lien | 577000 | 85 |
| NA | 1-Secured by a first lien | 195000 | 85 |
| NA | 1-Secured by a first lien | 147000 | 95 |
| NA | 1-Secured by a first lien | 131000 | 97 |
| NA | 1-Secured by a first lien | 178000 | 77 |
| NA | 1-Secured by a first lien | 132000 | 75 |
| NA | 1-Secured by a first lien | 465000 | 87 |
| NA | 1-Secured by a first lien | 350000 | 85 |
| NA | 1-Secured by a first lien | 265000 | 80 |
| NA | 1-Secured by a first lien | 145000 | 87 |
| NA | 1-Secured by a first lien | 265000 | NA |
| NA | 1-Secured by a first lien | 298000 | 50 |
| NA | 1-Secured by a first lien | 250000 | 88 |
| NA | 1-Secured by a first lien | 600000 | 75 |
| NA | 1-Secured by a first lien | 305000 | NA |
| NA | 1-Secured by a first lien | 285000 | 75 |
| NA | 1-Secured by a first lien | 375000 | NA |
| NA | 1-Secured by a first lien | 402000 | 96.5 |
| NA | 1-Secured by a first lien | 280000 | 75 |
| NA | 1-Secured by a first lien | 403000 | 80 |
| NA | 1-Secured by a first lien | 725000 | NA |
| NA | 1-Secured by a first lien | 450000 | 50 |
| NA | 1-Secured by a first lien | 790000 | 85.000 |
| NA | 1-Secured by a first lien | 360000 | 50 |
| NA | 1-Secured by a first lien | 890000 | 73.034 |
| NA | 1-Secured by a first lien | 130000 | 75 |
| NA | 1-Secured by a first lien | 800000 | 67 |


|  | 10-Not applicable |
| :---: | :---: |
|  | 10-Not applicable |
|  | 10-Not applicable |
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|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 9-Other |
|  | 4-Collateral |
|  | 4-Collateral |
|  | 4-Collateral |
|  | 10-Not applicable |
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|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 4-Collateral |
|  | 9-Other |
|  | 1-Debt-to-income ratio |
|  | 1-Debt-to-income ratio |
|  | 4-Collateral |
|  | 8-Mortgage insurance denied |
|  | 1-Debt-to-income ratio |
|  | 4-Collateral |
|  | 4-Collateral |
|  | 4-Collateral |
|  | 4-Collateral |
|  | 4-Collateral |
|  | 6-Unverifiable information |
|  | 9-Other |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
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| 1-Debt-to-income ratio | - |
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| 1-Debt-to-income ratio | - |
| 1-Debt-to-income ratio | - |
| 4-Collateral | - |
| 5-Insufficient cash (downpayment, closing costs) | - |
| 5-Insufficient cash (downpayment, closing costs) | - |
| 5-Insufficient cash (downpayment, closing costs) | - |
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| 5-White |
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| 1-American Indian or Alaska Native |
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| 2-Asian |
| 3-Black or African American |
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| 7-Not applicable |  |
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| 8-No co-applicant |  |
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| 4-Not applicable |
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| 4-Not applicable |
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| 301.04 | 6-Purchased loan | 1 |
| :---: | :---: | :---: |
| 2402.00 | 6-Purchased loan | 1 |
| 201.00 | 1-Loan originated | 1 |
| 506.00 | 6-Purchased loan | 1 |
| 818.00 | 1-Loan originated | 1 |
| 2801.00 | 1-Loan originated | 1 |
| 313.00 | 6-Purchased loan | 1 |
| 8309.00 | 1-Loan originated | 1 |
| 2435.00 | 6-Purchased loan | 1 |
| 629.00 | 1-Loan originated | 1 |
| 1510.01 | 1-Loan originated | 1 |
| 1510.02 | 6-Purchased loan | 2 |
| 2107.00 | 1-Loan originated | 1 |
| 1001.00 | 1-Loan originated | 1 |
| 8324.00 | 1-Loan originated | 1 |
| 634.00 | 1-Loan originated | 1 |
| 8428.00 | 6-Purchased loan | 1 |
| 1606.02 | 1-Loan originated | 1 |
| 8358.00 | 1-Loan originated | 1 |
| 1508.00 | 1-Loan originated | 1 |
| 803.00 | 1-Loan originated | 1 |
| 818.00 | 1-Loan originated | 1 |
| 802.01 | 1-Loan originated | 1 |
| 1102.00 | 6-Purchased loan | 1 |
| 8331.00 | 1-Loan originated | 1 |
| 402.01 | 6-Purchased loan | 1 |
| 2004.02 | 6-Purchased loan | 1 |
| 2422.00 | 1-Loan originated | 1 |
| 313.00 | 1-Loan originated | 1 |
| 307.02 | 1-Loan originated | 1 |
| 816.00 | 1-Loan originated | 1 |
| 8367.00 | 6-Purchased loan | 3 |
| 814.02 | 1-Loan originated | 1 |
| 1201.00 | 1-Loan originated | 1 |
| 310.00 | 6-Purchased loan | 1 |
| 715.00 | 1-Loan originated | 1 |
| 608.00 | 1-Loan originated | 1 |
| 1104.00 | 1-Loan originated | 1 |
| 6404.00 | 1-Loan originated | 1 |
| 8390.00 | 1-Loan originated | 1 |
| 4108.00 | 1-Loan originated | 1 |
| 812.01 | 1-Loan originated | 1 |
| 714.00 | 1-Loan originated | 1 |
| 8352.00 | 1-Loan originated | 2 |
| 3515.00 | 6-Purchased loan | 1 |
| 818.00 | 1-Loan originated | 1 |
| 8438.00 | 1-Loan originated | 1 |
| 402.01 | 6-Purchased loan | 4 |
| 106.00 | 6-Purchased loan | 1 |
| 812.01 | 1-Loan originated | 1 |
| 633.01 | 1-Loan originated | 1 |
| 630.00 | 6-Purchased loan | 1 |
| 2426.00 | 6-Purchased loan | 1 |
| 1103.00 | 1-Loan originated | 1 |
| 2819.00 | 1-Loan originated | 1 |
| 818.00 | 6-Purchased loan | 1 |
| 7608.03 | 1-Loan originated | 1 |
| 317.00 | 1-Loan originated | 1 |
| 2804.00 | 1-Loan originated | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improvement |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purcha |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purcha |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refir |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
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| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |


| 2-Not an open-end line of credit | 128800 | NA | 5.875 | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 389437.08 | NA | 3.99 | 360 |
| 2-Not an open-end line of credit | 90000 | 20220330 | 4.375 | 180 |
| 2-Not an open-end line of credit | 189000 | NA | 3.5 | 180 |
| 2-Not an open-end line of credit | 260000 | 20220330 | 4.25 | 180 |
| 2-Not an open-end line of credit | 255530 | 20211216 | 3.125 | 360 |
| 2-Not an open-end line of credit | 109250 | NA | 3 | 180 |
| 2-Not an open-end line of credit | 357120 | 20220131 | 3.625 | 360 |
| 2-Not an open-end line of credit | 331417.98 | NA | 2.875 | 360 |
| 2-Not an open-end line of credit | 728019 | 20211220 | 2.99 | 360 |
| 2-Not an open-end line of credit | 200000 | 20220523 | 6.125 | 360 |
| 2-Not an open-end line of credit | 416250 | NA | 4.25 | 360 |
| 2-Not an open-end line of credit | 212000 | 20220531 | 4.99 | 360 |
| 2-Not an open-end line of credit | 276000 | 20220705 | 5.625 | 360 |
| 2-Not an open-end line of credit | 468650 | 20211119 | 3.375 | 360 |
| 2-Not an open-end line of credit | 88270 | 20211105 | 2 | 180 |
| 2-Not an open-end line of credit | 463715.84 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 361000 | 20210902 | 2.625 | 360 |
| 2-Not an open-end line of credit | 525100 | 20211222 | 2.75 | 360 |
| 2-Not an open-end line of credit | 568000 | 20220119 | 3.375 | 360 |
| 2-Not an open-end line of credit | 245625 | 20220315 | 4.625 | 360 |
| 2-Not an open-end line of credit | 292500 | 20220815 | 5.625 | 360 |
| 2-Not an open-end line of credit | 228000 | 20220222 | 3.875 | 360 |
| 2-Not an open-end line of credit | 285000 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 276000 | 20211209 | 3.375 | 180 |
| 2-Not an open-end line of credit | 168300 | NA | 7.375 | 360 |
| 2-Not an open-end line of credit | 281203 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 381900 | 20220505 | 4.875 | 360 |
| 2-Not an open-end line of credit | 128250 | 20220408 | 5 | 360 |
| 2-Not an open-end line of credit | 192000 | 20221027 | 6.99 | 360 |
| 2-Not an open-end line of credit | 232500 | 20211130 | 3.125 | 360 |
| 2-Not an open-end line of credit | 252000 | NA | 3.375 | 360 |
| 2-Not an open-end line of credit | 168000 | 20220828 | 6.625 | 360 |
| 2-Not an open-end line of credit | 210550 | 20211105 | 3.25 | 360 |
| 2-Not an open-end line of credit | 266000 | NA | 6.575 | 360 |
| 2-Not an open-end line of credit | 156280 | 20220102 | 2.75 | 180 |
| 2-Not an open-end line of credit | 120000 | 20220512 | 5.25 | 360 |
| 2-Not an open-end line of credit | 407700 | 20220120 | 3.625 | 360 |
| 2-Not an open-end line of credit | 151000 | 20220819 | 5.375 | 360 |
| 2-Not an open-end line of credit | 395200 | 20210819 | 3.375 | 360 |
| 2-Not an open-end line of credit | 69750 | 20220331 | 5.375 | 360 |
| 2-Not an open-end line of credit | 1381250 | 20211118 | 2.625 | 360 |
| 2-Not an open-end line of credit | 1660000 | 20211109 | 2.5 | 360 |
| 2-Not an open-end line of credit | 202500 | 20211129 | 2.99 | 360 |
| 2-Not an open-end line of credit | 137250 | NA | 5 | 360 |
| 2-Not an open-end line of credit | 274500 | 20220606 | 5.49 | 360 |
| 2-Not an open-end line of credit | 212500 | 20220114 | 3.5 | 360 |
| 2-Not an open-end line of credit | 508125 | NA | 3.5 | 360 |
| 2-Not an open-end line of credit | 312550 | NA | 3.55 | 360 |
| 2-Not an open-end line of credit | 225380 | 20220323 | 3.99 | 180 |
| 2-Not an open-end line of credit | 134830 | 20220414 | 5.75 | 360 |
| 2-Not an open-end line of credit | 168750 | NA | 5.5 | 360 |
| 2-Not an open-end line of credit | 408405 | NA | 5.375 | 360 |
| 2-Not an open-end line of credit | 168150 | 20220227 | 4.125 | 360 |
| 2-Not an open-end line of credit | 180000 | 20211209 | 3.125 | 360 |
| 2-Not an open-end line of credit | 499500 | NA | 5.375 | 360 |
| 2-Not an open-end line of credit | 130950 | 20220214 | 4.49 | 360 |
| 2-Not an open-end line of credit | 111500 | 20220727 | 4.99 | 240 |
| 2-Not an open-end line of credit | 128800 | 20221006 | 6.99 | 360 |


| NA | 1-Secured by a first lien | 161000 | NA |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 520000 | NA |
| NA | 1-Secured by a first lien | 275000 | 33 |
| NA | 1-Secured by a first lien | 238000 | NA |
| NA | 1-Secured by a first lien | 470000 | 56 |
| NA | 1-Secured by a first lien | 320000 | 80 |
| NA | 1-Secured by a first lien | 115000 | NA |
| NA | 1-Secured by a first lien | 396800 | 90 |
| NA | 1-Secured by a first lien | 415000 | NA |
| NA | 1-Secured by a first lien | 809000 | 89.98 |
| NA | 1-Secured by a first lien | 250000 | 80 |
| NA | 1-Secured by a first lien | 555000 | NA |
| NA | 1-Secured by a first lien | 265000 | 80 |
| NA | 1-Secured by a first lien | 345000 | 80 |
| NA | 1-Secured by a first lien | 600000 | 79 |
| NA | 1-Secured by a first lien | 296000 | 30 |
| NA | 1-Secured by a first lien | 516000 | NA |
| NA | 1-Secured by a first lien | 990000 | 40 |
| NA | 1-Secured by a first lien | 620000 | 85 |
| NA | 1-Secured by a first lien | 710000 | 80 |
| NA | 1-Secured by a first lien | 405000 | 61 |
| NA | 1-Secured by a first lien | 390000 | 75 |
| NA | 1-Secured by a first lien | 285000 | 80 |
| NA | 1-Secured by a first lien | 325000 | NA |
| NA | 1-Secured by a first lien | 510000 | 55 |
| NA | 1-Secured by a first lien | 187000 | NA |
| NA | 1-Secured by a first lien | 289900 | NA |
| NA | 1-Secured by a first lien | 402000 | 95 |
| NA | 1-Secured by a first lien | 142500 | 90 |
| NA | 1-Secured by a first lien | 240000 | 80 |
| NA | 1-Secured by a first lien | 310000 | 75 |
| NA | 1-Secured by a first lien | 315000 | NA |
| NA | 1-Secured by a first lien | 210000 | 80 |
| NA | 1-Secured by a first lien | 387000 | 55 |
| NA | 1-Secured by a first lien | 280000 | NA |
| NA | 1-Secured by a first lien | 245000 | 64 |
| NA | 1-Secured by a first lien | 355000 | 34 |
| NA | 1-Secured by a first lien | 453000 | 90 |
| NA | 1-Secured by a first lien | 400000 | 38 |
| NA | 1-Secured by a first lien | 494000 | 80 |
| NA | 1-Secured by a first lien | 93000 | 75 |
| NA | 1-Secured by a first lien | 1625000 | 85.000 |
| NA | 1-Secured by a first lien | 2770000 | 59.92 |
| NA | 1-Secured by a first lien | 270000 | 75 |
| NA | 1-Secured by a first lien | 183000 | NA |
| NA | 1-Secured by a first lien | 305000 | 90 |
| NA | 1-Secured by a first lien | 250000 | 85 |
| NA | 1-Secured by a first lien | 677500 | NA |
| NA | 1-Secured by a first lien | 329000 | NA |
| NA | 1-Secured by a first lien | 1045000 | 21.56 |
| NA | 1-Secured by a first lien | 139000 | 97 |
| NA | 1-Secured by a first lien | 225000 | NA |
| NA | 1-Secured by a first lien | 429900 | NA |
| NA | 1-Secured by a first lien | 177000 | 95 |
| NA | 1-Secured by a first lien | 200000 | 90 |
| NA | 1-Secured by a first lien | 555000 | NA |
| NA | 1-Secured by a first lien | 135000 | 97 |
| NA | 1-Secured by a first lien | 316000 | 36 |
| NA | 1 -Secured by a first lien | 184000 | 70 |


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| 8311.00 | 6-Purchased loan | 3 |
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| 4603.01 | 1-Loan originated | 1 |
| 7402.00 | 1-Loan originated | 1 |
| 5101.00 | 1-Loan originated | 1 |
| 3302.00 | 1-Loan originated | 1 |
| 6201.00 | 1-Loan originated | 1 |
| 812.02 | 1-Loan originated | 1 |
| 312.00 | 6-Purchased loan | 1 |
| 307.01 | 6-Purchased loan | 1 |
| 713.00 | 1-Loan originated | 1 |
| 402.02 | 1-Loan originated | 1 |
| 1201.00 | 1-Loan originated | 1 |
| 801.00 | 1-Loan originated | 1 |
| 3901.00 | 1-Loan originated | 1 |
| 3806.00 | 6-Purchased loan | 1 |
| 506.00 | 1-Loan originated | 1 |
| 8422.00 | 1-Loan originated | 1 |
| 2213.00 | 1-Loan originated | 1 |
| 8423.00 | 1-Loan originated | 1 |
| 315.02 | 1-Loan originated | 1 |
| 307.03 | 1-Loan originated | 1 |
| 6309.00 | 1-Loan originated | 1 |
| 8421.00 | 6-Purchased loan | 1 |
| 2109.00 | 1-Loan originated | 2 |
| 8429.00 | 1-Loan originated | 1 |
| 1103.00 | 6-Purchased loan | 1 |
| 1002.00 | 1-Loan originated | 1 |
| 625.00 | 6-Purchased loan | 1 |
| 7401.00 | 1-Loan originated | 1 |
| 632.00 | 1-Loan originated | 1 |
| 105.01 | 1-Loan originated | 1 |
| 4911.00 | 1-Loan originated | 1 |
| 8422.00 | 1-Loan originated | 1 |
| 2420.00 | 6-Purchased loan | 1 |
| 6604.00 | 3-Application denied | 1 |
| 8314.00 | 3-Application denied | 2 |
| 6504.00 | 3-Application denied | 1 |
| 7003.02 | 6-Purchased loan | 1 |
| 5608.00 | 6-Purchased loan | 1 |
| 6504.00 | 6-Purchased loan | 1 |
| 7004.02 | 1-Loan originated | 1 |
| 8391.00 | 1-Loan originated | 1 |
| 2422.00 | 1-Loan originated | 3 |
| 2426.00 | 1-Loan originated | 3 |
| 209.02 | 1-Loan originated | 1 |
| 301.01 | 1-Loan originated | 1 |
| 2222.00 | 6-Purchased loan | 1 |
| 6503.02 | 1-Loan originated | 1 |
| 2105.01 | 1-Loan originated | 1 |
| 802.02 | 3-Application denied | 1 |
| 207.02 | 3-Application denied | 1 |
| 204.00 | 1-Loan originated | 1 |
| 716.00 | 1-Loan originated | 1 |
| 2435.00 | 1-Loan originated | 1 |
| 814.02 | 1-Loan origiginated | 1 |
| 802.02 | 1-Loan originated | 1 |
| 716.00 | 1-Loan originated | 1 |
| 8330.00 | 1 |  |
| 8330.00 | 1-Loan originated | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improvement |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
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| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |


| 2-Not an open-end line of credit | 467335.78 | NA | 3.75 | 360 |
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| 2-Not an open-end line of credit | 76000 | 20220204 | 3.99 | 360 |
| 2-Not an open-end line of credit | 202500 | 20211211 | 3.25 | 360 |
| 2-Not an open-end line of credit | 61546 | 20211207 | 4.99 | 240 |
| 2-Not an open-end line of credit | 218250 | 20220528 | 5.49 | 360 |
| 2-Not an open-end line of credit | 105000 | 20220526 | 4.375 | 180 |
| 2-Not an open-end line of credit | 498000 | 20220307 | 4.375 | 360 |
| 2-Not an open-end line of credit | 427020.96 | NA | 5.375 | 360 |
| 2-Not an open-end line of credit | 334287.4 | NA | 2.5 | 180 |
| 2-Not an open-end line of credit | 463250 | 20210813 | 3.625 | 360 |
| 2-Not an open-end line of credit | 112900 | 20211213 | 3.25 | 360 |
| 2-Not an open-end line of credit | 536000 | 20210916 | 2.625 | 360 |
| 2-Not an open-end line of credit | 256500 | 20220112 | 3.375 | 360 |
| 2-Not an open-end line of credit | 379000 | 20220415 | 4.99 | 360 |
| 2-Not an open-end line of credit | 159200 | NA | 5.875 | 360 |
| 2-Not an open-end line of credit | 1460000 | 20210917 | 2.75 | 360 |
| 2-Not an open-end line of credit | 450000 | 20221122 | 6.625 | 360 |
| 2-Not an open-end line of credit | 224000 | 20220319 | 3.875 | 180 |
| 2-Not an open-end line of credit | 256000 | 20220523 | 4.49 | 180 |
| 2-Not an open-end line of credit | 210540 | 20220117 | 3.625 | 360 |
| 2-Not an open-end line of credit | 276892 | 20220126 | 3.75 | 360 |
| 2-Not an open-end line of credit | 161500 | 20220711 | 5.25 | 360 |
| 2-Not an open-end line of credit | 1000000 | NA | 4.75 | 360 |
| 2-Not an open-end line of credit | 476215 | 20220225 | 5.99 | 360 |
| 2-Not an open-end line of credit | 726400 | 20220831 | 4.99 | 360 |
| 2-Not an open-end line of credit | 498750 | NA | 3.5 | 360 |
| 2-Not an open-end line of credit | 83700 | 20220104 | 3.99 | 360 |
| 2-Not an open-end line of credit | 269100 | NA | 4.375 | 360 |
| 2-Not an open-end line of credit | 168182 | 20211214 | 2.625 | 180 |
| 2-Not an open-end line of credit | 290700 | 20220509 | 5.5 | 360 |
| 2-Not an open-end line of credit | 128250 | 20220325 | 4.75 | 360 |
| 2-Not an open-end line of credit | 165550 | 20220722 | 5.99 | 360 |
| 2-Not an open-end line of credit | 645000 | 20220606 | 5.125 | 360 |
| 2-Not an open-end line of credit | 269186.53 | NA | 5.175 | 360 |
| 2-Not an open-end line of credit | 131000 | 20220126 | NA | 240 |
| 2-Not an open-end line of credit | 135150 | 20220706 | NA | 360 |
| 2-Not an open-end line of credit | 199000 | 20211116 | NA | 360 |
| 2-Not an open-end line of credit | 224000 | NA | 5.25 | 360 |
| 2-Not an open-end line of credit | 144790.71 | NA | 3.99 | 360 |
| 2-Not an open-end line of credit | 266000 | NA | 5.625 | 360 |
| 2-Not an open-end line of credit | 128750 | 20220304 | 3.75 | 180 |
| 2-Not an open-end line of credit | 237650 | 20220121 | 3.5 | 360 |
| 2-Not an open-end line of credit | 616000 | 20221012 | 6.5 | 360 |
| 2-Not an open-end line of credit | 180325 | 20211127 | 3.75 | 180 |
| 2-Not an open-end line of credit | 138400 | 20221024 | 6.75 | 360 |
| 2-Not an open-end line of credit | 112000 | 20220302 | 4.875 | 360 |
| 2-Not an open-end line of credit | 647000 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 182240 | 20211229 | 2.49 | 180 |
| 2-Not an open-end line of credit | 115700 | 20220119 | 2.99 | 180 |
| 2-Not an open-end line of credit | 187500 | 20220316 | NA | 360 |
| 2-Not an open-end line of credit | 156750 | 20220520 | NA | 360 |
| 2-Not an open-end line of credit | 111200 | 20220823 | 5.99 | 360 |
| 2-Not an open-end line of credit | 400000 | 20220701 | 4.75 | 180 |
| 2-Not an open-end line of credit | 365000 | 20220308 | 4.125 | 360 |
| 2-Not an open-end line of credit | 508500 | 20220916 | 6.375 | 360 |
| 2-Not an open-end line of credit | 274500 | 20220617 | 5.125 | 360 |
| 2-Not an open-end line of credit | 3000000 | 20220222 | 3.25 | 360 |
| 2-Not an open-end line of credit | 764800 | 20220505 | 4.375 | 360 |
| 2-Not an open-end line of credit | 339000 | 20211123 | 2.5 | 360 |


| NA | 1-Secured by a first lien | 625000 | NA |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 150000 | 51 |
| NA | 1-Secured by a first lien | 225000 | 90 |
| NA | 1-Secured by a first lien | 63450 | 97 |
| NA | 1-Secured by a first lien | 225000 | 97 |
| NA | 1-Secured by a first lien | 180000 | 59 |
| NA | 1-Secured by a first lien | 665000 | 75 |
| NA | 1-Secured by a first lien | 450000 | NA |
| NA | 1-Secured by a first lien | 425000 | NA |
| NA | 1-Secured by a first lien | 545000 | 85 |
| NA | 1-Secured by a first lien | 155000 | 73 |
| NA | 1-Secured by a first lien | 850000 | 65 |
| NA | 1-Secured by a first lien | 270000 | 95 |
| NA | 1-Secured by a first lien | 399000 | 95 |
| NA | 1-Secured by a first lien | 199000 | NA |
| NA | 1-Secured by a first lien | 1825000 | 80 |
| NA | 1-Secured by a first lien | 509000 | 89 |
| NA | 1-Secured by a first lien | 280000 | 80 |
| NA | 1-Secured by a first lien | 320000 | 80 |
| NA | 1-Secured by a first lien | 297000 | 71 |
| NA | 1-Secured by a first lien | 282000 | 96.5 |
| NA | 1-Secured by a first lien | 170000 | 95 |
| NA | 1-Secured by a first lien | 1250000 | NA |
| NA | 1-Secured by a first lien | 485000 | 96.5 |
| NA | 1-Secured by a first lien | 908000 | 80 |
| NA | 1-Secured by a first lien | 525000 | NA |
| NA | 1-Secured by a first lien | 115000 | 73 |
| NA | 1-Secured by a first lien | 299000 | NA |
| NA | 1-Secured by a first lien | 269400 | 63 |
| NA | 1-Secured by a first lien | 323000 | 90 |
| NA | 1-Secured by a first lien | 135000 | 95 |
| NA | 1-Secured by a first lien | 174000 | 96 |
| NA | 1-Secured by a first lien | 795000 | 82 |
| NA | 1-Secured by a first lien | 385000 | NA |
| NA | 1-Secured by a first lien | 295000 | 45 |
| NA | 1-Secured by a first lien | 159000 | 85 |
| NA | 1-Secured by a first lien | 234000 | 86 |
| NA | 1-Secured by a first lien | 280000 | NA |
| NA | 1-Secured by a first lien | 226000 | NA |
| NA | 1-Secured by a first lien | 280000 | NA |
| NA | 1-Secured by a first lien | 325000 | 40 |
| NA | 1-Secured by a first lien | 245000 | 97 |
| NA | 1-Secured by a first lien | 880000 | 70 |
| NA | 1-Secured by a first lien | 850000 | 22 |
| NA | 1-Secured by a first lien | 173000 | 80 |
| NA | 1-Secured by a first lien | 140000 | 80 |
| NA | 1-Secured by a first lien | 950000 | NA |
| NA | 1-Secured by a first lien | 275000 | 67 |
| NA | 1-Secured by a first lien | 282000 | 57 |
| NA | 1-Secured by a first lien | 250000 | 75 |
| NA | 1-Secured by a first lien | 150000 | 105 |
| NA | 1-Secured by a first lien | 139000 | 80 |
| NA | 1-Secured by a first lien | 605000 | 67 |
| NA | 1-Secured by a first lien | 425000 | 86 |
| NA | 1-Secured by a first lien | 565000 | 90 |
| NA | 1-Secured by a first lien | 305000 | 90 |
| NA | 1-Secured by a first lien | 3950000 | 75.94 |
| NA | 1-Secured by a first lien | 956000 | 80 |
| NA | 1-Secured by a first lien | 625000 | 55 |


|  | 10-Not applicable |
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|  | 1-Debt-to-income ratio |
|  | 4-Collateral |
|  | 4-Collateral |
|  | 10-Not applicable |
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|  | 1-Debt-to-income ratio |
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| 5-Insufficient cash (downpayment, closing costs) | - |
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| 6-Information not provided by applicant in mail, internet, or telephone application |  |
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| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 21-Asian Indian |  |
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| 22-Chinese |  |


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|  | 2-Not Hispanic or Latino |
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|  | 11-Mexican |
|  | 2-Not Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
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|  | 11-Mexican |
|  | 2-Not Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 1-Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 11-Mexican |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 1-Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 11-Mexican |
|  | 12-Puerto Rican |
|  | 2-Not Hispanic or Latino |
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| 5-No co-applicant |
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| 1606.02 | 3-Application denied | 3 |
| :---: | :---: | :---: |
| 1105.02 | 6-Purchased loan | 1 |
| 8422.00 | 1-Loan originated | 1 |
| 4106.00 | 6-Purchased loan | 1 |
| 208.02 | 1-Loan originated | 4 |
| 703.00 | 1-Loan originated | 1 |
| 2415.00 | 1-Loan originated | 1 |
| 2432.00 | 6-Purchased loan | 1 |
| 1801.00 | 1-Loan originated | 1 |
| 705.00 | 6-Purchased loan | 1 |
| 2519.00 | 1-Loan originated | 1 |
| 8420.00 | 6-Purchased loan | 1 |
| 8331.00 | 1-Loan originated | 1 |
| 8325.00 | 1-Loan originated | 1 |
| 8421.00 | 6-Purchased loan | 1 |
| 711.00 | 1-Loan originated | 1 |
| 2801.00 | 1-Loan originated | 1 |
| 102.01 | 1-Loan originated | 1 |
| 315.01 | 6-Purchased loan | 1 |
| 6103.00 | 3-Application denied | 1 |
| 7003.01 | 3-Application denied | 1 |
| 8412.00 | 3-Application denied | 4 |
| 1104.00 | 1-Loan originated | 1 |
| 1613.00 | 1-Loan originated | 1 |
| 8104.00 | 1-Loan originated | 1 |
| 4111.00 | 1-Loan originated | 1 |
| 505.00 | 1-Loan originated | 1 |
| 3201.01 | 1-Loan originated | 1 |
| 706.00 | 1-Loan originated | 1 |
| 1602.00 | 6-Purchased loan | 1 |
| 8439.00 | 1-Loan originated | 1 |
| 8428.00 | 1-Loan originated | 1 |
| 8439.00 | 6-Purchased loan | 1 |
| 810.00 | 1-Loan originated | 1 |
| 6405.00 | 1-Loan originated | 1 |
| 401.00 | 1-Loan originated | 1 |
| 2412.00 | 1-Loan originated | 1 |
| 513.00 | 6-Purchased loan | 1 |
| 8424.00 | 1-Loan originated | 1 |
| 804.00 | 1-Loan originated | 1 |
| 1004.00 | 6-Purchased loan | 1 |
| 902.00 | 1-Loan originated | 1 |
| 628.00 | 1-Loan originated | 1 |
| 2215.00 | 1-Loan originated | 1 |
| 1911.00 | 1-Loan originated | 1 |
| 8368.00 | 1-Loan originated | 1 |
| 2819.00 | 1-Loan originated | 1 |
| 712.00 | 1-Loan originated | 1 |
| 2106.02 | 6-Purchased loan | 1 |
| 407.00 | 1-Loan originated | 3 |
| 626.00 | 1-Loan originated | 1 |
| 2433.00 | 1-Loan originated | 1 |
| 8424.00 | 1-Loan originated | 1 |
| 8104.00 | 1-Loan originated | 1 |
| 2207.02 | 1-Loan originated | 1 |
| 1101.00 | 1-Loan originated | 1 |
| 1511.00 | 6-Purchased loan | 1 |
| 1508.00 | 1-Loan originated | 1 |
| 8331.00 | 1-Loan originated | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improvement |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improvement |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |


| 2-Not an open-end line of credit | 259000 | 20220208 | NA | 240 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 148500 | NA | 5.375 | 180 |
| 2-Not an open-end line of credit | 265000 | 20220225 | 3.99 | 360 |
| 2-Not an open-end line of credit | 376200 | NA | 3.875 | 240 |
| 2-Not an open-end line of credit | 656000 | 20220817 | 5.875 | 360 |
| 2-Not an open-end line of credit | 216800 | 20220124 | 3.625 | 360 |
| 2-Not an open-end line of credit | 556000 | 20220615 | 5.625 | 360 |
| 2-Not an open-end line of credit | 1105000 | NA | 4.25 | 360 |
| 2-Not an open-end line of credit | 328000 | 20220415 | 5.25 | 360 |
| 2-Not an open-end line of credit | 2276858.77 | NA | 4.25 | 360 |
| 2-Not an open-end line of credit | 76000 | 20220302 | 3.99 | 180 |
| 2-Not an open-end line of credit | 202500 | NA | 4.5 | 360 |
| 2-Not an open-end line of credit | 820000 | 20220228 | 3.5 | 360 |
| 2-Not an open-end line of credit | 609000 | 20211215 | 2.99 | 360 |
| 2-Not an open-end line of credit | 370500 | NA | 3.925 | 360 |
| 2-Not an open-end line of credit | 860000 | 20220728 | 4.125 | 360 |
| 2-Not an open-end line of credit | 350250 | 20211210 | 3.25 | 360 |
| 2-Not an open-end line of credit | 60211 | 20220211 | 3.75 | 180 |
| 2-Not an open-end line of credit | 297000 | NA | 4.875 | 360 |
| 2-Not an open-end line of credit | 150226 | 20221104 | NA | 360 |
| 2-Not an open-end line of credit | 313500 | 20221005 | NA | 360 |
| 2-Not an open-end line of credit | 250000 | 20220301 | NA | 360 |
| 2-Not an open-end line of credit | 65000 | 20211110 | 3.75 | 180 |
| 2-Not an open-end line of credit | 424000 | 20220504 | 5.125 | 360 |
| 2-Not an open-end line of credit | 183000 | 20220214 | 4.125 | 360 |
| 2-Not an open-end line of credit | 256000 | 20220211 | 3.99 | 360 |
| 2-Not an open-end line of credit | 912000 | 20220525 | 4.5 | 360 |
| 2-Not an open-end line of credit | 230000 | 20220726 | 5.375 | 360 |
| 2-Not an open-end line of credit | 778000 | 20211108 | 2.875 | 360 |
| 2-Not an open-end line of credit | 428000 | NA | 4.75 | 360 |
| 2-Not an open-end line of credit | 237299 | 20220211 | 2.99 | 180 |
| 2-Not an open-end line of credit | 507000 | 20220512 | 4.875 | 360 |
| 2-Not an open-end line of credit | 1010509.12 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 600000 | 20220810 | 4.75 | 240 |
| 2-Not an open-end line of credit | 211600 | 20211108 | 2.125 | 180 |
| 2-Not an open-end line of credit | 250000 | 20220328 | 4.25 | 180 |
| 2-Not an open-end line of credit | 732000 | 20211122 | 2.875 | 360 |
| 2-Not an open-end line of credit | 474300 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 290250 | 20220518 | 6.625 | 360 |
| 2-Not an open-end line of credit | 441000 | 20211214 | 2.875 | 360 |
| 2-Not an open-end line of credit | 340000 | NA | 2.625 | 180 |
| 2-Not an open-end line of credit | 342000 | 20220802 | 6.75 | 360 |
| 2-Not an open-end line of credit | 468000 | 20220104 | 3.49 | 360 |
| 2-Not an open-end line of credit | 650000 | 20211108 | 2.99 | 360 |
| 2-Not an open-end line of credit | 279000 | 20220406 | 5.5 | 360 |
| 2-Not an open-end line of credit | 181500 | 20210818 | 3.25 | 360 |
| 2-Not an open-end line of credit | 175000 | 20211227 | 3.375 | 360 |
| 2-Not an open-end line of credit | 278000 | 20211122 | 3.625 | 360 |
| 2-Not an open-end line of credit | 185000 | NA | 5.5 | 360 |
| 2-Not an open-end line of credit | 536400 | 20220328 | 5.25 | 360 |
| 2-Not an open-end line of credit | 740800 | 20220512 | 4.5 | 360 |
| 2-Not an open-end line of credit | 352500 | 20221028 | 6.875 | 360 |
| 2-Not an open-end line of credit | 397375 | 20220522 | 5.375 | 360 |
| 2-Not an open-end line of credit | 693000 | 20220207 | 3.25 | 360 |
| 2-Not an open-end line of credit | 532000 | 20211221 | 2.875 | 360 |
| 2-Not an open-end line of credit | 212000 | 20220330 | 4.99 | 360 |
| 2-Not an open-end line of credit | 300000 | NA | 3.875 | 240 |
| 2-Not an open-end line of credit | 118325 | 20211230 | 2.75 | 180 |
| 2-Not an open-end line of credit | 431250 | 20220106 | 2.875 | 180 |


| NA | 1-Secured by a first lien | 525000 | 50 |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 165000 | NA |
| NA | 1-Secured by a first lien | 405000 | 66 |
| NA | 1-Secured by a first lien | 418000 | NA |
| NA | 1-Secured by a first lien | 820000 | 80 |
| NA | 1-Secured by a first lien | 271000 | 80 |
| NA | 1-Secured by a first lien | 695000 | 80 |
| NA | 1-Secured by a first lien | 1300000 | NA |
| NA | 1-Secured by a first lien | 410000 | 80 |
| NA | 1-Secured by a first lien | 2850000 | NA |
| NA | 1-Secured by a first lien | 240000 | 32 |
| NA | 1-Secured by a first lien | 270000 | NA |
| NA | 1-Secured by a first lien | 1025000 | 80 |
| NA | 1-Secured by a first lien | 856000 | 72 |
| NA | 1-Secured by a first lien | 390000 | NA |
| NA | 1-Secured by a first lien | 1310000 | 65.649 |
| NA | 1-Secured by a first lien | 467000 | 75 |
| NA | 1-Secured by a first lien | 240000 | 26 |
| NA | 1-Secured by a first lien | 330000 | NA |
| NA | 1-Secured by a first lien | 153000 | 96.5 |
| NA | 1-Secured by a first lien | 330000 | 95 |
| NA | 1-Secured by a first lien | 800000 | 32 |
| NA | 1-Secured by a first lien | 220000 | 30 |
| NA | 1-Secured by a first lien | 530000 | 80 |
| NA | 1-Secured by a first lien | 298000 | 62 |
| NA | 1-Secured by a first lien | 320000 | 80 |
| NA | 1-Secured by a first lien | 1140000 | 80 |
| NA | 1-Secured by a first lien | 287500 | 80 |
| NA | 1-Secured by a first lien | 1150000 | 67.652 |
| NA | 1-Secured by a first lien | 535000 | NA |
| NA | 1-Secured by a first lien | 650000 | 37 |
| NA | 1-Secured by a first lien | 780000 | 65 |
| NA | 1-Secured by a first lien | 1265000 | NA |
| NA | 1-Secured by a first lien | 947500 | 64 |
| NA | 1-Secured by a first lien | 275000 | 77 |
| NA | 1-Secured by a first lien | 691500 | 37 |
| NA | 1-Secured by a first lien | 915000 | 80.000 |
| NA | 1-Secured by a first lien | 510000 | NA |
| NA | 1-Secured by a first lien | 322500 | 90 |
| NA | 1-Secured by a first lien | 630000 | 70 |
| NA | 1-Secured by a first lien | 425000 | NA |
| NA | 1-Secured by a first lien | 360000 | 95 |
| NA | 1-Secured by a first lien | 585000 | 80 |
| NA | 1-Secured by a first lien | 946000 | 68.71 |
| NA | 1-Secured by a first lien | 310000 | 90 |
| NA | 1-Secured by a first lien | 215000 | 85 |
| NA | 1-Secured by a first lien | 325000 | 54 |
| NA | 1-Secured by a first lien | 360000 | 78 |
| NA | 1-Secured by a first lien | 255000 | NA |
| NA | 1-Secured by a first lien | 820000 | 66 |
| NA | 1-Secured by a first lien | 926000 | 80 |
| NA | 1-Secured by a first lien | 502500 | 71 |
| NA | 1-Secured by a first lien | 467500 | 85 |
| NA | 1-Secured by a first lien | 910000 | 76.15 |
| NA | 1-Secured by a first lien | 665000 | 80 |
| NA | 1-Secured by a first lien | 390000 | 61 |
| NA | 1-Secured by a first lien | 375000 | NA |
| NA | 1-Secured by a first lien | 415000 | 29 |
| NA | 1-Secured by a first lien | 575000 | 75 |


|  | 4-Collateral |
| :---: | :---: |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
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|  | 10-Not applicable |
|  | 4-Collateral |
|  | 6-Unverifiable information |
|  | 4-Collateral |
|  | 10-Not applicable |
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|  | 10-Not applicable |
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| 1-Debt-to-income ratio | 5-Insufficient cash (downpayment, closing costs) |
| 5-Insufficient cash (downpayment, closing costs) | - |
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|  | 23-Filipino |
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|  | 23-Filipino |
|  | 27-Other Asian |
|  | 2-Asian |
|  | 2-Asian |
|  | 2-Asian |
|  | 2-Asian |
|  | 3-Black or African American |
|  | 3-Black or African American |
|  | 3-Black or African American |
|  | 3-Black or African American |
|  | 3-Black or African American |
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|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |


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| 8-No co-applicant |
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| 8-No co-applicant |
| 8-No co-applicant |
| 2-Asian |
| 2-Asian |
| 2-Asian |
| 2-Asian |
| 2-Asian |
| 3-Black or African American |
| 3-Black or African American |
| 3-Black or African American |
| 3-Black or African American |
| 2-Asian |
| 1-American Indian or Alaska Native |
| 3-Black or African American |
| 2-Asian |
| 3-Black or African American |
| 3-Black or African American |
| 3-Black or African American |
| 5-White |
| 5-White |
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| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |




| 1-Male |  |
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| 5-No co-applicant |  |  |
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| 2-Not Hispanic or Latino |
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| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 1-Hispanic or Latino |
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| 2-Not Hispanic or Latino |
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| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
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| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |




| 5-No co-applicant |
| :--- |
| 5-No co-applicant |
| 5-No co-applicant |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
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| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 14-Other Hispanic or Latino |
| 1-Hispanic or Latino |
| 1-Hispanic or Latino |
| 1-Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
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| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
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| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 1-Hispanic or Latino |
| 1-Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or |


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| 1609.00 | 1-Loan originated | 1 |
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| 8316.00 | 1-Loan originated | 3 |
| 106.00 | 1-Loan originated | 1 |
| 402.02 | 6-Purchased loan | 3 |
| 106.00 | 1-Loan originated | 1 |
| 311.00 | 1-Loan originated | 1 |
| 2429.00 | 1-Loan originated | 1 |
| 319.00 | 1-Loan originated | 1 |
| 302.00 | 6-Purchased loan | 1 |
| 6503.02 | 1-Loan originated | 1 |
| 8325.00 | 1-Loan originated | 1 |
| 814.03 | 3-Application denied | 1 |
| 2210.00 | 1-Loan originated | 1 |
| 818.00 | 1-Loan originated | 1 |
| 718.00 | 1-Loan originated | 1 |
| 2207.02 | 1-Loan originated | 2 |
| 2909.00 | 3-Application denied | 2 |
| 901.00 | 3-Application denied | 1 |
| 4301.01 | 3-Application denied | 3 |
| 4910.00 | 3-Application denied | 1 |
| 2505.00 | 1-Loan originated | 1 |
| 8424.00 | 6-Purchased loan | 1 |
| 8436.00 | 1-Loan originated | 3 |
| 2420.00 | 1-Loan originated | 1 |
| 7111.00 | 1-Loan originated | 1 |
| 4403.00 | 1-Loan originated | 2 |
| 7005.01 | 1-Loan originated | 1 |
| 7502.00 | 6-Purchased loan | 1 |
| 8360.00 | 6-Purchased loan | 1 |
| 7113.00 | 1-Loan originated | 1 |
| 7608.03 | 6-Purchased loan | 1 |
| 4406.00 | 1-Loan originated | 1 |
| 8390.00 | 1-Loan originated | 1 |
| 7105.00 | 1-Loan originated | 1 |
| 8344.00 | 1-Loan originated | 1 |
| 3301.01 | 1-Loan originated | 1 |
| 5204.00 | 6-Purchased loan | 2 |
| 8419.00 | 1-Loan originated | 1 |
| 5202.00 | 6-Purchased loan | 1 |
| 6611.00 | 1-Loan originated | 1 |
| 4909.02 | 1-Loan originated | 1 |
| 5001.00 | 1-Loan originated | 1 |
| 4906.00 | 6-Purchased loan | 1 |
| 5302.00 | 1-Loan originated | 1 |
| 2432.00 | 1-Loan originated | 1 |
| 3818.00 | 1-Loan originated | 1 |
| 4403.00 | 1-Loan originated | 1 |
| 6715.00 | 6-Purchased loan | 2 |
| 4205.00 | 6-Purchased loan | 1 |
| 103.00 | 1-Loan originated | 1 |
| 1005.00 | 3-Application denied | 1 |
| 5801.00 | 3-Application denied | 1 |
| 814.01 | 3-Application denied | 1 |
| 1508.00 | 3-Application denied | 1 |
| 8421.00 | 3-Application denied | 3 |
| 509.00 | 3-Application denied | 1 |
| 2505.00 | 6-Purchased loan | 1 |
| 715.00 | 6-Purchased loan | 1 |
| 8434.00 | 6-Purchased loan | 2 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improvement |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improvement |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |


| 2-Not an open-end line of credit | 181770 | 20220316 | 4.49 | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 64800 | 20220324 | 4.99 | 120 |
| 2-Not an open-end line of credit | 117500 | 20220511 | 5.125 | 360 |
| 2-Not an open-end line of credit | 382500 | NA | 4.375 | 360 |
| 2-Not an open-end line of credit | 127500 | 20220701 | 5.875 | 360 |
| 2-Not an open-end line of credit | 265525 | 20220406 | 4.875 | 360 |
| 2-Not an open-end line of credit | 315000 | 20220511 | 6.125 | 360 |
| 2-Not an open-end line of credit | 399000 | 20211117 | 4.125 | 360 |
| 2-Not an open-end line of credit | 379630.66 | NA | 6.125 | 360 |
| 2-Not an open-end line of credit | 223235 | 20220204 | 4.625 | 360 |
| 2-Not an open-end line of credit | 327500 | 20220524 | 4.875 | 360 |
| 2-Not an open-end line of credit | 175000 | 20220301 | NA | 180 |
| 2-Not an open-end line of credit | 229000 | 20211215 | 2.99 | 360 |
| 2-Not an open-end line of credit | 240000 | 20220425 | 4.75 | 360 |
| 2-Not an open-end line of credit | 800000 | 20220329 | 3 | 360 |
| 2-Not an open-end line of credit | 556000 | 20220321 | 4.375 | 360 |
| 2-Not an open-end line of credit | 150250 | 20220330 | NA | 360 |
| 2-Not an open-end line of credit | 552000 | 20220909 | NA | 360 |
| 2-Not an open-end line of credit | 210000 | 20221103 | NA | 240 |
| 2-Not an open-end line of credit | 96000 | 20221007 | NA | 360 |
| 2-Not an open-end line of credit | 312550 | 20220701 | 5.125 | 360 |
| 2-Not an open-end line of credit | 200000 | NA | 5.499 | 360 |
| 2-Not an open-end line of credit | 800000 | 20220206 | 3.625 | 360 |
| 2-Not an open-end line of credit | 211400 | 20220310 | 3.5 | 180 |
| 2-Not an open-end line of credit | 74169 | 20220502 | 5.25 | 120 |
| 2-Not an open-end line of credit | 184995 | 20220209 | 4.375 | 360 |
| 2-Not an open-end line of credit | 218000 | 20220810 | 6 | 360 |
| 2-Not an open-end line of credit | 152000 | NA | 4.625 | 360 |
| 2-Not an open-end line of credit | 456000 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 247435 | 20220730 | 4.375 | 360 |
| 2-Not an open-end line of credit | 155700 | NA | 4.125 | 360 |
| 2-Not an open-end line of credit | 187000 | 20210407 | 4.375 | 360 |
| 2-Not an open-end line of credit | 224100 | 20220605 | 5.49 | 360 |
| 2-Not an open-end line of credit | 95600 | 20220208 | 3.5 | 180 |
| 2-Not an open-end line of credit | 152500 | 20220615 | 6.625 | 360 |
| 2-Not an open-end line of credit | 355000 | 20220122 | 3.75 | 360 |
| 2-Not an open-end line of credit | 101500 | NA | 5.625 | 240 |
| 2-Not an open-end line of credit | 287600 | 20211213 | 3.25 | 360 |
| 2-Not an open-end line of credit | 241530 | NA | 3.625 | 360 |
| 2-Not an open-end line of credit | 267073 | 20211217 | 2.75 | 360 |
| 2-Not an open-end line of credit | 142373 | 20220127 | 4.25 | 360 |
| 2-Not an open-end line of credit | 158650 | 20220126 | 3.875 | 360 |
| 2-Not an open-end line of credit | 246865 | NA | 6.875 | 360 |
| 2-Not an open-end line of credit | 67000 | 20220526 | 5.99 | 360 |
| 2-Not an open-end line of credit | 926250 | 20220217 | 3.5 | 360 |
| 2-Not an open-end line of credit | 117000 | 20220608 | 6.375 | 360 |
| 2-Not an open-end line of credit | 166250 | 20220315 | 5.625 | 360 |
| 2-Not an open-end line of credit | 178560 | NA | 2.875 | 360 |
| 2-Not an open-end line of credit | 466731.56 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 86500 | 20220310 | 4.875 | 360 |
| 2-Not an open-end line of credit | 336500 | 20220130 | NA | 360 |
| 2-Not an open-end line of credit | 71570 | 20220212 | NA | 180 |
| 2-Not an open-end line of credit | 159000 | 20220107 | NA | 360 |
| 2-Not an open-end line of credit | 170000 | 20220401 | NA | 180 |
| 2-Not an open-end line of credit | 161500 | 20220303 | NA | 360 |
| 2-Not an open-end line of credit | 153550 | 20220217 | NA | 180 |
| 2-Not an open-end line of credit | 80000 | NA | 2.25 | 120 |
| 2-Not an open-end line of credit | 213750 | NA | 4.375 | 360 |
| 2-Not an open-end line of credit | 247000 | NA | 5.125 | 360 |


| NA | 1-Secured by a first lien | 485000 | 38 |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 490000 | 14 |
| NA | 1-Secured by a first lien | 170000 | 70 |
| NA | 1-Secured by a first lien | 510000 | NA |
| NA | 1-Secured by a first lien | 170000 | 75 |
| NA | 1-Secured by a first lien | 279500 | 95 |
| NA | 1-Secured by a first lien | 420000 | 75 |
| NA | 1-Secured by a first lien | 420000 | 95 |
| NA | 1-Secured by a first lien | 400000 | NA |
| NA | 1-Secured by a first lien | 280000 | 80 |
| NA | 1-Secured by a first lien | 655000 | 50 |
| NA | 1-Secured by a first lien | 260000 | 68 |
| NA | 1-Secured by a first lien | 365000 | 63 |
| NA | 1-Secured by a first lien | 840000 | 29 |
| NA | 1-Secured by a first lien | 1340000 | 59.7 |
| NA | 1-Secured by a first lien | 695000 | 80 |
| NA | 1-Secured by a first lien | 270000 | 56 |
| NA | 1-Secured by a first lien | 690000 | 80 |
| NA | 1-Secured by a first lien | 355000 | 60 |
| NA | 1-Secured by a first lien | 120000 | 80 |
| NA | 1-Secured by a first lien | 329000 | 95 |
| NA | 1-Secured by a first lien | 250000 | NA |
| NA | 1-Secured by a first lien | 1000000 | 80 |
| NA | 1-Secured by a first lien | 335000 | 64 |
| NA | 1-Secured by a first lien | 185000 | 41 |
| NA | 1-Secured by a first lien | 300000 | 62 |
| NA | 1-Secured by a first lien | 243000 | 90 |
| NA | 1-Secured by a first lien | 183000 | NA |
| NA | 1-Secured by a first lien | 480000 | NA |
| NA | 1-Secured by a first lien | 252000 | 96.5 |
| NA | 1-Secured by a first lien | 173000 | NA |
| NA | 1-Secured by a first lien | 198000 | 95 |
| NA | 1-Secured by a first lien | 249000 | 90 |
| NA | 1-Secured by a first lien | 145000 | 66 |
| NA | 1-Secured by a first lien | 205000 | 75 |
| NA | 1-Secured by a first lien | 385000 | 93 |
| NA | 1-Secured by a first lien | 142500 | NA |
| NA | 1-Secured by a first lien | 359500 | 80 |
| NA | 1-Secured by a first lien | 249000 | NA |
| NA | 1-Secured by a first lien | 272000 | 96.5 |
| NA | 1-Secured by a first lien | 145000 | 96.5 |
| NA | 1-Secured by a first lien | 167000 | 95 |
| NA | 1-Secured by a first lien | 254500 | NA |
| NA | 1-Secured by a first lien | 90000 | 75 |
| NA | 1-Secured by a first lien | 1235000 | 75 |
| NA | 1-Secured by a first lien | 130000 | 90 |
| NA | 1-Secured by a first lien | 175000 | 95 |
| NA | 1-Secured by a first lien | 192000 | NA |
| NA | 1-Secured by a first lien | 550000 | NA |
| NA | 1-Secured by a first lien | 162000 | 54 |
| NA | 1-Secured by a first lien | 600000 | 57 |
| NA | 1-Secured by a first lien | 202000 | 36 |
| NA | 1-Secured by a first lien | 140000 | 114 |
| NA | 1-Secured by a first lien | 400000 | 45 |
| NA | 1-Secured by a first lien | 345000 | 47 |
| NA | 1-Secured by a first lien | 225000 | 83 |
| NA | 1-Secured by a first lien | 320000 | NA |
| NA | 1-Secured by a first lien | 225000 | NA |
| NA | 1-Secured by a first lien | 270000 | NA |


|  | 10-Not applicable |
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|  | 10-Not applicable |
|  | 4-Collateral |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 4-Collateral |
|  | 1-Debt-to-income ratio |
|  | 9-Other |
|  | 9-Other |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
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|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 2-Employment history |
|  | 9-Other |
|  | 4-Collateral |
|  | 1-Debt-to-income ratio |
|  | 4-Collateral |
|  | 4-Collateral |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |


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| 1-Debt-to-income ratio | - |
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| 1-Debt-to-income ratio | - |
| 4-Collateral | - |
| 5-Insufficient cash (downpayment, closing costs) | - |
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| 6-Information not provided by applicant in mail, internet, or telephone application |
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| 6-Information not provided by applicant in mail, internet, or telephone application |
| 2-Asian |
| 3-Black or African American |
| 3-Black or African American |
| 5-White |
| 5-White |
| 5-White |
| 5-White |
| 5-White |
| 22-Chinese |
| 2-Asian |
| 2-Asian |
| 2-Asian |
| 2-Asian |
| 2-Asian |
| 3-Black or African American |
| 3-Black or African American |
| 3-Black or African American |
| 3-Black or African American |
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| 6-Information not provided by applicant in mail, internet, or telephone application |
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| 6-Information not provided by applicant in mail, internet, or telephone application |
| 2-Asian |
| 3-Black or African American |
| 21-Asian Indian |
| 5-White |
| 5-White |
| 5-White |
| 5-White |
| 5-White |
| 22-Chinese |
| 8-No co-applicant |
| 8-No co-applicant |
| 8-No co-applicant |
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| 8-No co co-applicant |





| 1-Male |  |
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| 2-Female |  |
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| 5-No co-applicant |  |
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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
| :---: | :---: |
|  | 12-Puerto Rican |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
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|  | 11-Mexican |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 1-Hispanic or Latino |




| 3-Information not provided by applicant in mail, internet, or telephone application |  |
| :---: | :---: |
|  | 12-Puerto Rican |
| 2-Not Hispanic or Latino |  |
| 2-Not Hispanic or Latino |  |
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| 2-Not Hispanic or Latino |  |
| 2-Not Hispanic or Latino |  |
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| 2-Not Hispanic or Latino |  |
| 1-Hispanic or Latino |  |
| 2-Not Hispanic or Latino |  |
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| 8380.00 | 6-Purchased loan | 1 |
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| 307.02 | 6-Purchased loan | 1 |
| 630.00 | 6-Purchased loan | 1 |
| 107.01 | 6-Purchased loan | 1 |
| 2505.00 | 1-Loan originated | 1 |
| 8412.00 | 1-Loan originated | 1 |
| 1406.02 | 6-Purchased loan | 1 |
| 1103.00 | 6-Purchased loan | 1 |
| 716.00 | 1-Loan originated | 1 |
| 8315.00 | 1-Loan originated | 1 |
| 2309.00 | 6-Purchased loan | 1 |
| 8412.00 | 6-Purchased loan | 2 |
| 8435.00 | 6-Purchased loan | 1 |
| 321.00 | 6-Purchased loan | 1 |
| 314.00 | 6-Purchased loan | 1 |
| 6505.00 | 1-Loan originated | 1 |
| 8324.00 | 6-Purchased loan | 2 |
| 501.00 | 1-Loan originated | 1 |
| 208.01 | 6-Purchased loan | 1 |
| 2211.00 | 1-Loan originated | 1 |
| 1005.00 | 1-Loan originated | 1 |
| 608.00 | 6-Purchased loan | 1 |
| 7608.03 | 1-Loan originated | 1 |
| 209.01 | 1-Loan originated | 1 |
| 8424.00 | 6-Purchased loan | 1 |
| 6406.00 | 1-Loan originated | 1 |
| 8319.00 | 6-Purchased loan | 1 |
| 8420.00 | 1-Loan originated | 1 |
| 710.00 | 1-Loan originated | 1 |
| 6308.00 | 1-Loan originated | 1 |
| 1801.00 | 6-Purchased loan | 1 |
| 1104.00 | 1-Loan originated | 1 |
| 404.02 | 6-Purchased loan | 1 |
| 103.00 | 1-Loan originated | 1 |
| 634.00 | 1-Loan originated | 1 |
| 8431.00 | 1-Loan originated | 1 |
| 814.03 | 1-Loan originated | 1 |
| 4601.00 | 1-Loan originated | 1 |
| 703.00 | 6-Purchased loan | 1 |
| 2415.00 | 1-Loan originated | 1 |
| 2435.00 | 1-Loan originated | 1 |
| 8391.00 | 1-Loan originated | 1 |
| 205.00 | 6-Purchased loan | 1 |
| 1605.02 | 1-Loan originated | 1 |
| 1711.00 | 1-Loan originated | 4 |
| 303.00 | 1-Loan originated | 1 |
| 715.00 | 1-Loan originated | 1 |
| 802.01 | 1-Loan originated | 1 |
| 2414.00 | 1-Loan originated | 1 |
| 7003.02 | 1-Loan originated | 1 |
| 2211.00 | 6-Purchased loan | 1 |
| 3301.02 | 1-Loan originated | 1 |
| 902.00 | 6-Purchased loan | 1 |
| 6501.00 | 1-Loan originated | 1 |
| 811.00 | 1-Loan originated | 1 |
| 5611.00 | 1-Loan originated | 1 |
| 632.00 | 1-Loan originated | 1 |
| 1201.00 | 1-Loan originated | 1 |
| 1902.00 | 1-Loan originated | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
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| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 2-Federal Housing Administration insured (FHA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
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| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improvement |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |


| 2-Not an open-end line of credit | 208550 | NA | 6.625 | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 84900 | NA | 3.625 | 360 |
| 2-Not an open-end line of credit | 285000 | NA | 3.975 | 360 |
| 2-Not an open-end line of credit | 92500 | NA | 4.75 | 360 |
| 2-Not an open-end line of credit | 264000 | 20220518 | 4.75 | 180 |
| 2-Not an open-end line of credit | 120000 | 20220224 | 3.875 | 180 |
| 2-Not an open-end line of credit | 147250 | NA | 6.125 | 360 |
| 2-Not an open-end line of credit | 206100 | NA | 5.375 | 360 |
| 2-Not an open-end line of credit | 473000 | 20220516 | 4.625 | 360 |
| 2-Not an open-end line of credit | 168300 | 20220720 | 5.875 | 360 |
| 2-Not an open-end line of credit | 294000 | NA | 4 | 360 |
| 2-Not an open-end line of credit | 134200 | NA | 2.25 | 120 |
| 2-Not an open-end line of credit | 303750 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 420000 | NA | 4.125 | 360 |
| 2-Not an open-end line of credit | 155800 | NA | 3.375 | 360 |
| 2-Not an open-end line of credit | 94113 | 20220322 | 4.25 | 120 |
| 2-Not an open-end line of credit | 589900 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 300000 | 20220215 | 3.75 | 360 |
| 2-Not an open-end line of credit | 92500 | NA | 4.75 | 360 |
| 2-Not an open-end line of credit | 817000 | 20211021 | 3.125 | 360 |
| 2-Not an open-end line of credit | 76312 | 20220513 | 5.75 | 360 |
| 2-Not an open-end line of credit | 100000 | NA | 4.5 | 360 |
| 2-Not an open-end line of credit | 152000 | 20220304 | 3.75 | 360 |
| 2-Not an open-end line of credit | 139500 | 20211228 | 3.25 | 360 |
| 2-Not an open-end line of credit | 171000 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 118600 | 20221014 | 6.99 | 360 |
| 2-Not an open-end line of credit | 200000 | NA | 3.375 | 240 |
| 2-Not an open-end line of credit | 200000 | 20220429 | 5 | 360 |
| 2-Not an open-end line of credit | 721650 | 20220418 | 3.750 | 360 |
| 2-Not an open-end line of credit | 216310 | 20220408 | 5.25 | 360 |
| 2-Not an open-end line of credit | 324300 | NA | 5.3 | 360 |
| 2-Not an open-end line of credit | 272964 | 20220804 | 4.75 | 360 |
| 2-Not an open-end line of credit | 214916.61 | NA | 4.5 | 360 |
| 2-Not an open-end line of credit | 196469 | 20211214 | 3.875 | 360 |
| 2-Not an open-end line of credit | 344000 | 20220121 | 3.125 | 180 |
| 2-Not an open-end line of credit | 164250 | 20211215 | 2 | 180 |
| 2-Not an open-end line of credit | 181900 | 20211019 | 2.625 | 180 |
| 2-Not an open-end line of credit | 195700 | 20220120 | 3.625 | 360 |
| 2-Not an open-end line of credit | 401250 | NA | 4 | 360 |
| 2-Not an open-end line of credit | 387000 | 20221005 | 6.625 | 360 |
| 2-Not an open-end line of credit | 436500 | 20220223 | 4.875 | 360 |
| 2-Not an open-end line of credit | 104000 | 20220623 | 6 | 360 |
| 2-Not an open-end line of credit | 146792.87 | NA | 4.125 | 360 |
| 2-Not an open-end line of credit | 441000 | 20220708 | 5.625 | 360 |
| 2-Not an open-end line of credit | 367500 | 20220927 | 7.625 | 360 |
| 2-Not an open-end line of credit | 124000 | 20220606 | 4.625 | 360 |
| 2-Not an open-end line of credit | 367500 | 20220307 | 4.375 | 360 |
| 2-Not an open-end line of credit | 120000 | 20211014 | 3 | 360 |
| 2-Not an open-end line of credit | 363375 | 20220201 | 3.75 | 360 |
| 2-Not an open-end line of credit | 280725 | 20220822 | 6.375 | 360 |
| 2-Not an open-end line of credit | 272100 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 251750 | 20220105 | 2.875 | 360 |
| 2-Not an open-end line of credit | 239200 | NA | 4.75 | 360 |
| 2-Not an open-end line of credit | 119000 | 20220908 | 5.875 | 180 |
| 2-Not an open-end line of credit | 275000 | 20220404 | 4.625 | 360 |
| 2-Not an open-end line of credit | 286150 | 20220823 | 6.625 | 360 |
| 2-Not an open-end line of credit | 75000 | 20220415 | 5.25 | 360 |
| 2-Not an open-end line of credit | 748000 | 20220517 | 4.875 | 360 |
| 2-Not an open-end line of credit | 299100 | 20211117 | 3.625 | 240 |


| NA | 1-Secured by a first lien | 215000 | NA |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 110900 | NA |
| NA | 1-Secured by a first lien | 380000 | NA |
| NA | 1-Secured by a first lien | 134000 | NA |
| NA | 1-Secured by a first lien | 330000 | 80 |
| NA | 1-Secured by a first lien | 340000 | 36 |
| NA | 1-Secured by a first lien | 155000 | NA |
| NA | 1-Secured by a first lien | 229000 | NA |
| NA | 1-Secured by a first lien | 685000 | 70 |
| NA | 1-Secured by a first lien | 187000 | 90 |
| NA | 1-Secured by a first lien | 370000 | NA |
| NA | 1-Secured by a first lien | 385000 | NA |
| NA | 1-Secured by a first lien | 337500 | NA |
| NA | 1-Secured by a first lien | 525000 | NA |
| NA | 1-Secured by a first lien | 164000 | NA |
| NA | 1-Secured by a first lien | 255000 | 37 |
| NA | 1-Secured by a first lien | 694000 | NA |
| NA | 1-Secured by a first lien | 575000 | 53 |
| NA | 1-Secured by a first lien | 152500 | NA |
| NA | 1-Secured by a first lien | 1660000 | 49.21 |
| NA | 1-Secured by a first lien | 358000 | 20.95 |
| NA | 1-Secured by a first lien | 125000 | NA |
| NA | 1-Secured by a first lien | 172000 | 89 |
| NA | 1-Secured by a first lien | 155000 | 90 |
| NA | 1-Secured by a first lien | 285000 | NA |
| NA | 1-Secured by a first lien | 148250 | 80 |
| NA | 1-Secured by a first lien | 378000 | NA |
| NA | 1-Secured by a first lien | 350000 | 58 |
| NA | 1-Secured by a first lien | 849000 | 85.000 |
| NA | 1-Secured by a first lien | 223000 | 97 |
| NA | 1-Secured by a first lien | 345000 | NA |
| NA | 1-Secured by a first lien | 383000 | 70.04 |
| NA | 1-Secured by a first lien | 269000 | NA |
| NA | 1-Secured by a first lien | 250000 | 79 |
| NA | 1-Secured by a first lien | 515000 | 67 |
| NA | 1-Secured by a first lien | 278000 | 60 |
| NA | 1-Secured by a first lien | 265000 | 69 |
| NA | 1-Secured by a first lien | 208000 | 95 |
| NA | 1-Secured by a first lien | 535000 | NA |
| NA | 1-Secured by a first lien | 430000 | 90 |
| NA | 1-Secured by a first lien | 485000 | 90 |
| NA | 1-Secured by a first lien | 130000 | 80 |
| NA | 1-Secured by a first lien | 157000 | NA |
| NA | 1-Secured by a first lien | 490000 | 90 |
| NA | 1-Secured by a first lien | 525000 | 70 |
| NA | 1-Secured by a first lien | 155000 | 80 |
| NA | 1-Secured by a first lien | 490000 | 75 |
| NA | 1-Secured by a first lien | 150000 | 80 |
| NA | 1-Secured by a first lien | 382500 | 95 |
| NA | 1-Secured by a first lien | 295500 | 95 |
| NA | 1-Secured by a first lien | 340000 | NA |
| NA | 1-Secured by a first lien | 265000 | 95 |
| NA | 1-Secured by a first lien | 299000 | NA |
| NA | 1-Secured by a first lien | 220000 | 55 |
| NA | 1-Secured by a first lien | 415000 | 67 |
| NA | 1-Secured by a first lien | 295000 | 97 |
| NA | 1-Secured by a first lien | 162000 | 47 |
| NA | 1-Secured by a first lien | 935000 | 80 |
| NA | 1-Secured by a first lien | 380000 | 79 |


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| 1-Hispanic or Latino |
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| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
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| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
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| 2-Not Hispanion not provided by applicant in mail, internet, or telephone application |




| 5-No co-applicant |
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| 8310.00 | 6-Purchased loan | 1 |
| :---: | :---: | :---: |
| 503.00 | 1-Loan originated | 1 |
| 8331.00 | 6-Purchased loan | 1 |
| 1203.00 | 1-Loan originated | 1 |
| 8331.00 | 1-Loan originated | 1 |
| 8331.00 | 1-Loan originated | 1 |
| 8366.00 | 1-Loan originated | 2 |
| 2922.00 | 6-Purchased loan | 2 |
| 314.00 | 3-Application denied | 1 |
| 5805.02 | 6-Purchased loan | 2 |
| 8423.00 | 1-Loan originated | 1 |
| 2429.00 | 6-Purchased loan | 1 |
| 1801.00 | 6-Purchased loan | 1 |
| 3018.02 | 1-Loan originated | 1 |
| 101.00 | 1-Loan originated | 1 |
| 815.00 | 6-Purchased loan | 1 |
| 1102.00 | 1-Loan originated | 1 |
| 5305.03 | 6-Purchased loan | 1 |
| 8439.00 | 1-Loan originated | 1 |
| 718.00 | 1-Loan originated | 1 |
| 2801.00 | 1-Loan originated | 1 |
| 5906.00 | 1-Loan originated | 1 |
| 2426.00 | 1-Loan originated | 1 |
| 1408.00 | 6-Purchased loan | 1 |
| 802.01 | 1-Loan originated | 1 |
| 718.00 | 6-Purchased loan | 1 |
| 3406.00 | 6-Purchased loan | 1 |
| 8314.00 | 1-Loan originated | 1 |
| 4909.01 | 1-Loan originated | 1 |
| 5610.00 | 1-Loan originated | 1 |
| 401.00 | 6-Purchased loan | 1 |
| 321.00 | 1-Loan originated | 1 |
| 815.00 | 3-Application denied | 1 |
| 2801.00 | 1-Loan originated | 1 |
| 301.01 | 6-Purchased loan | 1 |
| 714.00 | 6-Purchased loan | 1 |
| 2301.00 | 1-Loan originated | 1 |
| 1403.01 | 1-Loan originated | 1 |
| 8371.00 | 6-Purchased loan | 1 |
| 603.00 | 3-Application denied | 1 |
| 4804.00 | 1-Loan originated | 1 |
| 1510.02 | 3-Application denied | 1 |
| 6407.00 | 1-Loan originated | 1 |
| 506.00 | 1-Loan originated | 1 |
| 703.00 | 1-Loan originated | 1 |
| 7608.03 | 6-Purchased loan | 2 |
| 1006.00 | 1-Loan originated | 1 |
| 8423.00 | 1-Loan originated | 1 |
| 712.00 | 1-Loan originated | 1 |
| 2433.00 | 1-Loan originated | 1 |
| 3201.01 | 6-Purchased loan | 1 |
| 314.00 | 1-Loan originated | 1 |
| 8309.00 | 1-Loan originated | 1 |
| 8404.00 | 1-Loan originated | 1 |
| 634.00 | 6-Purchased loan | 1 |
| 716.00 | 1-Loan originated | 1 |
| 8311.00 | 6-Purchased loan | 2 |
| 2522.02 | 3-Application denied | 3 |
| 4909.02 | 3-Application denied | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improvement |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |


| 2-Not an open-end line of credit | 329513.84 | NA | 3.875 | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 115000 | 20220811 | 5.49 | 240 |
| 2-Not an open-end line of credit | 275619.75 | NA | 4.25 | 360 |
| 2-Not an open-end line of credit | 326250 | 20211203 | 2.875 | 360 |
| 2-Not an open-end line of credit | 312600 | 20220615 | 5.99 | 360 |
| 2-Not an open-end line of credit | 261000 | 20220429 | 5.625 | 360 |
| 2-Not an open-end line of credit | 300000 | 20220519 | 6.125 | 360 |
| 2-Not an open-end line of credit | 217500 | NA | 4.99 | 360 |
| 2-Not an open-end line of credit | 144400 | 20221107 | NA | 360 |
| 2-Not an open-end line of credit | 243501.49 | NA | 5.875 | 360 |
| 2-Not an open-end line of credit | 418000 | 20211217 | 2.875 | 360 |
| 2-Not an open-end line of credit | 470000 | NA | 3.99 | 360 |
| 2-Not an open-end line of credit | 232750 | NA | 3.625 | 360 |
| 2-Not an open-end line of credit | 119248 | 20211214 | 3.49 | 180 |
| 2-Not an open-end line of credit | 157500 | 20220318 | 4.99 | 360 |
| 2-Not an open-end line of credit | 647200 | NA | 3.9 | 360 |
| 2-Not an open-end line of credit | 125000 | 20220217 | 3.75 | 360 |
| 2-Not an open-end line of credit | 92000 | NA | 3.99 | 360 |
| 2-Not an open-end line of credit | 135800 | 20221115 | 6.875 | 360 |
| 2-Not an open-end line of credit | 516000 | 20211229 | 3.125 | 360 |
| 2-Not an open-end line of credit | 288000 | 20220418 | 4.875 | 360 |
| 2-Not an open-end line of credit | 224000 | 20220328 | 4.5 | 360 |
| 2-Not an open-end line of credit | 356250 | 20220411 | 4.99 | 360 |
| 2-Not an open-end line of credit | 600000 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 5000000 | 20220112 | 3.125 | 360 |
| 2-Not an open-end line of credit | 337500 | NA | 3.95 | 360 |
| 2-Not an open-end line of credit | 289990.83 | NA | 4.125 | 360 |
| 2-Not an open-end line of credit | 205640 | 20220617 | 5.75 | 360 |
| 2-Not an open-end line of credit | 100000 | 20220131 | 3.25 | 180 |
| 2-Not an open-end line of credit | 294500 | 20211019 | 5 | 360 |
| 2-Not an open-end line of credit | 1037502.1 | NA | 4.125 | 360 |
| 2-Not an open-end line of credit | 281250 | 20211019 | 3.99 | 360 |
| 2-Not an open-end line of credit | 169575 | 20220923 | NA | 360 |
| 2-Not an open-end line of credit | 427500 | 20221012 | 6.75 | 360 |
| 2-Not an open-end line of credit | 101250 | NA | 5.25 | 360 |
| 2-Not an open-end line of credit | 149250 | NA | 4.875 | 360 |
| 2-Not an open-end line of credit | 315875 | 20221018 | 7.25 | 360 |
| 2-Not an open-end line of credit | 79500 | 20211215 | 2.99 | 360 |
| 2-Not an open-end line of credit | 360050 | NA | 3.5 | 360 |
| 2-Not an open-end line of credit | 1230000 | 20211207 | NA | 360 |
| 2-Not an open-end line of credit | 192000 | 20220207 | 3.625 | 360 |
| 2-Not an open-end line of credit | 103000 | 20220802 | NA | 240 |
| 2-Not an open-end line of credit | 173762 | 20211213 | 2.625 | 180 |
| 2-Not an open-end line of credit | 420000 | 20220620 | 5.625 | 360 |
| 2-Not an open-end line of credit | 300000 | 20220728 | 5 | 360 |
| 2-Not an open-end line of credit | 214000 | NA | 4.75 | 360 |
| 2-Not an open-end line of credit | 282664 | 20220601 | 5 | 360 |
| 2-Not an open-end line of credit | 307500 | 20220308 | 3.875 | 360 |
| 2-Not an open-end line of credit | 183300 | 20211110 | 3 | 180 |
| 2-Not an open-end line of credit | 357500 | 20220118 | 3.625 | 360 |
| 2-Not an open-end line of credit | 150000 | NA | 5.25 | 360 |
| 2-Not an open-end line of credit | 255000 | 20220718 | 4.5 | 360 |
| 2-Not an open-end line of credit | 342500 | 20220117 | 2.625 | 360 |
| 2-Not an open-end line of credit | 186000 | 20220418 | 3.75 | 360 |
| 2-Not an open-end line of credit | 594750 | NA | 2.875 | 360 |
| 2-Not an open-end line of credit | 986000 | 20220429 | 4.75 | 360 |
| 2-Not an open-end line of credit | 400810.81 | NA | 5.5 | 360 |
| 2-Not an open-end line of credit | 254307 | 20211213 | NA | 360 |
| 2-Not an open-end line of credit | 167500 | 20220725 | NA | 360 |


| NA | 1-Secured by a first lien | 440000 | NA |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 425000 | 28 |
| NA | 1-Secured by a first lien | 345000 | NA |
| NA | 1-Secured by a first lien | 435000 | 75 |
| NA | 1-Secured by a first lien | 380000 | 83 |
| NA | 1-Secured by a first lien | 285000 | 92 |
| NA | 1-Secured by a first lien | 420000 | 72 |
| NA | 1-Secured by a first lien | 290000 | NA |
| NA | 1-Secured by a first lien | 152000 | 95 |
| NA | 1-Secured by a first lien | 325000 | NA |
| NA | 1-Secured by a first lien | 522500 | 80 |
| NA | 1-Secured by a first lien | 510000 | NA |
| NA | 1-Secured by a first lien | 245000 | NA |
| NA | 1-Secured by a first lien | 224000 | 54 |
| NA | 1-Secured by a first lien | 175000 | 90 |
| NA | 1-Secured by a first lien | 980000 | NA |
| NA | 1-Secured by a first lien | 220000 | 57 |
| NA | 1-Secured by a first lien | 115000 | NA |
| NA | 1-Secured by a first lien | 140000 | 97 |
| NA | 1-Secured by a first lien | 543500 | 95 |
| NA | 1-Secured by a first lien | 360000 | 80 |
| NA | 1-Secured by a first lien | 260000 | 87 |
| NA | 1-Secured by a first lien | 375000 | 95 |
| NA | 1-Secured by a first lien | 640000 | NA |
| NA | 1-Secured by a first lien | 6500000 | 76.923 |
| NA | 1-Secured by a first lien | 375000 | NA |
| NA | 1-Secured by a first lien | 363000 | NA |
| NA | 1-Secured by a first lien | 212000 | 97 |
| NA | 1-Secured by a first lien | 184000 | 55 |
| NA | 1-Secured by a first lien | 310000 | 95 |
| NA | 1-Secured by a first lien | 1300000 | NA |
| NA | 1-Secured by a first lien | 375000 | 75 |
| NA | 1-Secured by a first lien | 199500 | 85 |
| NA | 1-Secured by a first lien | 570000 | 75 |
| NA | 1-Secured by a first lien | 135000 | NA |
| NA | 1-Secured by a first lien | 199000 | NA |
| NA | 1-Secured by a first lien | 332500 | 95 |
| NA | 1-Secured by a first lien | 250000 | 32 |
| NA | 1-Secured by a first lien | 379000 | NA |
| NA | 1-Secured by a first lien | 1600000 | 76.87 |
| NA | 1-Secured by a first lien | 275000 | 70 |
| NA | 1-Secured by a first lien | 355000 | 30 |
| NA | 1-Secured by a first lien | 250000 | 70 |
| NA | 1-Secured by a first lien | 560000 | 75 |
| NA | 1-Secured by a first lien | 400000 | 75 |
| NA | 1-Secured by a first lien | 267500 | NA |
| NA | 1-Secured by a first lien | 288000 | 96.46 |
| NA | 1-Secured by a first lien | 410000 | 75 |
| NA | 1-Secured by a first lien | 270000 | 68 |
| NA | 1-Secured by a first lien | 387500 | 93 |
| NA | 1-Secured by a first lien | 341000 | NA |
| NA | 1-Secured by a first lien | 340000 | 75 |
| NA | 1-Secured by a first lien | 1250000 | 28 |
| NA | 1-Secured by a first lien | 248000 | 75 |
| NA | 1-Secured by a first lien | 793000 | NA |
| NA | 1-Secured by a first lien | 1160000 | 85 |
| NA | 1-Secured by a first lien | 535000 | NA |
| NA | 1-Secured by a first lien | 259000 | 96.5 |
| NA | 1-Secured by a first lien | 178000 | 95 |


|  | 10-Not applicable |
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|  | 10-Not applicable |
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|  | 4-Collateral |
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|  | 4-Collateral |
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|  | 10-Not applicable |
|  | 6-Unverifiable information |
|  | 10-Not applicable |
|  | 3-Credit history |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
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|  | 3-Credit history |
|  | 4-Collateral |



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|  | 6-Information not provided by applicant in mail, internet, or telephone application |
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|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 21-Asian Indian |
|  | 22-Chinese |
|  | 22-Chinese |
|  | 23-Filipino |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Black or African American |
|  | 5-White |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Asian |
|  | 2-Asian |
|  | 2-Asian |
|  | 2-Asian |
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|  | 2-Asian |
|  | 2-Asian |
|  | 2-Asian |
|  | 3-Black or African American |
|  | 5-White |
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|  | 2-Asian |
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|  | 2-Asian |
|  | 2-Asian |
|  | 3-Black or African American |
|  | 3-Black or African American |


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| 8-No co-applicant |
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| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 8-No co-applicant |
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| 2-Asian |
| 8-No co-applicant |
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| 8-No co-applicant |
| 8-No co-applicant |
| 2-Asian |
| 3-Black or African American |
| 5-White |
| 5-White |
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| 2-Asian |
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| 5-White |
| 5-White |
| 3-Black or African American |
| 3-Black or African American |




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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 1-Male |
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|  | 5-No co-applicant |
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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 5-No co-applicant |
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|  | 1-Male |
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|  | 2-Not Hispanic or Latino |
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|  | 2-Not Hispanic or Latino |
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|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 11-Mexican |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 1-Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 1-Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
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|  | 5-No co-applicant |
|  | 2-Not Hispanic or Latino |
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|  | 2-Not Hispanic or Latino |
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|  | 1-Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 1-Hispanic or Latino |
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| 14-Other Hispanic or Latino | - |
| 11-Mexican | - |
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| 1704.00 | 6-Purchased loan | 1 |
| :---: | :---: | :---: |
| 4605.00 | 1-Loan originated | 1 |
| 5306.00 | 1-Loan originated | 1 |
| 4909.02 | 1-Loan originated | 1 |
| 6713.00 | 1-Loan originated | 1 |
| 106.00 | 6-Purchased loan | 1 |
| 703.00 | 1-Loan originated | 1 |
| 8344.00 | 6-Purchased loan | 1 |
| 7201.00 | 1-Loan originated | 1 |
| 8104.00 | 3-Application denied | 1 |
| 2434.00 | 3-Application denied | 1 |
| 1605.01 | 3-Application denied | 2 |
| 308.00 | 3-Application denied | 2 |
| 8331.00 | 3-Application denied | 1 |
| 8422.00 | 3-Application denied | 1 |
| 5804.00 | 6-Purchased loan | 2 |
| 703.00 | 1-Loan originated | 1 |
| 629.00 | 1-Loan originated | 1 |
| 2307.00 | 1-Loan originated | 3 |
| 8326.00 | 6-Purchased loan | 1 |
| 1708.00 | 1-Loan originated | 1 |
| 8307.00 | 6-Purchased loan | 1 |
| 1002.00 | 1-Loan originated | 1 |
| 628.00 | 6-Purchased loan | 1 |
| 815.00 | 1-Loan originated | 1 |
| 8420.00 | 1-Loan originated | 1 |
| 1203.00 | 1-Loan originated | 1 |
| 1506.00 | 1-Loan originated | 1 |
| 8420.00 | 6-Purchased loan | 1 |
| 505.00 | 1-Loan originated | 1 |
| 1503.00 | 1-Loan originated | 1 |
| 2421.00 | 1-Loan originated | 1 |
| 8430.00 | 1-Loan originated | 1 |
| 813.00 | 1-Loan originated | 1 |
| 705.00 | 1-Loan originated | 1 |
| 510.00 | 1-Loan originated | 1 |
| 7005.01 | 1-Loan originated | 1 |
| 3907.00 | 6-Purchased loan | 1 |
| 207.02 | 1-Loan originated | 1 |
| 2101.00 | 6-Purchased loan | 1 |
| 321.00 | 6-Purchased loan | 1 |
| 8413.00 | 1-Loan originated | 2 |
| 5611.00 | 1-Loan originated | 1 |
| 309.00 | 1-Loan originated | 1 |
| 704.00 | 6-Purchased loan | 1 |
| 1203.00 | 1-Loan originated | 1 |
| 317.00 | 6-Purchased loan | 1 |
| 505.00 | 1-Loan originated | 1 |
| 404.01 | 6-Purchased loan | 1 |
| 402.01 | 6-Purchased loan | 1 |
| 801.00 | 1-Loan originated | 1 |
| 1510.02 | 1-Loan originated | 1 |
| 625.00 | 1-Loan originated | 1 |
| 812.01 | 1-Loan originated | 1 |
| 1502.00 | 1-Loan originated | 1 |
| 1408.00 | 1-Loan originated | 1 |
| 712.00 | 6-Purchased loan | 1 |
| 1103.00 | 1-Loan originated | 1 |
| 508.00 | 6-Purchased loan | 1 |


| S, or FSA) | 1-Home Purchase |
| :---: | :---: |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improvement |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purcha |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purch |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purc |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purch |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improvement |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
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| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1 -Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |


| 2-Not an open-end line of credit | 266266.41 | NA | 6.5 | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 230743 | 20220808 | 6.25 | 360 |
| 2-Not an open-end line of credit | 101250 | 20220406 | 6.125 | 360 |
| 2-Not an open-end line of credit | 259461 | 20221020 | 7.25 | 360 |
| 2-Not an open-end line of credit | 98029 | 20220829 | 5.5 | 360 |
| 2-Not an open-end line of credit | 472500 | NA | 4.375 | 360 |
| 2-Not an open-end line of credit | 472500 | 20220315 | 4.25 | 360 |
| 2-Not an open-end line of credit | 453718.72 | NA | 2.99 | 360 |
| 2-Not an open-end line of credit | 295829 | 20220201 | 3.49 | 360 |
| 2-Not an open-end line of credit | 234134 | 20220211 | NA | 360 |
| 2-Not an open-end line of credit | 676497 | 20220716 | NA | 360 |
| 2-Not an open-end line of credit | 153000 | 20220121 | NA | 180 |
| 2-Not an open-end line of credit | 629273 | 20211213 | NA | 360 |
| 2-Not an open-end line of credit | 468000 | 20220427 | NA | 360 |
| 2-Not an open-end line of credit | 768800 | 20220410 | NA | 360 |
| 2-Not an open-end line of credit | 280000 | NA | 5.875 | 360 |
| 2-Not an open-end line of credit | 432000 | 20211208 | 3 | 360 |
| 2-Not an open-end line of credit | 840000 | 20220322 | 4 | 360 |
| 2-Not an open-end line of credit | 384000 | 20220821 | 5.99 | 360 |
| 2-Not an open-end line of credit | 647200 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 114931 | 20211127 | 2.625 | 180 |
| 2-Not an open-end line of credit | 369000 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 72000 | 20221117 | 7.625 | 360 |
| 2-Not an open-end line of credit | 426163.29 | NA | 3.875 | 180 |
| 2-Not an open-end line of credit | 1000000 | 20220324 | 3.75 | 360 |
| 2-Not an open-end line of credit | 148320 | 20211214 | 2.625 | 180 |
| 2-Not an open-end line of credit | 330000 | 20211110 | 2.625 | 360 |
| 2-Not an open-end line of credit | 219000 | 20220222 | 3.99 | 240 |
| 2-Not an open-end line of credit | 647200 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 1760000 | 20220801 | 4.865 | 360 |
| 2-Not an open-end line of credit | 380000 | 20220330 | 4.375 | 360 |
| 2-Not an open-end line of credit | 544000 | 20220114 | 3 | 360 |
| 2-Not an open-end line of credit | 240000 | 20211026 | 3.375 | 360 |
| 2-Not an open-end line of credit | 1417500 | 20211102 | 2.75 | 180 |
| 2-Not an open-end line of credit | 784000 | 20220421 | 4.75 | 360 |
| 2-Not an open-end line of credit | 760000 | 20220705 | 5.75 | 360 |
| 2-Not an open-end line of credit | 220000 | 20220310 | 3 | 180 |
| 2-Not an open-end line of credit | 603500 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 166250 | 20220418 | 5.99 | 360 |
| 2-Not an open-end line of credit | 150000 | NA | 5.125 | 180 |
| 2-Not an open-end line of credit | 247500 | NA | 3.99 | 360 |
| 2-Not an open-end line of credit | 210000 | 20211229 | 4.375 | 360 |
| 2-Not an open-end line of credit | 210526 | 20220411 | 4.5 | 180 |
| 2-Not an open-end line of credit | 547700 | 20211223 | 2.875 | 360 |
| 2-Not an open-end line of credit | 568000 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 648000 | 20220622 | 4.5 | 360 |
| 2-Not an open-end line of credit | 413250 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 473600 | 20220106 | 3.49 | 360 |
| 2-Not an open-end line of credit | 1002400 | NA | 4 | 360 |
| 2-Not an open-end line of credit | 1406677.97 | NA | 4.75 | 360 |
| 2-Not an open-end line of credit | 1800000 | 20210827 | 1.750 | 360 |
| 2-Not an open-end line of credit | 130000 | 20220106 | 3.375 | 360 |
| 2-Not an open-end line of credit | 526400 | 20220808 | 5.875 | 360 |
| 2-Not an open-end line of credit | 600000 | 20220324 | 5 | 360 |
| 2-Not an open-end line of credit | 426833 | 20220908 | 5.75 | 360 |
| 2-Not an open-end line of credit | 463500 | 20220111 | 3.5 | 360 |
| 2-Not an open-end line of credit | 641250 | NA | 3.5 | 360 |
| 2-Not an open-end line of credit | 375000 | 20220418 | 4.875 | 360 |
| 2-Not an open-end line of credit | 1387812.45 | NA | 3.5 | 360 |


| NA | 1-Secured by a first lien | 275000 | NA |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 235000 | 96.5 |
| NA | 1-Secured by a first lien | 135000 | 75 |
| NA | 1-Secured by a first lien | 270000 | 94.44 |
| NA | 1-Secured by a first lien | 220000 | 45 |
| NA | 1-Secured by a first lien | 556500 | NA |
| NA | 1-Secured by a first lien | 500000 | 95 |
| NA | 1-Secured by a first lien | 505000 | NA |
| NA | 1-Secured by a first lien | 625000 | 48 |
| NA | 1-Secured by a first lien | 500000 | 47 |
| NA | 1-Secured by a first lien | 752500 | 89.89 |
| NA | 1-Secured by a first lien | 405000 | 38 |
| NA | 1-Secured by a first lien | 740000 | 86 |
| NA | 1-Secured by a first lien | 485000 | 97 |
| NA | 1-Secured by a first lien | 961000 | 80 |
| NA | 1-Secured by a first lien | 400000 | NA |
| NA | 1-Secured by a first lien | 480000 | 90 |
| NA | 1-Secured by a first lien | 1050000 | 80 |
| NA | 1-Secured by a first lien | 480000 | 80 |
| NA | 1-Secured by a first lien | 690000 | NA |
| NA | 1-Secured by a first lien | 350000 | 33 |
| NA | 1-Secured by a first lien | 410000 | NA |
| NA | 1-Secured by a first lien | 335000 | 22 |
| NA | 1-Secured by a first lien | 534900 | NA |
| NA | 1-Secured by a first lien | 1700000 | 59 |
| NA | 1-Secured by a first lien | 257800 | 58 |
| NA | 1-Secured by a first lien | 975000 | 34 |
| NA | 1-Secured by a first lien | 316000 | 70 |
| NA | 1-Secured by a first lien | 887000 | NA |
| NA | 1-Secured by a first lien | 2200000 | 80 |
| NA | 1-Secured by a first lien | 475000 | 80 |
| NA | 1-Secured by a first lien | 640000 | 85 |
| NA | 1-Secured by a first lien | 300000 | 80 |
| NA | 1-Secured by a first lien | 4400000 | 32.21 |
| NA | 1-Secured by a first lien | 980000 | 80 |
| NA | 1-Secured by a first lien | 950000 | 80 |
| NA | 1-Secured by a first lien | 305000 | 73 |
| NA | 1-Secured by a first lien | 710000 | NA |
| NA | 1-Secured by a first lien | 175000 | 95 |
| NA | 1-Secured by a first lien | 750000 | NA |
| NA | 1-Secured by a first lien | 330000 | NA |
| NA | 1-Secured by a first lien | 350000 | 60 |
| NA | 1-Secured by a first lien | 352000 | 60 |
| NA | 1-Secured by a first lien | 1005000 | 55 |
| NA | 1-Secured by a first lien | 710000 | NA |
| NA | 1-Secured by a first lien | 810000 | 80 |
| NA | 1-Secured by a first lien | 435000 | NA |
| NA | 1-Secured by a first lien | 592000 | 80 |
| NA | 1-Secured by a first lien | 1253000 | NA |
| NA | 1-Secured by a first lien | 1657000 | NA |
| NA | 1-Secured by a first lien | 3800000 | 47.368 |
| NA | 1-Secured by a first lien | 280000 | 47 |
| NA | 1-Secured by a first lien | 658000 | 80 |
| NA | 1-Secured by a first lien | 870000 | 69 |
| NA | 1-Secured by a first lien | 569111 | 75 |
| NA | 1-Secured by a first lien | 950000 | 55 |
| NA | 1-Secured by a first lien | 855000 | NA |
| NA | 1-Secured by a first lien | 400000 | 94 |
| NA | 1-Secured by a first lien | 2100000 | NA |


|  | 10-Not applicable |
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|  | 1-Debt-to-income ratio |
|  | 1-Debt-to-income ratio |
|  | 4-Collateral |
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|  | 6-Unverifiable information |
|  | 10-Not applicable |
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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 1-Hispanic or Latino |
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| 902.00 | 1-Loan originated | 1 |
| :---: | :---: | :---: |
| 2432.00 | 6-Purchased loan | 1 |
| 2402.00 | 1-Loan originated | 1 |
| 2435.00 | 1-Loan originated | 1 |
| 302.00 | 6-Purchased loan | 1 |
| 1610.00 | 1-Loan originated | 1 |
| 513.00 | 1-Loan originated | 1 |
| 816.00 | 1-Loan originated | 1 |
| 2405.00 | 1-Loan originated | 1 |
| 8321.00 | 6-Purchased loan | 1 |
| 1607.00 | 6-Purchased loan | 3 |
| 508.00 | 6-Purchased loan | 1 |
| 603.00 | 1-Loan originated | 1 |
| 705.00 | 1-Loan originated | 3 |
| 601.00 | 1-Loan originated | 1 |
| 8391.00 | 6-Purchased loan | 1 |
| 1406.01 | 6-Purchased loan | 1 |
| 8330.00 | 1-Loan originated | 1 |
| 513.00 | 1-Loan originated | 1 |
| 813.00 | 1-Loan originated | 1 |
| 604.00 | 1-Loan originated | 1 |
| 317.00 | 1-Loan originated | 1 |
| 2819.00 | 6-Purchased loan | 1 |
| 4208.00 | 1-Loan originated | 2 |
| 5501.00 | 1-Loan originated | 1 |
| 8429.00 | 6-Purchased loan | 1 |
| 404.02 | 1-Loan originated | 1 |
| 5203.00 | 1-Loan originated | 1 |
| 8390.00 | 1-Loan originated | 1 |
| 703.00 | 1-Loan originated | 3 |
| 206.01 | 1-Loan originated | 1 |
| 1510.02 | 1-Loan originated | 1 |
| 401.00 | 6-Purchased loan | 1 |
| 8404.00 | 3-Application denied | 1 |
| 402.01 | 1-Loan originated | 1 |
| 8323.00 | 1-Loan originated | 1 |
| 1605.01 | 1-Loan originated | 1 |
| 815.00 | 1-Loan originated | 1 |
| 2215.00 | 1-Loan originated | 3 |
| 3301.03 | 1-Loan originated | 1 |
| 8310.00 | 1-Loan originated | 1 |
| 314.00 | 1-Loan originated | 1 |
| 816.00 | 1-Loan originated | 1 |
| 4312.00 | 3-Application denied | 1 |
| 3301.01 | 1-Loan originated | 1 |
| 6714.00 | 1-Loan originated | 1 |
| 8388.00 | 1-Loan originated | 1 |
| 209.01 | 1-Loan originated | 1 |
| 8350.00 | 1-Loan originated | 1 |
| 8419.00 | 1-Loan originated | 1 |
| 103.00 | 1-Loan originated | 1 |
| 4805.00 | 1-Loan originated | 1 |
| 8358.00 | 6-Purchased loan | 1 |
| 8361.00 | 1-Loan originated | 1 |
| 4604.00 | 1-Loan originated | 2 |
| 2305.00 | 1-Loan originated | 1 |
| 4907.00 | 6-Purchased loan | 1 |
| 1710.00 | 1-Loan originated | 1 |
| 1703.00 | 3-Application denied | 2 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 32-Cash Out |


| 2-Not an open-end line of credit | 340000 | 20220228 | 5.125 | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2 -Not an open-end line of credit | 451250 | NA | 3.5 | 360 |
| $2-$ Not an open-end line of credit | 340000 | 20211228 | 2.49 | 180 |
| $2-$ Not an open-end line of credit | 338850 | 20211130 | 3.125 | 360 |
| 2 -Not an open-end line of credit | 999999 | NA | 4.875 | 360 |
| $2-$ Not an open-end line of credit | 382500 | 20221021 | 5.25 | 360 |
| 2-Not an open-end line of credit | 585000 | 20220322 | 4.625 | 360 |
| $2-$ Not an open-end line of credit | 535500 | 20211118 | 2.625 | 360 |
| $2-$ Not an open-end line of credit | 427500 | 20220505 | 5.375 | 360 |
| $2-$ Not an open-end line of credit | 238000 | NA | 4.49 | 360 |
| $2-$ Not an open-end line of credit | 420000 | NA | 3.875 | 360 |
| $2-$ Not an open-end line of credit | 1540000 | NA | 3.5 | 360 |
| 2 -Not an open-end line of credit | 1088000 | 20220518 | 4.25 | 360 |
| $2-$ Not an open-end line of credit | 1237500 | 20220307 | 3.5 | 360 |
| 2-Not an open-end line of credit | 382500 | 20220411 | 4.99 | 360 |
| 2-Not an open-end line of credit | 559920 | NA | 3.725 | 360 |
| 2-Not an open-end line of credit | 343247.08 | NA | 5 | 360 |
| 2-Not an open-end line of credit | 856480 | 20220712 | 5.375 | 360 |
| 2-Not an open-end line of credit | 1319200 | 20220524 | 4.625 | 360 |
| 2-Not an open-end line of credit | 225000 | 20211215 | 2.125 | 120 |
| 2-Not an open-end line of credit | 565800 | 20220213 | 3.75 | 360 |
| 2-Not an open-end line of credit | 316000 | 20211220 | 3.375 | 360 |
| 2-Not an open-end line of credit | 286900 | NA | 4.1 | 360 |
| 2-Not an open-end line of credit | 332224 | 20220122 | 3.75 | 360 |
| 2-Not an open-end line of credit | 68730 | 20220526 | 4.99 | 180 |
| 2-Not an open-end line of credit | 1897554.27 | NA | 4.625 | 360 |
| 2-Not an open-end line of credit | 800000 | 20211227 | 2.875 | 360 |
| 2-Not an open-end line of credit | 260199 | 20220418 | 5.125 | 360 |
| 2-Not an open-end line of credit | 200000 | 20221125 | 6 | 180 |
| 2-Not an open-end line of credit | 555257 | 20220110 | 3.625 | 360 |
| 2-Not an open-end line of credit | 288000 | 20220319 | 3.875 | 360 |
| 2-Not an open-end line of credit | 513000 | 20220602 | 4.75 | 360 |
| 2-Not an open-end line of credit | 1090529.05 | NA | 4.375 | 360 |
| 2-Not an open-end line of credit | 259000 | 20220418 | NA | 360 |
| 2-Not an open-end line of credit | 206100 | 20220816 | 4.99 | 360 |
| 2-Not an open-end line of credit | 706300 | 20220505 | 4.625 | 360 |
| 2-Not an open-end line of credit | 481000 | 20211119 | 2.875 | 360 |
| 2-Not an open-end line of credit | 500000 | 20211120 | 3.125 | 360 |
| 2-Not an open-end line of credit | 473000 | 20211022 | 3.625 | 180 |
| 2-Not an open-end line of credit | 816000 | 20211129 | 2.5 | 180 |
| 2-Not an open-end line of credit | 1198280 | 20211129 | 3.25 | 360 |
| 2-Not an open-end line of credit | 86250 | 20211206 | 3.375 | 360 |
| 2-Not an open-end line of credit | 256800 | 20220518 | 5.875 | 360 |
| 2-Not an open-end line of credit | 181649 | 20221128 | NA | 360 |
| 2-Not an open-end line of credit | 314000 | 20220204 | 3.875 | 360 |
| 2-Not an open-end line of credit | 47500 | 20211221 | 4.75 | 180 |
| 2-Not an open-end line of credit | 51350 | 20220114 | 2.875 | 180 |
| 2-Not an open-end line of credit | 169100 | 20220615 | 5.375 | 360 |
| 2-Not an open-end line of credit | 123000 | 20220215 | 4.625 | 360 |
| 2-Not an open-end line of credit | 394500 | 20220215 | 4.625 | 240 |
| 2-Not an open-end line of credit | 111236 | 20211202 | 3.49 | 360 |
| 2-Not an open-end line of credit | 74020 | 20211112 | 2.75 | 120 |
| 2-Not an open-end line of credit | 352000 | NA | 3.75 | 300 |
| 2-Not an open-end line of credit | 156750 | 20220606 | 5.49 | 360 |
| 2-Not an open-end line of credit | 114349 | 20220106 | 4.75 | 360 |
| 2-Not an open-end line of credit | 185500 | 20220607 | 5.99 | 360 |
| 2-Not an open-end line of credit | 166920 | NA | 6.25 | 360 |
| 2-Not an open-end line of credit | 257050 | 20220429 | 5.375 | 360 |
| 2-Not an open-end line of credit | 150183 | 20220706 | NA | 360 |


| NA | 1-Secured by a first lien | 425000 | 80 |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 475000 | NA |
| NA | 1-Secured by a first lien | 425000 | 80 |
| NA | 1-Secured by a first lien | 376500 | 90 |
| NA | 1-Secured by a first lien | 1262500 | NA |
| NA | 1-Secured by a first lien | 510000 | 75 |
| NA | 1-Secured by a first lien | 650000 | 90 |
| NA | 1-Secured by a first lien | 1300000 | 42 |
| NA | 1-Secured by a first lien | 450000 | 95 |
| NA | 1-Secured by a first lien | 280000 | NA |
| NA | 1-Secured by a first lien | 560000 | NA |
| NA | 1-Secured by a first lien | 1925000 | NA |
| NA | 1-Secured by a first lien | 1360000 | 80 |
| NA | 1-Secured by a first lien | 1650000 | 75 |
| NA | 1-Secured by a first lien | 450000 | 85 |
| NA | 1-Secured by a first lien | 699900 | NA |
| NA | 1-Secured by a first lien | 350000 | NA |
| NA | 1-Secured by a first lien | 1070600 | 80 |
| NA | 1-Secured by a first lien | 1552000 | 85.000 |
| NA | 1-Secured by a first lien | 405000 | 56 |
| NA | 1-Secured by a first lien | 615000 | 92 |
| NA | 1-Secured by a first lien | 395000 | 80 |
| NA | 1-Secured by a first lien | 302000 | NA |
| NA | 1-Secured by a first lien | 475000 | 70 |
| NA | 1-Secured by a first lien | 70000 | 96.5 |
| NA | 1-Secured by a first lien | 2375000 | NA |
| NA | 1-Secured by a first lien | 1100000 | 72.72 |
| NA | 1-Secured by a first lien | 265000 | 96.5 |
| NA | 1-Secured by a first lien | 255000 | 79 |
| NA | 1-Secured by a first lien | 855000 | 65 |
| NA | 1-Secured by a first lien | 360000 | 80 |
| NA | 1-Secured by a first lien | 570000 | 90 |
| NA | 1-Secured by a first lien | 1365000 | NA |
| NA | 1-Secured by a first lien | 370000 | 70 |
| NA | 1-Secured by a first lien | 229000 | 90 |
| NA | 1-Secured by a first lien | 1009000 | 70 |
| NA | 1-Secured by a first lien | 770000 | 63 |
| NA | 1-Secured by a first lien | 675000 | 75 |
| NA | 1-Secured by a first lien | 960000 | 49.27 |
| NA | 1-Secured by a first lien | 1220000 | 66.88 |
| NA | 1-Secured by a first lien | 1630000 | 78 |
| NA | 1-Secured by a first lien | 115000 | 75 |
| NA | 1-Secured by a first lien | 321000 | 80 |
| NA | 1-Secured by a first lien | 185000 | 96.5 |
| NA | 1-Secured by a first lien | 392500 | 80 |
| NA | 1-Secured by a first lien | 50000 | 95 |
| NA | 1-Secured by a first lien | 92000 | 56 |
| NA | 1-Secured by a first lien | 178000 | 95 |
| NA | 1-Secured by a first lien | 230000 | 54 |
| NA | 1-Secured by a first lien | 526000 | 75 |
| NA | 1-Secured by a first lien | 175000 | 64 |
| NA | 1-Secured by a first lien | 103000 | 72 |
| NA | 1-Secured by a first lien | 440000 | NA |
| NA | 1-Secured by a first lien | 165000 | 95 |
| NA | 1-Secured by a first lien | 180000 | 64 |
| NA | 1-Secured by a first lien | 350000 | 53 |
| NA | 1-Secured by a first lien | 170000 | NA |
| NA | 1-Secured by a first lien | 265000 | 97 |
| NA | 1-Secured by a first lien | 300000 | 49.2 |


|  | 10-Not applicable |
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|  | 10-Not applicable |
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|  | 2-Employment history |
|  | 10-Not applicable |
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|  | 3-Credit history |
|  | 10-Not applicable |
|  | 10-Not applicable |
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|  | 6-Unverifiable information |



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|  | 6-Information not provided by applicant in mail, internet, or telephone application |
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|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 21-Asian Indian |
|  | 21-Asian Indian |
|  | 21-Asian Indian |
|  | 22-Chinese |
|  | 1-American Indian or Alaska Native |
|  | 2-Asian |
|  | 2-Asian |
|  | 2-Asian |
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|  | 3-Black or African American |
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|  | 6-Information not provided by applicant in mail, internet, or telephone application |
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|  | 6-Information not provided by applicant in mail, internet, or telephone application |
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|  | 6 -Information not provided by applicant in mail, internet, or telephone application |
|  | 6 -Information not provided by applicant in mail, internet, or telephone application |
|  | 21-Asian Indian |
|  | 21-Asian Indian |
|  | 21-Asian Indian |
|  | 22-Chinese |
|  | 8-No co-applicant |
|  | 8-No co-applicant |
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|  | 2-Not Hispanic or Latino |
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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 1-Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 1-Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 1-Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
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|  | 5-No co-applicant |
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| 2409.00 | 3-Application denied | 3 |
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| 2104.00 | 3-Application denied | 1 |
| 5806.00 | 3-Application denied | 2 |
| 6606.00 | 3-Application denied | 1 |
| 2003.00 | 3-Application denied | 2 |
| 6605.00 | 3-Application denied | 3 |
| 2402.00 | 3-Application denied | 1 |
| 1407.01 | 3-Application denied | 1 |
| 5807.00 | 3-Application denied | 2 |
| 615.00 | 3-Application denied | 2 |
| 313.00 | 3-Application denied | 1 |
| 6122.00 | 3-Application denied | 3 |
| 2312.00 | 3-Application denied | 2 |
| 1705.00 | 6-Purchased loan | 1 |
| 7003.02 | 1-Loan originated | 1 |
| 304.00 | 6-Purchased loan | 1 |
| 1006.00 | 6-Purchased loan | 1 |
| 1405.00 | 1-Loan originated | 1 |
| 5610.00 | 1-Loan originated | 1 |
| 2503.00 | 1-Loan originated | 1 |
| 5806.00 | 6-Purchased loan | 2 |
| 6606.00 | 1-Loan originated | 1 |
| 8397.00 | 6-Purchased loan | 1 |
| 2204.00 | 6-Purchased loan | 2 |
| 8391.00 | 1-Loan originated | 1 |
| 2213.00 | 1-Loan originated | 1 |
| 509.00 | 1-Loan originated | 1 |
| 6201.00 | 1-Loan originated | 1 |
| 2801.00 | 1-Loan originated | 1 |
| 8319.00 | 1-Loan originated | 1 |
| 6404.00 | 1-Loan originated | 1 |
| 2415.00 | 6-Purchased loan | 1 |
| 8391.00 | 6-Purchased loan | 1 |
| 304.00 | 1-Loan originated | 1 |
| 1604.00 | 1-Loan originated | 1 |
| 6405.00 | 1-Loan originated | 1 |
| 6503.01 | 1-Loan originated | 2 |
| 8333.00 | 1-Loan originated | 1 |
| 4603.02 | 1-Loan originated | 1 |
| 2827.00 | 1-Loan originated | 1 |
| 818.00 | 1-Loan originated | 1 |
| 2309.00 | 1-Loan originated | 1 |
| 2101.00 | 1-Loan originated | 1 |
| 8371.00 | 1-Loan originated | 1 |
| 8325.00 | 6-Purchased loan | 1 |
| 2213.00 | 1-Loan originated | 1 |
| 803.00 | 1-Loan originated | 1 |
| 901.00 | 1-Loan originated | 1 |
| 8430.00 | 1-Loan originated | 1 |
| 2433.00 | 1-Loan originated | 1 |
| 2107.00 | 1-Loan originated | 1 |
| 8390.00 | 6-Purchased loan | 1 |
| 310.00 | 1-Loan originated | 1 |
| 6610.00 | 6-Purchased loan | 1 |
| 3206.00 | 1-Loan originated | 1 |
| 1604.00 | 1-Loan originated | 1 |
| 5705.00 | 1-Loan originated | 1 |
| 1408.00 | 1-Loan originated | 2 |
| 902.00 | 6-Purchased loan | 1 |
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| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 32-Cash Out |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improvement |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purch |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |


| 2-Not an open-end line of credit | 208200 | 20220107 | NA | 180 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 310500 | 20220323 | NA | 360 |
| 2-Not an open-end line of credit | 173000 | 20220309 | NA | 180 |
| 2-Not an open-end line of credit | 259960 | 20220920 | NA | 360 |
| 2-Not an open-end line of credit | 184655 | 20220415 | NA | 360 |
| 2-Not an open-end line of credit | 348569 | 20220919 | NA | 360 |
| 2-Not an open-end line of credit | 210200 | 20220729 | NA | 360 |
| 2-Not an open-end line of credit | 218500 | 20220228 | NA | 360 |
| 2-Not an open-end line of credit | 75000 | 20220625 | NA | 360 |
| 2-Not an open-end line of credit | 450600 | 20220519 | NA | 360 |
| 2-Not an open-end line of credit | 107572 | 20220312 | NA | 360 |
| 2-Not an open-end line of credit | 235653 | 20220727 | NA | 360 |
| 2-Not an open-end line of credit | 242250 | 20220317 | NA | 360 |
| 2-Not an open-end line of credit | 212800 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 164000 | 20211204 | 2.875 | 180 |
| 2-Not an open-end line of credit | 198317 | NA | 5.5 | 180 |
| 2-Not an open-end line of credit | 145000 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 241200 | 20211216 | 3.375 | 360 |
| 2-Not an open-end line of credit | 137575 | 20211208 | 3.49 | 360 |
| 2-Not an open-end line of credit | 220000 | 20211207 | 3.625 | 360 |
| 2-Not an open-end line of credit | 210000 | NA | 5.75 | 360 |
| 2-Not an open-end line of credit | 262718 | 20221012 | 6.25 | 360 |
| 2-Not an open-end line of credit | 226500 | NA | 5.5 | 360 |
| 2-Not an open-end line of credit | 718250 | NA | 3.99 | 360 |
| 2-Not an open-end line of credit | 142500 | 20221012 | 6.75 | 360 |
| 2-Not an open-end line of credit | 552000 | 20220403 | 3.125 | 180 |
| 2-Not an open-end line of credit | 972000 | 20220223 | 3.625 | 360 |
| 2-Not an open-end line of credit | 83200 | 20211203 | 2.75 | 180 |
| 2-Not an open-end line of credit | 452000 | 20220209 | 3.99 | 360 |
| 2-Not an open-end line of credit | 204700 | 20211029 | 2.875 | 240 |
| 2-Not an open-end line of credit | 323000 | 20220523 | 5.375 | 360 |
| 2-Not an open-end line of credit | 237109.61 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 277000 | NA | 3.375 | 360 |
| 2-Not an open-end line of credit | 518100 | 20220208 | 3.75 | 360 |
| 2-Not an open-end line of credit | 468000 | 20220720 | 5.49 | 360 |
| 2-Not an open-end line of credit | 235000 | 20220906 | 5.49 | 180 |
| 2-Not an open-end line of credit | 310250 | 20220309 | 4.49 | 360 |
| 2-Not an open-end line of credit | 310250 | 20220411 | 4.99 | 360 |
| 2-Not an open-end line of credit | 200000 | 20220523 | 4.875 | 360 |
| 2-Not an open-end line of credit | 212800 | 20220408 | 4.99 | 360 |
| 2-Not an open-end line of credit | 637500 | 20220111 | 3.5 | 360 |
| 2-Not an open-end line of credit | 567499 | 20220513 | 4.375 | 360 |
| 2-Not an open-end line of credit | 328930 | 20220422 | 5.125 | 360 |
| 2-Not an open-end line of credit | 151500 | 20220225 | 3.875 | 180 |
| 2-Not an open-end line of credit | 516000 | NA | 3.99 | 360 |
| 2-Not an open-end line of credit | 510000 | 20220111 | 3.25 | 360 |
| 2-Not an open-end line of credit | 1125000 | 20220405 | 4.375 | 360 |
| 2-Not an open-end line of credit | 332000 | 20220503 | 5.25 | 360 |
| 2-Not an open-end line of credit | 57520 | 20220327 | 4.99 | 360 |
| 2-Not an open-end line of credit | 512000 | 20220208 | 3.49 | 360 |
| 2-Not an open-end line of credit | 212000 | 20220615 | 4.75 | 180 |
| 2-Not an open-end line of credit | 217075 | NA | 6.25 | 360 |
| 2-Not an open-end line of credit | 104000 | 20220120 | 2.75 | 120 |
| 2-Not an open-end line of credit | 218027.49 | NA | 5.875 | 360 |
| 2-Not an open-end line of credit | 170400 | 20211206 | 3.375 | 180 |
| 2-Not an open-end line of credit | 400000 | 20211116 | 2.75 | 360 |
| 2-Not an open-end line of credit | 236550 | 20221005 | 6.25 | 360 |
| 2-Not an open-end line of credit | 550000 | 20211214 | 3.25 | 360 |
| 2-Not an open-end line of credit | 124000 | NA | 5.375 | 180 |


| NA | 1-Secured by a first lien | 600000 | 35 |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 335000 | 93 |
| NA | 1-Secured by a first lien | 325000 | 54 |
| NA | 1-Secured by a first lien | 266040 | 98 |
| NA | 1-Secured by a first lien | 325000 | 55.84 |
| NA | 1-Secured by a first lien | 355000 | 96.5 |
| NA | 1-Secured by a first lien | 400000 | 53 |
| NA | 1-Secured by a first lien | 230000 | 95 |
| NA | 1-Secured by a first lien | 260000 | 29 |
| NA | 1-Secured by a first lien | 751000 | 60 |
| NA | 1-Secured by a first lien | 110900 | 97 |
| NA | 1-Secured by a first lien | 240000 | 96.5 |
| NA | 1-Secured by a first lien | 285000 | 85 |
| NA | 1-Secured by a first lien | 266000 | NA |
| NA | 1-Secured by a first lien | 305000 | 54 |
| NA | 1-Secured by a first lien | 204450 | NA |
| NA | 1-Secured by a first lien | 300000 | NA |
| NA | 1-Secured by a first lien | 440000 | 55 |
| NA | 1-Secured by a first lien | 310000 | 45 |
| NA | 1-Secured by a first lien | 275000 | 80 |
| NA | 1-Secured by a first lien | 280000 | NA |
| NA | 1-Secured by a first lien | 268000 | 96.34 |
| NA | 1-Secured by a first lien | 389000 | NA |
| NA | 1-Secured by a first lien | 845000 | NA |
| NA | 1-Secured by a first lien | 150000 | 95 |
| NA | 1-Secured by a first lien | 690000 | 80 |
| NA | 1-Secured by a first lien | 1215000 | 80 |
| NA | 1-Secured by a first lien | 104000 | 80 |
| NA | 1-Secured by a first lien | 565000 | 80 |
| NA | 1-Secured by a first lien | 1135000 | 22 |
| NA | 1-Secured by a first lien | 340000 | 95 |
| NA | 1-Secured by a first lien | 250000 | NA |
| NA | 1-Secured by a first lien | 475000 | NA |
| NA | 1-Secured by a first lien | 800000 | 65 |
| NA | 1-Secured by a first lien | 520000 | 90 |
| NA | 1-Secured by a first lien | 515000 | 46 |
| NA | 1-Secured by a first lien | 365000 | 85 |
| NA | 1-Secured by a first lien | 365000 | 85 |
| NA | 1-Secured by a first lien | 220000 | 91 |
| NA | 1-Secured by a first lien | 266000 | 80 |
| NA | 1-Secured by a first lien | 750000 | 85 |
| NA | 1-Secured by a first lien | 842500 | 68 |
| NA | 1-Secured by a first lien | 469500 | 71 |
| NA | 1-Secured by a first lien | 235000 | 65 |
| NA | 1-Secured by a first lien | 645000 | NA |
| NA | 1-Secured by a first lien | 600000 | 85 |
| NA | 1-Secured by a first lien | 1725000 | 65.21 |
| NA | 1-Secured by a first lien | 415000 | 80 |
| NA | 1-Secured by a first lien | 71900 | 80 |
| NA | 1-Secured by a first lien | 640000 | 80 |
| NA | 1-Secured by a first lien | 265000 | 80 |
| NA | 1-Secured by a first lien | 228500 | NA |
| NA | 1-Secured by a first lien | 350000 | 30 |
| NA | 1-Secured by a first lien | 225000 | NA |
| NA | 1-Secured by a first lien | 300000 | 57 |
| NA | 1-Secured by a first lien | 690000 | 58 |
| NA | 1-Secured by a first lien | 249000 | 95 |
| NA | 1-Secured by a first lien | 715000 | 77 |
| NA | 1-Secured by a first lien | 155000 | NA |


|  | 2-Employment history |
| :---: | :---: |
|  | 4-Collateral |
|  | 4-Collateral |
|  | 9-Other |
|  | 1-Debt-to-income ratio |
|  | 9-Other |
|  | 1-Debt-to-income ratio |
|  | 4-Collateral |
|  | 4-Collateral |
|  | 4-Collateral |
|  | 9 -Other |
|  | 9-Other |
|  | 9-Other |
|  | 10-Not applicable |
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| 1104.00 | 1-Loan originated | 1 |
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| 3301.02 | 1-Loan originated | 1 |
| 4608.00 | 1-Loan originated | 4 |
| 8330.00 | 1-Loan originated | 1 |
| 8420.00 | 1-Loan originated | 1 |
| 5610.00 | 1-Loan originated | 1 |
| 407.00 | 6-Purchased loan | 1 |
| 2429.00 | 6-Purchased loan | 1 |
| 634.00 | 6-Purchased loan | 1 |
| 1405.00 | 6-Purchased loan | 2 |
| 1710.00 | 6-Purchased loan | 1 |
| 409.00 | 1-Loan originated | 1 |
| 8325.00 | 1-Loan originated | 1 |
| 8422.00 | 1-Loan originated | 1 |
| 1203.00 | 1-Loan originated | 1 |
| 818.00 | 6-Purchased loan | 1 |
| 1202.00 | 6-Purchased loan | 1 |
| 209.02 | 1-Loan originated | 1 |
| 7207.00 | 1-Loan originated | 1 |
| 7002.00 | 1-Loan originated | 1 |
| 1511.00 | 1-Loan originated | 1 |
| 2403.00 | 1-Loan originated | 1 |
| 7708.00 | 6-Purchased loan | 1 |
| 704.00 | 1-Loan originated | 1 |
| 8422.00 | 1-Loan originated | 1 |
| 1203.00 | 1-Loan originated | 1 |
| 1505.01 | 1-Loan originated | 1 |
| 2207.01 | 1-Loan originated | 1 |
| 814.02 | 1-Loan originated | 1 |
| 306.04 | 1-Loan originated | 1 |
| 8391.00 | 1-Loan originated | 1 |
| 8331.00 | 1-Loan originated | 1 |
| 714.00 | 1-Loan originated | 1 |
| 309.00 | 1-Loan originated | 1 |
| 106.00 | 6-Purchased loan | 1 |
| 818.00 | 1-Loan originated | 1 |
| 701.03 | 1-Loan originated | 1 |
| 8326.00 | 1-Loan originated | 1 |
| 307.03 | 6-Purchased loan | 1 |
| 5703.00 | 1-Loan originated | 1 |
| 8429.00 | 6-Purchased loan | 1 |
| 2105.01 | 6-Purchased loan | 1 |
| 706.00 | 6-Purchased loan | 1 |
| 704.00 | 1-Loan originated | 1 |
| 8430.00 | 1-Loan originated | 1 |
| 2203.00 | 1-Loan originated | 1 |
| 314.00 | 1-Loan originated | 1 |
| 817.00 | 6-Purchased loan | 1 |
| 3301.02 | 1-Loan originated | 1 |
| 7206.00 | 1-Loan originated | 1 |
| 1606.01 | 1-Loan originated | 1 |
| 701.01 | 6-Purchased loan | 1 |
| 2105.02 | 6-Purchased loan | 2 |
| 621.00 | 6-Purchased loan | 2 |
| 304.00 | 6-Purchased loan | 1 |
| 1602.00 | 1-Loan originated | 1 |
| 1605.01 | 1-Loan originated | 1 |
| 629.00 | 1-Loan originated | 1 |
| 3006.00 | 1-Loan originated | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improvement |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purch |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
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| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
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| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |


| 2-Not an open-end line of credit | 290000 | 20220404 | 4.875 | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2 -Not an open-end line of credit | 231000 | 20220715 | 4.99 | 360 |
| $2-$ Not an open-end line of credit | 70000 | 20220524 | 6.625 | 360 |
| $2-$ Not an open-end line of credit | 480000 | 20220124 | 2.75 | 360 |
| 2 -Not an open-end line of credit | 389000 | 20211115 | 2.375 | 180 |
| 2-Not an open-end line of credit | 332000 | 20220622 | 5.875 | 360 |
| 2-Not an open-end line of credit | 151500 | NA | 4.625 | 360 |
| $2-$ Not an open-end line of credit | 165000 | NA | 3.925 | 360 |
| $2-$ Not an open-end line of credit | 306000 | NA | 3.5 | 360 |
| $2-$ Not an open-end line of credit | 479338.69 | NA | 4.25 | 360 |
| $2-$ Not an open-end line of credit | 467637 | NA | 3.99 | 360 |
| $2-$ Not an open-end line of credit | 2456250 | 20211021 | 3.375 | 360 |
| 2 -Not an open-end line of credit | 620000 | 20211110 | 2.99 | 360 |
| $2-$ Not an open-end line of credit | 380000 | 20211214 | 3.375 | 180 |
| 2-Not an open-end line of credit | 192500 | 20211016 | 3.25 | 360 |
| 2-Not an open-end line of credit | 293700 | NA | 5 | 360 |
| 2-Not an open-end line of credit | 617405 | NA | 2.875 | 360 |
| 2-Not an open-end line of credit | 75270 | 20211214 | 2.99 | 360 |
| 2-Not an open-end line of credit | 215000 | 20220503 | 6 | 360 |
| 2-Not an open-end line of credit | 235000 | 20220112 | 3.75 | 360 |
| 2-Not an open-end line of credit | 252000 | 20220225 | 4 | 360 |
| 2-Not an open-end line of credit | 721750 | 20220519 | 4.375 | 360 |
| 2-Not an open-end line of credit | 408000 | NA | 2.875 | 360 |
| 2-Not an open-end line of credit | 360000 | 20220525 | 5.375 | 360 |
| 2-Not an open-end line of credit | 1240000 | 20221114 | 5.875 | 360 |
| 2-Not an open-end line of credit | 226500 | 20211122 | 2.375 | 180 |
| 2-Not an open-end line of credit | 150000 | 20220104 | 3.75 | 360 |
| 2-Not an open-end line of credit | 140000 | 20220623 | 6.75 | 360 |
| 2-Not an open-end line of credit | 554250 | 20220411 | 4.875 | 360 |
| 2-Not an open-end line of credit | 135000 | 20220729 | 4.25 | 360 |
| 2-Not an open-end line of credit | 307500 | 20220817 | 5.49 | 360 |
| 2-Not an open-end line of credit | 348750 | 20220504 | 4.75 | 360 |
| 2-Not an open-end line of credit | 340000 | 20220708 | 4.875 | 360 |
| 2-Not an open-end line of credit | 453750 | 20220209 | 4.75 | 360 |
| 2-Not an open-end line of credit | 479200 | NA | 2.625 | 180 |
| 2-Not an open-end line of credit | 268000 | 20211215 | 3.625 | 360 |
| 2-Not an open-end line of credit | 168000 | 20220721 | 6.75 | 360 |
| 2-Not an open-end line of credit | 281000 | 20220427 | 4.125 | 360 |
| 2-Not an open-end line of credit | 159900 | NA | 5.75 | 360 |
| 2-Not an open-end line of credit | 247000 | 20220403 | 5 | 360 |
| 2-Not an open-end line of credit | 1374061.22 | NA | 4.125 | 360 |
| 2-Not an open-end line of credit | 522405 | NA | 6.5 | 360 |
| 2-Not an open-end line of credit | 442500 | NA | 3 | 360 |
| 2-Not an open-end line of credit | 420000 | 20220324 | 4.99 | 360 |
| 2-Not an open-end line of credit | 56800 | 20220222 | 3.875 | 120 |
| 2-Not an open-end line of credit | 517750 | 20220409 | 5.375 | 360 |
| 2-Not an open-end line of credit | 378000 | 20220721 | 6.125 | 360 |
| 2-Not an open-end line of credit | 240000 | NA | 3.375 | 360 |
| 2-Not an open-end line of credit | 290500 | 20220301 | 3.75 | 360 |
| 2-Not an open-end line of credit | 488000 | 20220329 | 4.625 | 360 |
| 2-Not an open-end line of credit | 199500 | 20221011 | 6.25 | 360 |
| 2-Not an open-end line of credit | 225000 | NA | 5.5 | 360 |
| 2-Not an open-end line of credit | 547286.32 | NA | 4 | 360 |
| 2-Not an open-end line of credit | 840000 | NA | 5.5 | 360 |
| 2-Not an open-end line of credit | 269100 | NA | 3.625 | 360 |
| 2-Not an open-end line of credit | 320000 | 20220125 | 4.125 | 360 |
| 2-Not an open-end line of credit | 308700 | 20220919 | 6.375 | 360 |
| 2-Not an open-end line of credit | 338100 | 20220718 | 5.75 | 360 |
| 2-Not an open-end line of credit | 218500 | 20220707 | 4.875 | 360 |


| NA | 1-Secured by a first lien | 420000 | 70 |
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| NA | 1-Secured by a first lien | 342500 | 68 |
| NA | 1-Secured by a first lien | 280000 | 25 |
| NA | 1-Secured by a first lien | 875000 | 55 |
| NA | 1-Secured by a first lien | 750000 | 52 |
| NA | 1-Secured by a first lien | 350000 | 95 |
| NA | 1-Secured by a first lien | 202000 | NA |
| NA | 1-Secured by a first lien | 415000 | NA |
| NA | 1-Secured by a first lien | 340000 | NA |
| NA | 1-Secured by a first lien | 600000 | NA |
| NA | 1-Secured by a first lien | 492250 | NA |
| NA | 1-Secured by a first lien | 3275000 | 75 |
| NA | 1-Secured by a first lien | 775000 | 80 |
| NA | 1-Secured by a first lien | 750000 | 51 |
| NA | 1-Secured by a first lien | 396500 | 49 |
| NA | 1-Secured by a first lien | 525000 | NA |
| NA | 1-Secured by a first lien | 649900 | NA |
| NA | 1-Secured by a first lien | 96500 | 78 |
| NA | 1-Secured by a first lien | 332000 | 65 |
| NA | 1-Secured by a first lien | 315000 | 75 |
| NA | 1-Secured by a first lien | 315000 | 80 |
| NA | 1-Secured by a first lien | 1900000 | 37.98 |
| NA | 1-Secured by a first lien | 510000 | NA |
| NA | 1-Secured by a first lien | 460000 | 79 |
| NA | 1-Secured by a first lien | 1550000 | 80 |
| NA | 1-Secured by a first lien | 550000 | 42 |
| NA | 1-Secured by a first lien | 200000 | 75 |
| NA | 1-Secured by a first lien | 175000 | 80 |
| NA | 1-Secured by a first lien | 739000 | 75 |
| NA | 1-Secured by a first lien | 150000 | 90 |
| NA | 1-Secured by a first lien | 410000 | 75 |
| NA | 1-Secured by a first lien | 465000 | 75 |
| NA | 1-Secured by a first lien | 400000 | 85 |
| NA | 1-Secured by a first lien | 605000 | 75 |
| NA | 1-Secured by a first lien | 600000 | NA |
| NA | 1-Secured by a first lien | 500000 | 54 |
| NA | 1-Secured by a first lien | 224000 | 75 |
| NA | 1-Secured by a first lien | 500000 | 57 |
| NA | 1-Secured by a first lien | 195000 | NA |
| NA | 1-Secured by a first lien | 260000 | 95 |
| NA | 1-Secured by a first lien | 1720000 | NA |
| NA | 1-Secured by a first lien | 549900 | NA |
| NA | 1-Secured by a first lien | 590000 | NA |
| NA | 1-Secured by a first lien | 640000 | 66 |
| NA | 1-Secured by a first lien | 83000 | 69 |
| NA | 1-Secured by a first lien | 545000 | 95 |
| NA | 1-Secured by a first lien | 420000 | 90 |
| NA | 1-Secured by a first lien | 320000 | NA |
| NA | 1-Secured by a first lien | 415000 | 70 |
| NA | 1-Secured by a first lien | 610000 | 80 |
| NA | 1-Secured by a first lien | 215000 | 93 |
| NA | 1-Secured by a first lien | 250000 | NA |
| NA | 1-Secured by a first lien | 575000 | NA |
| NA | 1-Secured by a first lien | 1050000 | NA |
| NA | 1-Secured by a first lien | 299000 | NA |
| NA | 1-Secured by a first lien | 400000 | 80 |
| NA | 1-Secured by a first lien | 325000 | 95 |
| NA | 1-Secured by a first lien | 367500 | 92 |
| NA | 1-Secured by a first lien | 230000 | 95 |


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| 5907.00 | 1-Loan originated | 2 |
| :---: | :---: | :---: |
| 8390.00 | 1-Loan originated | 1 |
| 8325.00 | 1-Loan originated | 1 |
| 1301.00 | 1-Loan originated | 1 |
| 628.00 | 6-Purchased loan | 1 |
| 102.01 | 3-Application denied | 1 |
| 2601.00 | 3-Application denied | 1 |
| 8378.00 | 3-Application denied | 1 |
| 5805.01 | 3-Application denied | 4 |
| 8428.00 | 1-Loan originated | 1 |
| 3301.03 | 1-Loan originated | 1 |
| 5205.00 | 1-Loan originated | 1 |
| 8412.00 | 1-Loan originated | 3 |
| 7004.02 | 6-Purchased loan | 1 |
| 2909.00 | 1-Loan originated | 1 |
| 628.00 | 1-Loan originated | 1 |
| 2605.00 | 6-Purchased loan | 1 |
| 2413.00 | 1-Loan originated | 2 |
| 2421.00 | 3-Application denied | 1 |
| 402.02 | 1-Loan originated | 1 |
| 3301.03 | 1-Loan originated | 1 |
| 803.00 | 6-Purchased loan | 1 |
| 2434.00 | 1-Loan originated | 1 |
| 3201.02 | 1-Loan originated | 1 |
| 8315.00 | 1-Loan originated | 1 |
| 307.02 | 6-Purchased loan | 1 |
| 301.01 | 6-Purchased loan | 1 |
| 1503.00 | 1-Loan originated | 1 |
| 2828.00 | 1-Loan originated | 1 |
| 3301.03 | 1-Loan originated | 1 |
| 1003.00 | 1-Loan originated | 1 |
| 8437.00 | 1-Loan originated | 1 |
| 3301.01 | 1-Loan originated | 1 |
| 312.00 | 1-Loan originated | 1 |
| 8342.00 | 6-Purchased loan | 1 |
| 902.00 | 1-Loan originated | 1 |
| 1007.00 | 6-Purchased loan | 1 |
| 1703.00 | 1-Loan originated | 1 |
| 2402.00 | 6-Purchased loan | 1 |
| 629.00 | 1-Loan originated | 1 |
| 202.00 | 1-Loan originated | 1 |
| 5611.00 | 1-Loan originated | 1 |
| 3206.00 | 1-Loan originated | 1 |
| 1602.00 | 1-Loan originated | 1 |
| 8390.00 | 1-Loan originated | 1 |
| 1702.00 | 1-Loan originated | 1 |
| 2421.00 | 6-Purchased loan | 1 |
| 513.00 | 6-Purchased loan | 1 |
| 7201.00 | 1-Loan originated | 1 |
| 6403.00 | 1-Loan originated | 1 |
| 8434.00 | 1-Loan originated | 1 |
| 2207.01 | 1-Loan originated | 2 |
| 818.00 | 1-Loan originated | 1 |
| 8316.00 | 1-Loan originated | 1 |
| 8323.00 | 1-Loan originated | 1 |
| 1204.00 | 1-Loan originated | 1 |
| 409.00 | 1-Loan originated | 1 |
| 8307.00 | 1-Loan originated | 1 |
| 621.00 | 1-Loan originated | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purch |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
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| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
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| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
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| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
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| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |


| 2-Not an open-end line of credit | 180000 | 20220326 | 5.75 | 300 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 138400 | 20220418 | 4.99 | 240 |
| 2-Not an open-end line of credit | 972000 | 20220527 | 4.125 | 360 |
| 2-Not an open-end line of credit | 423750 | 20220419 | 4.625 | 240 |
| 2-Not an open-end line of credit | 1277553.38 | NA | 4.625 | 360 |
| 2-Not an open-end line of credit | 309600 | 20220211 | NA | 180 |
| 2-Not an open-end line of credit | 109250 | 20211206 | NA | 360 |
| 2-Not an open-end line of credit | 287850 | 20211229 | NA | 360 |
| 2-Not an open-end line of credit | 196875 | 20221208 | NA | 360 |
| 2-Not an open-end line of credit | 124000 | 20220725 | 5.99 | 360 |
| 2-Not an open-end line of credit | 230000 | 20221107 | 7.125 | 360 |
| 2-Not an open-end line of credit | 221853 | 20220829 | 6 | 360 |
| 2-Not an open-end line of credit | 250000 | 20220216 | 4 | 240 |
| 2-Not an open-end line of credit | 192680 | NA | 3.375 | 360 |
| 2-Not an open-end line of credit | 219920 | 20220920 | 6.625 | 360 |
| 2-Not an open-end line of credit | 1182000 | 20220131 | 2.125 | 360 |
| 2-Not an open-end line of credit | 140250 | NA | 7.125 | 360 |
| 2-Not an open-end line of credit | 408000 | 20220127 | 4 | 360 |
| 2-Not an open-end line of credit | 565200 | 20221116 | NA | 360 |
| 2-Not an open-end line of credit | 191500 | 20220804 | 5 | 360 |
| 2-Not an open-end line of credit | 216600 | 20220401 | 4.99 | 360 |
| 2-Not an open-end line of credit | 386250 | NA | 5.5 | 360 |
| 2-Not an open-end line of credit | 297000 | 20220705 | 4.99 | 360 |
| 2-Not an open-end line of credit | 85000 | 20220321 | 4.25 | 180 |
| 2-Not an open-end line of credit | 187625 | 20221005 | 7 | 360 |
| 2-Not an open-end line of credit | 231750 | NA | 3.65 | 360 |
| 2-Not an open-end line of credit | 137750 | NA | 6 | 360 |
| 2-Not an open-end line of credit | 100000 | 20220915 | 6 | 180 |
| 2-Not an open-end line of credit | 218000 | 20220801 | 4.25 | 360 |
| 2-Not an open-end line of credit | 146500 | 20221031 | 5.875 | 360 |
| 2-Not an open-end line of credit | 280000 | 20220607 | 5.375 | 360 |
| 2-Not an open-end line of credit | 1100000 | 20220426 | 4.625 | 360 |
| 2-Not an open-end line of credit | 869250 | 20220513 | 4.5 | 360 |
| 2-Not an open-end line of credit | 328000 | 20220223 | 4.625 | 360 |
| 2-Not an open-end line of credit | 252605 | NA | 5.25 | 360 |
| 2-Not an open-end line of credit | 400000 | 20220405 | 5.125 | 360 |
| 2-Not an open-end line of credit | 342000 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 342000 | 20220329 | 4.75 | 360 |
| 2-Not an open-end line of credit | 1477500 | NA | 4 | 360 |
| 2-Not an open-end line of credit | 740000 | 20220610 | 4.625 | 360 |
| 2-Not an open-end line of credit | 236000 | 20220610 | 5.625 | 360 |
| 2-Not an open-end line of credit | 223300 | 20220517 | 5.49 | 360 |
| 2-Not an open-end line of credit | 266000 | 20220714 | 5.875 | 360 |
| 2-Not an open-end line of credit | 343000 | 20220404 | 5.25 | 360 |
| 2-Not an open-end line of credit | 592000 | 20220426 | 4.625 | 180 |
| 2-Not an open-end line of credit | 184500 | 20220404 | 5.125 | 360 |
| 2-Not an open-end line of credit | 465000 | NA | 2.99 | 360 |
| 2-Not an open-end line of credit | 1198455.33 | NA | 4.625 | 360 |
| 2-Not an open-end line of credit | 200000 | 20220609 | 6.75 | 360 |
| 2-Not an open-end line of credit | 217700 | 20220120 | 3.125 | 180 |
| 2-Not an open-end line of credit | 294750 | 20220408 | 4.99 | 360 |
| 2-Not an open-end line of credit | 292500 | 20220302 | 4.49 | 360 |
| 2-Not an open-end line of credit | 300000 | 20211026 | 2.99 | 360 |
| 2-Not an open-end line of credit | 342000 | 20220728 | 5.49 | 360 |
| 2-Not an open-end line of credit | 548250 | 20211129 | 2.25 | 360 |
| 2-Not an open-end line of credit | 333437 | 20220719 | 5.25 | 360 |
| 2-Not an open-end line of credit | 1425000 | 20220307 | 3.25 | 360 |
| 2-Not an open-end line of credit | 177537 | 20211209 | 3.25 | 240 |
| 2-Not an open-end line of credit | 620000 | 20220114 | 2 | 180 |


| NA | 1-Secured by a first lien | 310000 | 59 |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 173000 | 80 |
| NA | 1-Secured by a first lien | 1215000 | 80 |
| NA | 1-Secured by a first lien | 565000 | 75 |
| NA | 1-Secured by a first lien | 1599000 | NA |
| NA | 1-Secured by a first lien | 570000 | 55 |
| NA | 1-Secured by a first lien | 115000 | 95 |
| NA | 1-Secured by a first lien | 303000 | 95 |
| NA | 1-Secured by a first lien | 262500 | 75 |
| NA | 1-Secured by a first lien | 240000 | 52 |
| NA | 1-Secured by a first lien | 310000 | 75 |
| NA | 1-Secured by a first lien | 229900 | 97 |
| NA | 1-Secured by a first lien | 390000 | 65 |
| NA | 1-Secured by a first lien | 260000 | NA |
| NA | 1-Secured by a first lien | 274900 | 80 |
| NA | 1-Secured by a first lien | 1820000 | 64.94 |
| NA | 1-Secured by a first lien | 165000 | NA |
| NA | 1-Secured by a first lien | 680000 | 60 |
| NA | 1-Secured by a first lien | 628000 | 90 |
| NA | 1-Secured by a first lien | 213000 | 90 |
| NA | 1-Secured by a first lien | 228000 | 95 |
| NA | 1-Secured by a first lien | 515000 | NA |
| NA | 1-Secured by a first lien | 330000 | 90 |
| NA | 1-Secured by a first lien | 310000 | 28 |
| NA | 1-Secured by a first lien | 197500 | 95 |
| NA | 1-Secured by a first lien | 257500 | NA |
| NA | 1-Secured by a first lien | 145000 | NA |
| NA | 1-Secured by a first lien | 435000 | 23 |
| NA | 1-Secured by a first lien | 248000 | 88 |
| NA | 1-Secured by a first lien | 296000 | 50 |
| NA | 1-Secured by a first lien | 395000 | 71 |
| NA | 1-Secured by a first lien | 1375000 | 80 |
| NA | 1-Secured by a first lien | 1159000 | 75 |
| NA | 1-Secured by a first lien | 410000 | 80 |
| NA | 1-Secured by a first lien | 265900 | NA |
| NA | 1-Secured by a first lien | 500000 | 80 |
| NA | 1-Secured by a first lien | 360000 | NA |
| NA | 1-Secured by a first lien | 360000 | 95 |
| NA | 1-Secured by a first lien | 1970000 | NA |
| NA | 1-Secured by a first lien | 925000 | 80 |
| NA | 1-Secured by a first lien | 295000 | 80 |
| NA | 1-Secured by a first lien | 319000 | 70 |
| NA | 1-Secured by a first lien | 280000 | 95 |
| NA | 1-Secured by a first lien | 385000 | 90 |
| NA | 1-Secured by a first lien | 740000 | 80 |
| NA | 1-Secured by a first lien | 370000 | 50 |
| NA | 1-Secured by a first lien | 620000 | NA |
| NA | 1-Secured by a first lien | 1600000 | NA |
| NA | 1-Secured by a first lien | 250000 | 80 |
| NA | 1-Secured by a first lien | 294000 | 75 |
| NA | 1-Secured by a first lien | 327500 | 90 |
| NA | 1-Secured by a first lien | 390000 | 75 |
| NA | 1-Secured by a first lien | 498750 | 61 |
| NA | 1-Secured by a first lien | 360000 | 95 |
| NA | 1-Secured by a first lien | 712500 | 77 |
| NA | 1-Secured by a first lien | 343750 | 97 |
| NA | 1-Secured by a first lien | 1900000 | 75 |
| NA | 1-Secured by a first lien | 334000 | 54 |
| NA | 1-Secured by a first lien | 810000 | 77 |


|  | 10-Not applicable |
| :---: | :---: |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 9-Other |
|  | 1-Debt-to-income ratio |
|  | 1-Debt-to-income ratio |
|  | 4-Collateral |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 6-Unverifiable information |
|  | 10-Not applicable |
|  | 10-Not applicable |
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| 5-Insufficient cash (downpayment, closing costs) | - |
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| 1-Debt-to-income ratio | - |
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| 5-White |  |
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| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
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| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 21-Asian Indian |  |
| 21-Asian Indian |  |
| 21-Asian Indian |  |
| 21-Asian Indian |  |
| 25-Korean |  |
| 25-Korean |  |
| 2-Asian |  |
| 3-Black or African American |  |
| 3-Black or African American |  |
| 2-Asian |  |
| 2-Asian |  |
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| 2-Asian |  |
| 2-Asian |  |
| 3-Black or African American |  |
| 3-Black or African American |  |
| 3-Black or African American |  |
| 5-White |  |
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| 8-No co-applicant |
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| 5-White |
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| 2-Asian |
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| 5-White |
| 3-Black or African American |
| 3-Black or African American |
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| 1-Male |  |
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| 11-Mexican |
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| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 1-Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 11-Mexican |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 1-Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
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| 5-No co-applicant |  |
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| 1-Hispanic or Latino |  |
| 2-Not Hispanic or Latino |  |
| 5-No co-applicant |  |
| 2-Not Hispanic or Latino |  |
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| 2-Not Hispanic or Latino |  |
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| 12-Puerto Rican | - |
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| 14-Other Hispanic or Latino | - |
| 12-Puerto Rican | - |
| 11-Mexican | - |
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| 404.01 | 1-Loan originated | 1 |
| :---: | :---: | :---: |
| 626.00 | 1-Loan originated | 1 |
| 317.00 | 6-Purchased loan | 3 |
| 703.00 | 6-Purchased loan | 1 |
| 701.02 | 1-Loan originated | 1 |
| 1502.00 | 1-Loan originated | 1 |
| 102.02 | 1-Loan originated | 1 |
| 507.00 | 6-Purchased loan | 1 |
| 7003.02 | 1-Loan originated | 1 |
| 1105.02 | 6-Purchased loan | 1 |
| 2203.00 | 6-Purchased loan | 1 |
| 615.00 | 1-Loan originated | 4 |
| 2207.01 | 6-Purchased loan | 4 |
| 2222.00 | 1-Loan originated | 1 |
| 401.00 | 1-Loan originated | 1 |
| 8318.00 | 1-Loan originated | 1 |
| 404.01 | 1-Loan originated | 1 |
| 8432.00 | 1-Loan originated | 1 |
| 706.00 | 1-Loan originated | 1 |
| 1606.01 | 1-Loan originated | 1 |
| 8318.00 | 3-Application denied | 1 |
| 8305.00 | 6-Purchased loan | 1 |
| 624.00 | 1-Loan originated | 1 |
| 2430.00 | 1-Loan originated | 1 |
| 8364.00 | 1-Loan originated | 1 |
| 814.03 | 1-Loan originated | 1 |
| 8439.00 | 1-Loan originated | 1 |
| 705.00 | 1-Loan originated | 1 |
| 402.02 | 1-Loan originated | 1 |
| 6116.00 | 1-Loan originated | 1 |
| 2302.00 | 6-Purchased loan | 1 |
| 703.00 | 1-Loan originated | 1 |
| 8397.00 | 1-Loan originated | 1 |
| 1606.02 | 1-Loan originated | 1 |
| 2106.02 | 6-Purchased loan | 2 |
| 3812.00 | 1-Loan originated | 1 |
| 2511.00 | 1-Loan originated | 2 |
| 8307.00 | 3-Application denied | 1 |
| 1903.00 | 1-Loan originated | 1 |
| 1202.00 | 1-Loan originated | 1 |
| 1402.00 | 1-Loan originated | 1 |
| 630.00 | 1-Loan originated | 1 |
| 816.00 | 1-Loan originated | 1 |
| 312.00 | 1-Loan originated | 1 |
| 1408.00 | 6-Purchased loan | 1 |
| 302.00 | 1-Loan originated | 1 |
| 6304.00 | 1-Loan originated | 1 |
| 3301.02 | 1-Loan originated | 1 |
| 2819.00 | 1-Loan originated | 1 |
| 2306.00 | 1-Loan originated | 1 |
| 4312.00 | 3-Application denied | 1 |
| 3905.00 | 3-Application denied | 1 |
| 3510.00 | 3-Application denied | 1 |
| 4203.00 | 3-Application denied | 1 |
| 4208.00 | 3-Application denied | 1 |
| 5305.01 | 1-Loan originated | 1 |
| 2909.00 | 1-Loan originated | 2 |
| 107.01 | 6-Purchased loan | 1 |
| 4910.00 | 1-Loan originated | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1 -Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1 -Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1 -Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1 -Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |


| 2-Not an open-end line of credit | 295000 | 20220324 | 5.375 | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 1024000 | 20220126 | 3.875 | 360 |
| 2-Not an open-end line of credit | 357906.12 | NA | 3.375 | 240 |
| 2-Not an open-end line of credit | 556750 | NA | 4.625 | 360 |
| 2-Not an open-end line of credit | 899000 | 20220323 | 3.875 | 360 |
| 2-Not an open-end line of credit | 385900 | 20220308 | 3.625 | 240 |
| 2-Not an open-end line of credit | 688000 | 20220629 | 5 | 360 |
| 2-Not an open-end line of credit | 522750 | NA | 5.125 | 360 |
| 2-Not an open-end line of credit | 313500 | 20220414 | 5 | 360 |
| 2-Not an open-end line of credit | 372000 | NA | 5.375 | 360 |
| 2-Not an open-end line of credit | 1080000 | NA | 4 | 360 |
| 2-Not an open-end line of credit | 200700 | 20220708 | 6.99 | 360 |
| 2-Not an open-end line of credit | 599076.19 | NA | 3.625 | 360 |
| 2-Not an open-end line of credit | 170000 | 20220224 | 3.75 | 360 |
| 2-Not an open-end line of credit | 770000 | 20220601 | 4.75 | 360 |
| 2-Not an open-end line of credit | 316000 | 20220629 | 5.49 | 360 |
| 2-Not an open-end line of credit | 544000 | 20211207 | 2.49 | 180 |
| 2-Not an open-end line of credit | 246500 | 20220726 | 6.5 | 360 |
| 2-Not an open-end line of credit | 227697 | 20220129 | 3 | 360 |
| 2-Not an open-end line of credit | 137600 | 20220113 | 3.25 | 240 |
| 2-Not an open-end line of credit | 270000 | 20220527 | NA | 360 |
| 2-Not an open-end line of credit | 232000 | NA | 2.875 | 180 |
| 2-Not an open-end line of credit | 440000 | 20220217 | 4.25 | 360 |
| 2-Not an open-end line of credit | 424000 | 20220215 | 4.125 | 360 |
| 2-Not an open-end line of credit | 517500 | 20221028 | 6.49 | 360 |
| 2-Not an open-end line of credit | 623000 | 20211214 | 2.75 | 360 |
| 2-Not an open-end line of credit | 1367120 | 20220223 | 5.875 | 360 |
| 2-Not an open-end line of credit | 1320000 | 20220725 | 4.5 | 360 |
| 2-Not an open-end line of credit | 532000 | 20220210 | 3.625 | 360 |
| 2-Not an open-end line of credit | 110000 | 20211113 | 2.75 | 120 |
| 2-Not an open-end line of credit | 647200 | NA | 3.5 | 360 |
| 2-Not an open-end line of credit | 595000 | 20220822 | 5.625 | 360 |
| 2-Not an open-end line of credit | 503920 | 20220203 | 3.99 | 360 |
| 2-Not an open-end line of credit | 157500 | 20220420 | 6.125 | 360 |
| 2-Not an open-end line of credit | 407483 | NA | 5.25 | 360 |
| 2-Not an open-end line of credit | 338317 | 20220517 | 5.75 | 360 |
| 2-Not an open-end line of credit | 150000 | 20220615 | 7 | 360 |
| 2-Not an open-end line of credit | 270000 | 20221108 | NA | 360 |
| 2-Not an open-end line of credit | 338000 | 20220406 | 5.625 | 360 |
| 2-Not an open-end line of credit | 427000 | 20220112 | 3.625 | 360 |
| 2-Not an open-end line of credit | 540000 | 20220714 | 4.875 | 360 |
| 2-Not an open-end line of credit | 559900 | 20220706 | 5.5 | 360 |
| 2-Not an open-end line of credit | 340000 | 20220205 | 3.25 | 360 |
| 2-Not an open-end line of credit | 270000 | 20220429 | 5.25 | 360 |
| 2-Not an open-end line of credit | 293250 | NA | 3.5 | 360 |
| 2-Not an open-end line of credit | 760000 | 20221019 | 6.000 | 360 |
| 2-Not an open-end line of credit | 173600 | 20221011 | 5.625 | 360 |
| 2-Not an open-end line of credit | 356000 | 20220314 | 4.115 | 360 |
| 2-Not an open-end line of credit | 182975 | 20220815 | 4.99 | 360 |
| 2-Not an open-end line of credit | 272000 | 20220120 | 3.875 | 360 |
| 2-Not an open-end line of credit | 228937 | 20221128 | NA | 360 |
| 2-Not an open-end line of credit | 794058 | 20211231 | NA | 360 |
| 2-Not an open-end line of credit | 96662 | 20220406 | NA | 360 |
| 2-Not an open-end line of credit | 292500 | 20220209 | NA | 180 |
| 2-Not an open-end line of credit | 151075 | 20211204 | NA | 360 |
| 2-Not an open-end line of credit | 192449 | 20220521 | 4.75 | 360 |
| 2-Not an open-end line of credit | 144000 | 20211216 | 3.875 | 360 |
| 2-Not an open-end line of credit | 133000 | NA | 3.625 | 360 |
| 2-Not an open-end line of credit | 74600 | 20220222 | 4.375 | 360 |


| NA | 1-Secured by a first lien | 315000 | 94 |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 1280000 | 80 |
| NA | 1-Secured by a first lien | 920000 | NA |
| NA | 1-Secured by a first lien | 655000 | NA |
| NA | 1-Secured by a first lien | 1299000 | 69.2 |
| NA | 1-Secured by a first lien | 454000 | 85 |
| NA | 1-Secured by a first lien | 860000 | 80 |
| NA | 1-Secured by a first lien | 615000 | NA |
| NA | 1-Secured by a first lien | 330000 | 95 |
| NA | 1-Secured by a first lien | 465000 | NA |
| NA | 1-Secured by a first lien | 1350000 | NA |
| NA | 1-Secured by a first lien | 1100000 | 19 |
| NA | 1-Secured by a first lien | 800000 | NA |
| NA | 1-Secured by a first lien | 400000 | 43 |
| NA | 1-Secured by a first lien | 1100000 | 70 |
| NA | 1-Secured by a first lien | 395000 | 80 |
| NA | 1-Secured by a first lien | 925000 | 59 |
| NA | 1-Secured by a first lien | 290000 | 85 |
| NA | 1-Secured by a first lien | 500000 | 46 |
| NA | 1-Secured by a first lien | 600000 | 23 |
| NA | 1-Secured by a first lien | 360000 | 75 |
| NA | 1-Secured by a first lien | 290000 | NA |
| NA | 1-Secured by a first lien | 550000 | 80 |
| NA | 1-Secured by a first lien | 530000 | 80 |
| NA | 1-Secured by a first lien | 575000 | 90 |
| NA | 1-Secured by a first lien | 890000 | 70 |
| NA | 1-Secured by a first lien | 1708900 | 80 |
| NA | 1-Secured by a first lien | 1650000 | 80 |
| NA | 1-Secured by a first lien | 560000 | 95 |
| NA | 1-Secured by a first lien | 190000 | 58 |
| NA | 1-Secured by a first lien | 1050000 | NA |
| NA | 1-Secured by a first lien | 692500 | 86 |
| NA | 1-Secured by a first lien | 629900 | 80 |
| NA | 1-Secured by a first lien | 225000 | 70 |
| NA | 1-Secured by a first lien | 415000 | NA |
| NA | 1-Secured by a first lien | 350000 | 95 |
| NA | 1-Secured by a first lien | 315000 | 48 |
| NA | 1-Secured by a first lien | 337500 | 80 |
| NA | 1-Secured by a first lien | 350000 | 97 |
| NA | 1-Secured by a first lien | 675000 | 64 |
| NA | 1-Secured by a first lien | 599900 | 91 |
| NA | 1-Secured by a first lien | 699900 | 80 |
| NA | 1-Secured by a first lien | 425000 | 80 |
| NA | 1-Secured by a first lien | 360000 | 75 |
| NA | 1-Secured by a first lien | 345000 | NA |
| NA | 1-Secured by a first lien | 950000 | 80.000 |
| NA | 1-Secured by a first lien | 217000 | 80 |
| NA | 1-Secured by a first lien | 445000 | 80 |
| NA | 1-Secured by a first lien | 281500 | 65 |
| NA | 1-Secured by a first lien | 340000 | 80 |
| NA | 1-Secured by a first lien | 295000 | 76.27 |
| NA | 1-Secured by a first lien | 1500000 | 52.93 |
| NA | 1-Secured by a first lien | 115000 | 82.61 |
| NA | 1-Secured by a first lien | 390000 | 75 |
| NA | 1-Secured by a first lien | 216500 | 70 |
| NA | 1-Secured by a first lien | 196000 | 96.5 |
| NA | 1-Secured by a first lien | 270000 | 54 |
| NA | 1-Secured by a first lien | 140000 | NA |
| NA | 1 -Secured by a first lien | 85000 | 88 |


|  | 10-Not applicable |
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|  | 10-Not applicable |
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|  | 10-Not applicable |
|  | 1-Debt-to-income ratio |
|  | 10-Not applicable |
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|  | 10-Not applicable |
|  | 1-Debt-to-income ratio |
|  | 10-Not applicable |
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|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 3-Credit history |
|  | $9-$ Other |
|  | 1-Debt-to-income ratio |
|  | 1-Debt-to-income ratio |
|  | 4-Collateral |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |



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|  | 5-White |
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|  | 6-Information not provided by applicant in mail, internet, or telephone application |
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|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
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|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 21-Asian Indian |
|  | 22-Chinese |
|  | 5-White |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Black or African American |
|  | 3-Black or African American |
|  | 5-White |
|  | 5-White |
|  | 5-White |
|  | 5-White |
|  | 5-White |
|  | 21-Asian Indian |
|  | 27-Other Asian |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 7-Not applicable |
|  | 8-No co-applicant |
|  | 8-No co-applicant |
|  | 8-No co-applicant |
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|  | 8-No co-applicant |
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|  | 2-Female |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 4-Not applicable |
|  | 5-No co-applicant |
|  | 5-No co-applicant |
|  | 5-No co-applicant |
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| 14-Other Hispanic or Latino |
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| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 11-Mexican |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 1-Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 11-Mexican |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 14-Other Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
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| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
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| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |




| 14-Other Hispanic or Latino |
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| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 11-Mexican |
| 2-Not Hispanic or Latino |
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| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 1-Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 11-Mexican |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 11-Mexican |
| 14-Other Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 4-Not applicable |
| 5-No co-applicant |
| 5-No co-applicant |
| 5-No co-applicant |
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| 1605.02 | 6-Purchased loan | 1 |
| :---: | :---: | :---: |
| 7004.02 | 1-Loan originated | 1 |
| 4314.00 | 6-Purchased loan | 3 |
| 4407.00 | 1-Loan originated | 1 |
| 8365.00 | 6-Purchased loan | 1 |
| 7107.00 | 1-Loan originated | 1 |
| 6703.00 | 1-Loan originated | 1 |
| 5102.00 | 1-Loan originated | 1 |
| 8390.00 | 1-Loan originated | 1 |
| 2609.00 | 1-Loan originated | 1 |
| 7207.00 | 1-Loan originated | 1 |
| 203.01 | 1-Loan originated | 1 |
| 3902.00 | 6-Purchased loan | 1 |
| 4312.00 | 6-Purchased loan | 1 |
| 4108.00 | 1-Loan originated | 1 |
| 1606.02 | 1-Loan originated | 1 |
| 402.02 | 1-Loan originated | 1 |
| 4101.00 | 1-Loan originated | 1 |
| 315.02 | 1-Loan originated | 1 |
| 7301.00 | 6-Purchased loan | 1 |
| 8410.00 | 1-Loan originated | 1 |
| 6705.00 | 3-Application denied | 1 |
| 902.00 | 3-Application denied | 1 |
| 6308.00 | 3-Application denied | 1 |
| 6720.00 | 3-Application denied | 1 |
| 621.00 | 3-Application denied | 1 |
| 609.00 | 3-Application denied | 1 |
| 6501.00 | 3-Application denied | 1 |
| 6607.00 | 6-Purchased loan | 1 |
| 1608.00 | 1-Loan originated | 2 |
| 6501.00 | 1-Loan originated | 1 |
| 1510.02 | 1-Loan originated | 1 |
| 818.00 | 1-Loan originated | 1 |
| 510.00 | 1-Loan originated | 1 |
| 4302.00 | 1-Loan originated | 1 |
| 3301.01 | 1-Loan originated | 1 |
| 202.00 | 1-Loan originated | 1 |
| 1613.00 | 1-Loan originated | 1 |
| 1710.00 | 6-Purchased loan | 1 |
| 2004.02 | 6-Purchased loan | 2 |
| 1201.00 | 1-Loan originated | 1 |
| 1703.00 | 1-Loan originated | 1 |
| 102.02 | 1-Loan originated | 1 |
| 8330.00 | 1-Loan originated | 1 |
| 1510.02 | 1-Loan originated | 1 |
| 8373.00 | 6-Purchased loan | 1 |
| 7608.03 | 1-Loan originated | 1 |
| 1711.00 | 1-Loan originated | 1 |
| 317.00 | 1-Loan originated | 1 |
| 5602.00 | 1-Loan originated | 1 |
| 8383.00 | 1-Loan originated | 1 |
| 817.00 | 1-Loan originated | 1 |
| 1504.02 | 1-Loan originated | 1 |
| 2424.00 | 6-Purchased loan | 1 |
| 6501.00 | 1-Loan originated | 1 |
| 8233.04 | 6-Purchased loan | 1 |
| 1612.00 | 1-Loan originated | 1 |
| 2211.00 | 1-Loan originated | 1 |
| 314.00 | 1-Loan originated | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1 -Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1 -Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1 -Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1 -Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1 -Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1 -Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1 -Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1 -Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1 -Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |


| 2-Not an open-end line of credit | 230375 | NA | 4.875 | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 165000 | 20220808 | 6.99 | 360 |
| 2-Not an open-end line of credit | 206250 | NA | 2.99 | 180 |
| 2-Not an open-end line of credit | 60441 | 20211203 | 3.25 | 240 |
| 2-Not an open-end line of credit | 647200 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 106000 | 20220617 | 5.49 | 180 |
| 2-Not an open-end line of credit | 167200 | 20220624 | 5.375 | 360 |
| 2-Not an open-end line of credit | 125130 | 20220308 | 4.25 | 360 |
| 2-Not an open-end line of credit | 318000 | 20220208 | 3.5 | 360 |
| 2-Not an open-end line of credit | 85000 | 20211229 | 4.625 | 360 |
| 2-Not an open-end line of credit | 260688 | 20220921 | 6.25 | 360 |
| 2-Not an open-end line of credit | 180000 | 20220617 | 5.625 | 360 |
| 2-Not an open-end line of credit | 259960 | NA | 4.875 | 360 |
| 2-Not an open-end line of credit | 108000 | NA | 5.375 | 360 |
| 2-Not an open-end line of credit | 108000 | 20221014 | 8 | 360 |
| 2-Not an open-end line of credit | 278000 | 20220825 | 5.99 | 360 |
| 2-Not an open-end line of credit | 248000 | 20211207 | 3.375 | 360 |
| 2-Not an open-end line of credit | 125655 | 20211126 | 2.875 | 180 |
| 2-Not an open-end line of credit | 75000 | 20220224 | 3.99 | 120 |
| 2-Not an open-end line of credit | 275405 | NA | 5.125 | 360 |
| 2-Not an open-end line of credit | 351750 | 20220315 | 5.125 | 360 |
| 2-Not an open-end line of credit | 124000 | 20220406 | NA | 360 |
| 2-Not an open-end line of credit | 252000 | 20220921 | NA | 360 |
| 2-Not an open-end line of credit | 216015 | 20220725 | NA | 360 |
| 2-Not an open-end line of credit | 201875 | 20220609 | NA | 360 |
| 2-Not an open-end line of credit | 542230 | 20220502 | NA | 360 |
| 2-Not an open-end line of credit | 168750 | 20220203 | NA | 240 |
| 2-Not an open-end line of credit | 180000 | 20220304 | NA | 360 |
| 2-Not an open-end line of credit | 197600 | NA | 5.375 | 360 |
| 2-Not an open-end line of credit | 176000 | 20220418 | 4.99 | 360 |
| 2-Not an open-end line of credit | 167000 | 20220214 | 3.625 | 180 |
| 2-Not an open-end line of credit | 286000 | 20220208 | 4.25 | 360 |
| 2-Not an open-end line of credit | 437000 | 20220420 | 4.99 | 360 |
| 2-Not an open-end line of credit | 462200 | 20211229 | 2.49 | 180 |
| 2-Not an open-end line of credit | 393000 | 20211210 | 3.125 | 360 |
| 2-Not an open-end line of credit | 458000 | 20220222 | 3.25 | 180 |
| 2-Not an open-end line of credit | 238800 | 20211222 | 2.375 | 120 |
| 2-Not an open-end line of credit | 164900 | 20220325 | 4.75 | 360 |
| 2-Not an open-end line of credit | 280250 | NA | 3.5 | 360 |
| 2-Not an open-end line of credit | 288742 | NA | 3 | 360 |
| 2-Not an open-end line of credit | 325200 | 20211215 | 3.25 | 360 |
| 2-Not an open-end line of credit | 242250 | 20220130 | 3.375 | 360 |
| 2-Not an open-end line of credit | 108400 | 20220425 | 5.625 | 360 |
| 2-Not an open-end line of credit | 879000 | 20220323 | 3.875 | 360 |
| 2-Not an open-end line of credit | 100800 | 20220408 | 4.25 | 360 |
| 2-Not an open-end line of credit | 143355 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 109600 | 20220822 | 6.5 | 360 |
| 2-Not an open-end line of credit | 291000 | 20220114 | 3.99 | 360 |
| 2-Not an open-end line of credit | 133000 | 20220323 | 3.99 | 180 |
| 2-Not an open-end line of credit | 231200 | 20220902 | 6.375 | 360 |
| 2-Not an open-end line of credit | 263150 | 20220208 | 3.25 | 360 |
| 2-Not an open-end line of credit | 289900 | 20220512 | 4.5 | 180 |
| 2-Not an open-end line of credit | 240000 | 20220505 | 4.875 | 180 |
| 2-Not an open-end line of credit | 203000 | NA | 4.25 | 360 |
| 2-Not an open-end line of credit | 162400 | 20220219 | 3.49 | 180 |
| 2-Not an open-end line of credit | 134400 | NA | 7.125 | 360 |
| 2-Not an open-end line of credit | 166387 | 20220301 | 4.125 | 360 |
| 2-Not an open-end line of credit | 198200 | 20220206 | 3.625 | 360 |
| 2-Not an open-end line of credit | 231800 | 20220105 | 3.625 | 360 |


| NA | 1-Secured by a first lien | 237500 | NA |
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| NA | 1-Secured by a first lien | 262000 | 63 |
| NA | 1-Secured by a first lien | 275000 | NA |
| NA | 1-Secured by a first lien | 152000 | 40 |
| NA | 1-Secured by a first lien | 715000 | NA |
| NA | 1-Secured by a first lien | 176683 | 60 |
| NA | 1-Secured by a first lien | 173000 | 97 |
| NA | 1-Secured by a first lien | 129000 | 97 |
| NA | 1-Secured by a first lien | 465000 | 69 |
| NA | 1-Secured by a first lien | 100000 | 85 |
| NA | 1-Secured by a first lien | 265500 | 96.5 |
| NA | 1-Secured by a first lien | 200000 | 90 |
| NA | 1-Secured by a first lien | 268000 | NA |
| NA | 1-Secured by a first lien | 135000 | NA |
| NA | 1-Secured by a first lien | 120000 | 90 |
| NA | 1-Secured by a first lien | 365000 | 77 |
| NA | 1-Secured by a first lien | 310000 | 80 |
| NA | 1-Secured by a first lien | 176300 | 72 |
| NA | 1-Secured by a first lien | 190000 | 40 |
| NA | 1-Secured by a first lien | 289900 | NA |
| NA | 1-Secured by a first lien | 535000 | 66 |
| NA | 1-Secured by a first lien | 140000 | 89 |
| NA | 1-Secured by a first lien | 280000 | 90 |
| NA | 1-Secured by a first lien | 220000 | 96.5 |
| NA | 1-Secured by a first lien | 212500 | 95 |
| NA | 1-Secured by a first lien | 559000 | 97 |
| NA | 1-Secured by a first lien | 185000 | 92 |
| NA | 1-Secured by a first lien | 245000 | 74 |
| NA | 1-Secured by a first lien | 247000 | NA |
| NA | 1-Secured by a first lien | 535000 | 33 |
| NA | 1-Secured by a first lien | 309000 | 55 |
| NA | 1-Secured by a first lien | 370000 | 78 |
| NA | 1-Secured by a first lien | 460000 | 95 |
| NA | 1-Secured by a first lien | 800000 | 58 |
| NA | 1-Secured by a first lien | 570000 | 69 |
| NA | 1-Secured by a first lien | 572500 | 80 |
| NA | 1-Secured by a first lien | 500000 | 48 |
| NA | 1-Secured by a first lien | 170000 | 97 |
| NA | 1-Secured by a first lien | 295000 | NA |
| NA | 1-Secured by a first lien | 388000 | NA |
| NA | 1-Secured by a first lien | 542000 | 60 |
| NA | 1-Secured by a first lien | 285000 | 85 |
| NA | 1-Secured by a first lien | 135500 | 80 |
| NA | 1-Secured by a first lien | 1150000 | 77 |
| NA | 1-Secured by a first lien | 120000 | 84 |
| NA | 1-Secured by a first lien | 150900 | NA |
| NA | 1-Secured by a first lien | 137000 | 80 |
| NA | 1-Secured by a first lien | 430000 | 68 |
| NA | 1-Secured by a first lien | 208000 | 64 |
| NA | 1-Secured by a first lien | 289000 | 80 |
| NA | 1-Secured by a first lien | 277000 | 95 |
| NA | 1-Secured by a first lien | 449900 | 65 |
| NA | 1-Secured by a first lien | 300000 | 80 |
| NA | 1-Secured by a first lien | 213685 | NA |
| NA | 1-Secured by a first lien | 240000 | 68 |
| NA | 1-Secured by a first lien | 168000 | NA |
| NA | 1-Secured by a first lien | 260000 | 64 |
| NA | 1-Secured by a first lien | 310000 | 64 |
| NA | 1-Secured by a first lien | 244000 | 95 |


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| 12-Puerto Rican |
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| 3201.01 | 1-Loan originated | 1 |
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| 710.00 | 1-Loan originated | 1 |
| 8319.00 | 1-Loan originated | 1 |
| 816.00 | 6-Purchased loan | 1 |
| 1703.00 | 1-Loan originated | 1 |
| 1503.00 | 1-Loan originated | 1 |
| 1605.02 | 1-Loan originated | 1 |
| 802.02 | 1-Loan originated | 1 |
| 8319.00 | 1-Loan originated | 1 |
| 319.00 | 6-Purchased loan | 1 |
| 318.00 | 1-Loan originated | 1 |
| 2819.00 | 1-Loan originated | 1 |
| 2212.00 | 6-Purchased loan | 1 |
| 1005.00 | 1-Loan originated | 3 |
| 701.01 | 1-Loan originated | 1 |
| 8322.00 | 1-Loan originated | 1 |
| 1902.00 | 1-Loan originated | 2 |
| 8428.00 | 1-Loan originated | 1 |
| 1906.02 | 1-Loan originated | 1 |
| 633.01 | 6-Purchased loan | 1 |
| 1504.01 | 1-Loan originated | 1 |
| 6117.00 | 1-Loan originated | 2 |
| 804.00 | 1-Loan originated | 1 |
| 6714.00 | 1-Loan originated | 1 |
| 2210.00 | 1-Loan originated | 1 |
| 208.01 | 1-Loan originated | 1 |
| 704.00 | 1-Loan originated | 1 |
| 701.01 | 1-Loan originated | 1 |
| 714.00 | 6-Purchased loan | 1 |
| 707.00 | 6-Purchased loan | 1 |
| 2429.00 | 1-Loan originated | 1 |
| 8391.00 | 6-Purchased loan | 1 |
| 609.00 | 1-Loan originated | 1 |
| 8421.00 | 1-Loan originated | 1 |
| 2421.00 | 1-Loan originated | 1 |
| 619.01 | 6-Purchased loan | 1 |
| 2425.00 | 6-Purchased loan | 1 |
| 2801.00 | 6-Purchased loan | 1 |
| 2422.00 | 1-Loan originated | 1 |
| 203.01 | 6-Purchased loan | 1 |
| 8233.04 | 6-Purchased loan | 1 |
| 313.00 | 6-Purchased loan | 1 |
| 4408.00 | 3-Application denied | 1 |
| 8419.00 | 3-Application denied | 1 |
| 1609.00 | 1-Loan originated | 1 |
| 8331.00 | 1-Loan originated | 1 |
| 8381.00 | 3-Application denied | 1 |
| 2411.00 | 1-Loan originated | 1 |
| 3302.00 | 1-Loan originated | 1 |
| 1301.00 | 1-Loan originated | 1 |
| 8404.00 | 6-Purchased loan | 1 |
| 634.00 | 1-Loan originated | 1 |
| 2205.00 | 1-Loan originated | 1 |
| 3301.03 | 6-Purchased loan | 1 |
| 8326.00 | 1-Loan originated | 1 |
| 812.02 | 1-Loan originated | 1 |
| 703.00 | 1-Loan originated | 1 |
| 4601.00 | 3-Application denied | 2 |
| 8333.00 | 1-Loan originated | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purch |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |


| 2-Not an open-end line of credit | 223760 | 20220210 | 3.875 | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 1423200 | 20220817 | 4.625 | 360 |
| 2-Not an open-end line of credit | 525000 | 20220822 | 5.49 | 360 |
| 2-Not an open-end line of credit | 152000 | NA | 6 | 360 |
| 2-Not an open-end line of credit | 248500 | 20220506 | 5.375 | 360 |
| 2-Not an open-end line of credit | 135800 | 20220603 | 5.5 | 360 |
| 2-Not an open-end line of credit | 221750 | 20220314 | 4.375 | 360 |
| 2-Not an open-end line of credit | 75000 | 20220718 | 4.74 | 360 |
| 2-Not an open-end line of credit | 396000 | 20220520 | 5.49 | 360 |
| 2-Not an open-end line of credit | 125841.47 | NA | 4.75 | 360 |
| 2-Not an open-end line of credit | 230000 | 20220517 | 5 | 360 |
| 2-Not an open-end line of credit | 222250 | 20220601 | 4.865 | 360 |
| 2-Not an open-end line of credit | 369000 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 200005 | 20211213 | 3.25 | 360 |
| 2-Not an open-end line of credit | 147600 | 20220711 | 4.375 | 360 |
| 2-Not an open-end line of credit | 411350 | 20221113 | 6.25 | 360 |
| 2-Not an open-end line of credit | 250000 | 20220114 | 3.75 | 360 |
| 2-Not an open-end line of credit | 104330 | 20220120 | 3.125 | 180 |
| 2-Not an open-end line of credit | 201000 | 20220606 | 5.99 | 360 |
| 2-Not an open-end line of credit | 179900 | NA | 5.875 | 360 |
| 2-Not an open-end line of credit | 335000 | 20220113 | 3.875 | 360 |
| 2-Not an open-end line of credit | 165750 | 20220314 | 4.24 | 360 |
| 2-Not an open-end line of credit | 720000 | 20220917 | 4.375 | 360 |
| 2-Not an open-end line of credit | 156750 | 20211118 | 3.125 | 360 |
| 2-Not an open-end line of credit | 146000 | 20220107 | 3.875 | 360 |
| 2-Not an open-end line of credit | 110000 | 20211208 | 3.99 | 360 |
| 2-Not an open-end line of credit | 220500 | 20220221 | 3.99 | 360 |
| 2-Not an open-end line of credit | 195000 | 20220114 | 2.99 | 120 |
| 2-Not an open-end line of credit | 217198.99 | NA | 4.225 | 360 |
| 2-Not an open-end line of credit | 188000 | NA | 3.375 | 360 |
| 2-Not an open-end line of credit | 452000 | 20221006 | 6.875 | 360 |
| 2-Not an open-end line of credit | 187500 | NA | 4.125 | 360 |
| 2-Not an open-end line of credit | 153930 | 20211213 | 3.99 | 360 |
| 2-Not an open-end line of credit | 227700 | 20221004 | 6.375 | 360 |
| 2-Not an open-end line of credit | 278390 | 20220718 | 5.625 | 360 |
| 2-Not an open-end line of credit | 162750 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 320000 | NA | 4.75 | 360 |
| 2-Not an open-end line of credit | 288000 | NA | 2.5 | 180 |
| 2-Not an open-end line of credit | 375000 | 20220112 | 2.875 | 360 |
| 2-Not an open-end line of credit | 577500 | NA | 4.875 | 360 |
| 2-Not an open-end line of credit | 150400 | NA | 2.875 | 360 |
| 2-Not an open-end line of credit | 147129.23 | NA | 5.75 | 360 |
| 2-Not an open-end line of credit | 80909 | 20220509 | NA | 360 |
| 2-Not an open-end line of credit | 156309 | 20220223 | NA | 360 |
| 2-Not an open-end line of credit | 621908 | 20220621 | 4.49 | 180 |
| 2-Not an open-end line of credit | 315000 | 20220517 | 5.125 | 240 |
| 2-Not an open-end line of credit | 230000 | 20220221 | NA | 360 |
| 2-Not an open-end line of credit | 462750 | 20220210 | 2.865 | 180 |
| 2-Not an open-end line of credit | 558900 | 20220930 | 5.25 | 360 |
| 2-Not an open-end line of credit | 421700 | 20211102 | 3.125 | 360 |
| 2-Not an open-end line of credit | 122400 | NA | 6.875 | 360 |
| 2-Not an open-end line of credit | 324000 | 20220129 | 3.125 | 360 |
| 2-Not an open-end line of credit | 1314312 | 20221004 | 5.500 | 360 |
| 2-Not an open-end line of credit | 425000 | NA | 3.6 | 360 |
| 2-Not an open-end line of credit | 4400000 | 20220421 | 4.000 | 360 |
| 2-Not an open-end line of credit | 1000000 | 20220901 | 4.625 | 360 |
| 2-Not an open-end line of credit | 639000 | 20211214 | 2.250 | 360 |
| 2-Not an open-end line of credit | 197359 | 20220527 | NA | 360 |
| 2-Not an open-end line of credit | 416800 | 20220329 | 4.75 | 360 |


| NA | 1-Secured by a first lien | 430000 | 53 |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 1779000 | 80 |
| NA | 1-Secured by a first lien | 700000 | 75 |
| NA | 1-Secured by a first lien | 190000 | NA |
| NA | 1-Secured by a first lien | 311000 | 80 |
| NA | 1-Secured by a first lien | 140000 | 97 |
| NA | 1-Secured by a first lien | 450000 | 50 |
| NA | 1-Secured by a first lien | 223000 | 34 |
| NA | 1-Secured by a first lien | 440000 | 90 |
| NA | 1-Secured by a first lien | 180000 | NA |
| NA | 1-Secured by a first lien | 242000 | 96 |
| NA | 1-Secured by a first lien | 444500 | 50 |
| NA | 1-Secured by a first lien | 410000 | NA |
| NA | 1-Secured by a first lien | 515000 | 38.83 |
| NA | 1-Secured by a first lien | 270000 | 55 |
| NA | 1-Secured by a first lien | 433000 | 95 |
| NA | 1-Secured by a first lien | 390000 | 65 |
| NA | 1-Secured by a first lien | 406600 | 26 |
| NA | 1-Secured by a first lien | 335000 | 60 |
| NA | 1-Secured by a first lien | 257000 | NA |
| NA | 1-Secured by a first lien | 425000 | 79 |
| NA | 1-Secured by a first lien | 195000 | 85 |
| NA | 1-Secured by a first lien | 900000 | 80 |
| NA | 1-Secured by a first lien | 165000 | 95 |
| NA | 1-Secured by a first lien | 380000 | 39 |
| NA | 1-Secured by a first lien | 160000 | 69 |
| NA | 1-Secured by a first lien | 245000 | 90 |
| NA | 1-Secured by a first lien | 325000 | 60 |
| NA | 1-Secured by a first lien | 290000 | NA |
| NA | 1-Secured by a first lien | 220000 | NA |
| NA | 1-Secured by a first lien | 565000 | 80 |
| NA | 1-Secured by a first lien | 210500 | NA |
| NA | 1-Secured by a first lien | 219900 | 70 |
| NA | 1-Secured by a first lien | 253000 | 90 |
| NA | 1-Secured by a first lien | 287000 | 97 |
| NA | 1-Secured by a first lien | 217000 | NA |
| NA | 1-Secured by a first lien | 400000 | NA |
| NA | 1-Secured by a first lien | 420000 | NA |
| NA | 1-Secured by a first lien | 500000 | 75 |
| NA | 1-Secured by a first lien | 770000 | NA |
| NA | 1-Secured by a first lien | 188000 | NA |
| NA | 1-Secured by a first lien | 150000 | NA |
| NA | 1-Secured by a first lien | 110000 | 72.29 |
| NA | 1-Secured by a first lien | 339000 | 47 |
| NA | 1-Secured by a first lien | 691009 | 90 |
| NA | 1-Secured by a first lien | 350000 | 90 |
| NA | 1-Secured by a first lien | 230000 | 100 |
| NA | 1-Secured by a first lien | 617000 | 75 |
| NA | 1-Secured by a first lien | 621000 | 90 |
| NA | 1-Secured by a first lien | 530000 | 80 |
| NA | 1-Secured by a first lien | 153000 | NA |
| NA | 1-Secured by a first lien | 550000 | 59 |
| NA | 1-Secured by a first lien | 1546250 | 85.000 |
| NA | 1-Secured by a first lien | 500000 | NA |
| NA | 1-Secured by a first lien | 5840000 | 74.074 |
| NA | 1-Secured by a first lien | 1180000 | 85.000 |
| NA | 1-Secured by a first lien | 799000 | 79.975 |
| NA | 1-Secured by a first lien | 201000 | 96.5 |
| NA | 1-Secured by a first lien | 521000 | 80 |


|  | 10-Not applicable |
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|  | 10-Not applicable |
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|  | 10-Not applicable |
|  | 3-Credit history |
|  | 4-Collateral |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 6-Unverifiable information |
|  | 10-Not applicable |
|  | 10-Not applicable |
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|  | 3-Credit history |
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| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 21-Asian Indian |
| 21-Asian Indian |
| 21-Asian Indian |
| 21-Asian Indian |
| 22-Chinese |
| 25-Korean |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
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|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6 -Information not provided by applicant in mail, internet, or telephone application |
|  | 6 -Information not provided by applicant in mail, internet, or telephone application |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6 -Information not provided by applicant in mail, internet, or telephone application |
|  | 8-No co-applicant |
|  | 8-No co-applicant |





| 5-No co-applicant |  |
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| 5-No co-applicant |  |
| 5-No co-applicant |  |
| 3-Information not provided by applicant in mail, internet, or telephone application |  |
| 3-Information not provided by applicant in mail, internet, or telephone application |  |
| 3-Information not provided by applicant in mail, internet, or telephone application |  |
| 3-Information not provided by applicant in mail, internet, or telephone application |  |
| 3-Information not provided by applicant in mail, internet, or telephone application |  |
| 5-No co-applicant |  |
|  | 5-No co-applicant |


| 2-Not Hispanic or Latino |
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| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
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| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
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| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
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| 3-Information not provided by applicant in mail, internet, or telephone application |
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| 3-Information not provided by applicant in mail, internet, or telephone application |




| 5-No co-applicant |  |
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|  | 5-No co-applicant |
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| 3-Information not provided by applicant in mail, internet, or telephone application |  |
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| 3-Information not provided by applicant in mail, internet, or telephone application |  |
| 3-Information not provided by applicant in mail, internet, or telephone application |  |
| 3-Information not provided by applicant in mail, internet, or telephone application |  |
| 5-No co-applicant |  |
|  | 5-No co-applicant |


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| 2212.00 | 6-Purchased loan | 1 |
| :---: | :---: | :---: |
| 710.00 | 1-Loan originated | 1 |
| 712.00 | 1-Loan originated | 1 |
| 402.02 | 6-Purchased loan | 1 |
| 208.01 | 6-Purchased loan | 1 |
| 3905.00 | 1-Loan originated | 1 |
| 609.00 | 1-Loan originated | 1 |
| 2414.00 | 1-Loan originated | 2 |
| 818.00 | 1-Loan originated | 1 |
| 8365.00 | 1-Loan originated | 1 |
| 8438.00 | 6-Purchased loan | 1 |
| 8325.00 | 1-Loan originated | 1 |
| 2432.00 | 6-Purchased loan | 1 |
| 3906.00 | 1-Loan originated | 1 |
| 2420.00 | 6-Purchased loan | 1 |
| 8428.00 | 1-Loan originated | 1 |
| 716.00 | 6-Purchased loan | 1 |
| 2105.02 | 1-Loan originated | 2 |
| 1002.00 | 1-Loan originated | 1 |
| 317.00 | 6-Purchased loan | 1 |
| 311.00 | 6-Purchased loan | 1 |
| 8331.00 | 6-Purchased loan | 1 |
| 817.00 | 1-Loan originated | 1 |
| 308.00 | 1-Loan originated | 1 |
| 8430.00 | 1-Loan originated | 1 |
| 8331.00 | 1-Loan originated | 1 |
| 307.02 | 1-Loan originated | 1 |
| 621.00 | 1-Loan originated | 1 |
| 3206.00 | 1-Loan originated | 1 |
| 8326.00 | 6-Purchased loan | 3 |
| 315.01 | 1-Loan originated | 1 |
| 7003.02 | 1-Loan originated | 1 |
| 2203.00 | 1-Loan originated | 1 |
| 401.00 | 1-Loan originated | 1 |
| 629.00 | 1-Loan originated | 1 |
| 6604.00 | 3-Application denied | 1 |
| 8425.00 | 6-Purchased loan | 1 |
| 2427.00 | 1-Loan originated | 3 |
| 8391.00 | 1-Loan originated | 1 |
| 206.02 | 3-Application denied | 2 |
| 2838.00 | 1-Loan originated | 1 |
| 1105.02 | 1-Loan originated | 1 |
| 3201.01 | 3-Application denied | 1 |
| 2206.02 | 6-Purchased loan | 1 |
| 803.00 | 1-Loan originated | 1 |
| 1005.00 | 1-Loan originated | 1 |
| 1203.00 | 1-Loan originated | 1 |
| 1903.00 | 6-Purchased loan | 1 |
| 4108.00 | 1-Loan originated | 1 |
| 2212.00 | 1-Loan originated | 1 |
| 2227.00 | 1-Loan originated | 2 |
| 3301.03 | 1-Loan originated | 1 |
| 6405.00 | 1-Loan originated | 1 |
| 5205.00 | 6-Purchased loan | 1 |
| 7708.00 | 6-Purchased loan | 1 |
| 716.00 | 1-Loan originated | 1 |
| 802.01 | 1-Loan originated | 1 |
| 620.00 | 1-Loan originated | 1 |
| 1202.00 | 6-Purchased loan | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |


| 2-Not an open-end line of credit | 209000 | NA | 5.275 | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 1400000 | 20210914 | 2.000 | 360 |
| 2-Not an open-end line of credit | 710400 | 20220310 | 3.875 | 360 |
| 2-Not an open-end line of credit | 261250 | NA | 5.85 | 360 |
| 2-Not an open-end line of credit | 636500 | NA | 3.425 | 360 |
| 2-Not an open-end line of credit | 3272500 | 20220218 | 3.125 | 360 |
| 2-Not an open-end line of credit | 128250 | 20211210 | 3.49 | 360 |
| 2-Not an open-end line of credit | 600000 | 20211216 | 2.750 | 360 |
| 2-Not an open-end line of credit | 2570000 | 20220210 | 3.125 | 360 |
| 2-Not an open-end line of credit | 548250 | 20211108 | 2.75 | 360 |
| 2-Not an open-end line of credit | 487500 | NA | 3.99 | 360 |
| 2-Not an open-end line of credit | 372000 | 20220224 | 4.25 | 360 |
| 2-Not an open-end line of credit | 654500 | NA | 4.625 | 360 |
| 2-Not an open-end line of credit | 410000 | 20220110 | 3.125 | 360 |
| 2-Not an open-end line of credit | 453600 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 580000 | 20211122 | 2.875 | 360 |
| 2-Not an open-end line of credit | 960000 | NA | 4.25 | 360 |
| 2-Not an open-end line of credit | 527000 | 20220329 | 4.875 | 360 |
| 2-Not an open-end line of credit | 392655 | 20220615 | 5.75 | 360 |
| 2-Not an open-end line of credit | 346750 | NA | 4.375 | 360 |
| 2-Not an open-end line of credit | 527920 | NA | 3.375 | 360 |
| 2-Not an open-end line of credit | 332500 | NA | 3.99 | 360 |
| 2-Not an open-end line of credit | 320000 | 20220429 | 4.875 | 360 |
| 2-Not an open-end line of credit | 431200 | 20220616 | 5.375 | 360 |
| 2-Not an open-end line of credit | 666000 | 20211027 | 2.75 | 360 |
| 2-Not an open-end line of credit | 360400 | 20220322 | 4.75 | 360 |
| 2-Not an open-end line of credit | 121600 | 20220504 | 4.75 | 180 |
| 2-Not an open-end line of credit | 267000 | 20220831 | 5.375 | 360 |
| 2-Not an open-end line of credit | 555000 | 20220629 | 4.875 | 360 |
| 2-Not an open-end line of credit | 1031250 | NA | 5.875 | 360 |
| 2-Not an open-end line of credit | 224000 | 20220301 | 4.25 | 360 |
| 2-Not an open-end line of credit | 142500 | 20220420 | 4.875 | 360 |
| 2-Not an open-end line of credit | 243375 | 20220822 | 6.375 | 360 |
| 2-Not an open-end line of credit | 508000 | 20220209 | 3.125 | 360 |
| 2-Not an open-end line of credit | 489250 | 20220317 | 4.625 | 360 |
| 2-Not an open-end line of credit | 148036 | 20220111 | NA | 180 |
| 2-Not an open-end line of credit | 505600 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 600000 | 20220210 | 3.625 | 180 |
| 2-Not an open-end line of credit | 304000 | 20220606 | 5.5 | 360 |
| 2-Not an open-end line of credit | 250000 | 20211009 | NA | 360 |
| 2-Not an open-end line of credit | 303000 | 20221010 | 7.49 | 360 |
| 2-Not an open-end line of credit | 112000 | 20220831 | 5.625 | 360 |
| 2-Not an open-end line of credit | 650000 | 20220307 | NA | 360 |
| 2-Not an open-end line of credit | 958521.91 | NA | 3.625 | 360 |
| 2-Not an open-end line of credit | 680000 | 20220407 | 4.75 | 360 |
| 2-Not an open-end line of credit | 295000 | 20220110 | 3.25 | 360 |
| 2-Not an open-end line of credit | 647200 | 20220107 | 2.125 | 180 |
| 2-Not an open-end line of credit | 375250 | NA | 3.5 | 360 |
| 2-Not an open-end line of credit | 380000 | 20220121 | 3.875 | 360 |
| 2-Not an open-end line of credit | 650000 | 20220912 | 5.125 | 360 |
| 2-Not an open-end line of credit | 292500 | 20220813 | 7 | 360 |
| 2-Not an open-end line of credit | 722000 | 20210814 | 2.25 | 360 |
| 2-Not an open-end line of credit | 336300 | 20220303 | 4.125 | 360 |
| 2-Not an open-end line of credit | 132000 | NA | 3.125 | 180 |
| 2-Not an open-end line of credit | 235000 | NA | 3.375 | 360 |
| 2-Not an open-end line of credit | 731250 | 20220616 | 4.5 | 360 |
| 2-Not an open-end line of credit | 185300 | 20221014 | 7.875 | 360 |
| 2-Not an open-end line of credit | 712500 | 20220624 | 4.99 | 360 |
| 2-Not an open-end line of credit | 396000 | NA | 3.65 | 360 |


| NA | 1-Secured by a first lien | 309000 | NA |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 2450000 | 65.306 |
| NA | 1-Secured by a first lien | 888000 | 80 |
| NA | 1-Secured by a first lien | 275000 | NA |
| NA | 1-Secured by a first lien | 670000 | NA |
| NA | 1-Secured by a first lien | 3850000 | 85.000 |
| NA | 1-Secured by a first lien | 135000 | 95 |
| NA | 1-Secured by a first lien | 955000 | 62.827 |
| NA | 1-Secured by a first lien | 3212500 | 80 |
| NA | 1-Secured by a first lien | 740000 | 75 |
| NA | 1-Secured by a first lien | 650000 | NA |
| NA | 1-Secured by a first lien | 465000 | 80 |
| NA | 1-Secured by a first lien | 770000 | NA |
| NA | 1-Secured by a first lien | 480000 | 86 |
| NA | 1-Secured by a first lien | 504000 | NA |
| NA | 1-Secured by a first lien | 725000 | 80 |
| NA | 1-Secured by a first lien | 1200000 | NA |
| NA | 1-Secured by a first lien | 620000 | 85 |
| NA | 1-Secured by a first lien | 399900 | 96.5 |
| NA | 1-Secured by a first lien | 365000 | NA |
| NA | 1-Secured by a first lien | 659900 | NA |
| NA | 1-Secured by a first lien | 482500 | NA |
| NA | 1-Secured by a first lien | 400000 | 80 |
| NA | 1-Secured by a first lien | 539000 | 80 |
| NA | 1-Secured by a first lien | 832500 | 80 |
| NA | 1-Secured by a first lien | 424000 | 85 |
| NA | 1-Secured by a first lien | 152000 | 80 |
| NA | 1-Secured by a first lien | 467000 | 58 |
| NA | 1-Secured by a first lien | 740000 | 75 |
| NA | 1-Secured by a first lien | 1375000 | NA |
| NA | 1-Secured by a first lien | 280000 | 80 |
| NA | 1-Secured by a first lien | 150000 | 95 |
| NA | 1-Secured by a first lien | 324500 | 75 |
| NA | 1-Secured by a first lien | 635000 | 80 |
| NA | 1-Secured by a first lien | 515000 | 95 |
| NA | 1-Secured by a first lien | 295000 | 51 |
| NA | 1-Secured by a first lien | 632000 | NA |
| NA | 1-Secured by a first lien | 850000 | 71 |
| NA | 1-Secured by a first lien | 380000 | 80 |
| NA | 1-Secured by a first lien | 510000 | 50 |
| NA | 1-Secured by a first lien | 328000 | 93 |
| NA | 1-Secured by a first lien | 140000 | 80 |
| NA | 1-Secured by a first lien | 1800000 | 36.11 |
| NA | 1-Secured by a first lien | 1200000 | NA |
| NA | 1-Secured by a first lien | 850000 | 80 |
| NA | 1-Secured by a first lien | 375000 | 79 |
| NA | 1-Secured by a first lien | 1000000 | 65 |
| NA | 1-Secured by a first lien | 395000 | NA |
| NA | 1-Secured by a first lien | 400000 | 95 |
| NA | 1-Secured by a first lien | 1375000 | 47.27 |
| NA | 1-Secured by a first lien | 390000 | 75 |
| NA | 1-Secured by a first lien | 1086000 | 66.48 |
| NA | 1-Secured by a first lien | 354000 | 95 |
| NA | 1-Secured by a first lien | 192000 | NA |
| NA | 1-Secured by a first lien | 330000 | NA |
| NA | 1-Secured by a first lien | 975000 | 75 |
| NA | 1-Secured by a first lien | 218000 | 85 |
| NA | 1-Secured by a first lien | 950000 | 75 |
| NA | 1-Secured by a first lien | 495000 | NA |


|  | 10-Not applicable |
| :---: | :---: |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
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|  | 10-Not applicable |
|  | 1-Debt-to-income ratio |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 4-Collateral |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 4-Collateral |
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| 6-Information not provided by applicant in mail, internet, or telephone application |  |
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| 6-Information not provided by applicant in mail, internet, or telephone application |  |
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| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 7-Not applicable |  |
| 3-Black or African American |  |
| 3-Black or African American |  |
| 2-Asian |  |
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| 3-Black or African American |  |
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| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 21-Asian Indian |  |
| 23-Filipino |  |
| 1-American Indian or Alaska Native |  |
| 1-American Indian or Alaska Native |  |
| 2-Asian |  |
| 2-Asian |  |
| 2-Asian |  |
| 2-Asian |  |
| 2-Asian |  |
| 2-Asian |  |
| 3-Black or African American |  |
| 5-White |  |
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| 5-White | - |
| 21-White | - |
| 21-Asian Indian Indian | - |
| 21-Asian Indian | - |
| 21-Asian Indian | - |
| 22-Chinese | - |
| 26 -Vietnamese | - |
| 27-Other Asian | - |
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| 8-No co-applicant |
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| 2-Asian |
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| 8-No co-applicant |
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| 8-No co-applicant |
| 2-Asian |
| 5-White |
| 3-Black or African American |
| 2-Asian |
| 5-White |
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| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 21-Asian Indian |
| 23-Filipino |
| 1-American Indian or Alaska Native |
| 21-Asian Indian |
| 2-Asian |
| 2-Asian |
| 2-Asian |
| 2-Asian |
| 5-White |
| 5-White |
| 3-Black or African American |
| 2-Asian |
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| 3-Information not provided by applicant in mail, internet, or telephone application |  |
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| 3-Information not provided by applicant in mail, internet, or telephone application |  |
| 3-Information not provided by applicant in mail, internet, or telephone application |  |
| 3-Information not provided by applicant in mail, internet, or telephone application |  |
| 3-Information not provided by applicant in mail, internet, or telephone application |  |
| 3-Information not provided by applicant in mail, internet, or telephone application |  |
| 4-Not applicable |  |
| 1-Male |  |
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| 5-No co-applicant |
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| 2-Female |
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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 4-Not applicable |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
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|  | 2-Not Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 11-Mexican |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 1-Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
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|  | 2-Not Hispanic or Latino |
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|  | 2-Not Hispanic or Latino |
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|  | 2-Not Hispanic or Latino |
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|  | 1-Hispanic or Latino |
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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
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| 11-Mexican | - |
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| 12-Puerto Rican | - |
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| 2429.00 | 6-Purchased loan | 1 |
| :---: | :---: | :---: |
| 813.00 | 6-Purchased loan | 1 |
| 401.00 | 6-Purchased loan | 1 |
| 2506.00 | 1-Loan originated | 1 |
| 8429.00 | 1-Loan originated | 1 |
| 8438.00 | 6-Purchased loan | 1 |
| 2431.00 | 6-Purchased loan | 1 |
| 628.00 | 6-Purchased loan | 3 |
| 503.00 | 1-Loan originated | 3 |
| 8399.00 | 1-Loan originated | 1 |
| 1103.00 | 1-Loan originated | 1 |
| 601.00 | 1-Loan originated | 1 |
| 706.00 | 6-Purchased loan | 1 |
| 1510.01 | 1-Loan originated | 1 |
| 2421.00 | 1-Loan originated | 1 |
| 1903.00 | 6-Purchased loan | 1 |
| 814.02 | 1-Loan originated | 1 |
| 6407.00 | 1-Loan originated | 1 |
| 1202.00 | 1-Loan originated | 1 |
| 2216.00 | 6-Purchased loan | 1 |
| 8421.00 | 6-Purchased loan | 1 |
| 6308.00 | 1-Loan originated | 1 |
| 2101.00 | 1-Loan originated | 3 |
| 633.02 | 1-Loan originated | 1 |
| 7205.00 | 1-Loan originated | 1 |
| 8325.00 | 6-Purchased loan | 3 |
| 8428.00 | 1-Loan originated | 1 |
| 8318.00 | 1-Loan originated | 1 |
| 8430.00 | 6-Purchased loan | 1 |
| 8420.00 | 1-Loan originated | 1 |
| 8437.00 | 1-Loan originated | 1 |
| 404.02 | 1-Loan originated | 1 |
| 202.00 | 1-Loan originated | 1 |
| 512.00 | 1-Loan originated | 1 |
| 8386.00 | 6-Purchased loan | 4 |
| 404.02 | 1-Loan originated | 1 |
| 620.00 | 6-Purchased loan | 1 |
| 1103.00 | 6-Purchased loan | 1 |
| 4111.00 | 6-Purchased loan | 1 |
| 812.01 | 1-Loan originated | 1 |
| 605.00 | 1-Loan originated | 1 |
| 2430.00 | 1-Loan originated | 1 |
| 6303.00 | 1-Loan originated | 1 |
| 505.00 | 1-Loan originated | 1 |
| 2222.00 | 1-Loan originated | 1 |
| 6611.00 | 1-Loan originated | 1 |
| 5205.00 | 1-Loan originated | 1 |
| 5906.00 | 1-Loan originated | 2 |
| 632.00 | 6-Purchased loan | 1 |
| 8435.00 | 6-Purchased loan | 1 |
| 814.02 | 6-Purchased loan | 1 |
| 1502.00 | 6-Purchased loan | 1 |
| 8437.00 | 6-Purchased loan | 1 |
| 3204.00 | 1-Loan originated | 1 |
| 8399.00 | 1-Loan originated | 1 |
| 501.00 | 6-Purchased loan | 3 |
| 7202.00 | 6-Purchased loan | 1 |
| 208.02 | 1-Loan originated | 3 |
| 1003.00 | 1-Loan originated | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purch |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purch |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purch |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | finance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improvement |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improvement |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |


| 2-Not an open-end line of credit | 600000 | NA | 2.99 | 360 |
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| 2-Not an open-end line of credit | 743063.94 | NA | 4.75 | 360 |
| 2-Not an open-end line of credit | 1193192.56 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 100000 | 20220516 | 5.25 | 360 |
| 2-Not an open-end line of credit | 565000 | 20211103 | 2.875 | 360 |
| 2-Not an open-end line of credit | 306000 | NA | 4.875 | 360 |
| 2-Not an open-end line of credit | 1138320.55 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 553150 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 421400 | 20211222 | 4.125 | 360 |
| 2-Not an open-end line of credit | 245000 | 20211207 | 3.375 | 360 |
| 2-Not an open-end line of credit | 261369 | 20211127 | 3.25 | 240 |
| 2-Not an open-end line of credit | 1162500 | 20220502 | 4.5 | 360 |
| 2-Not an open-end line of credit | 617500 | NA | 2.99 | 360 |
| 2-Not an open-end line of credit | 360000 | 20220808 | 4.75 | 240 |
| 2-Not an open-end line of credit | 680000 | 20220516 | 5 | 360 |
| 2-Not an open-end line of credit | 175000 | NA | 4.125 | 360 |
| 2-Not an open-end line of credit | 397000 | 20211130 | 2.75 | 240 |
| 2-Not an open-end line of credit | 232750 | 20220808 | 5.375 | 360 |
| 2-Not an open-end line of credit | 119000 | 20211218 | 3.25 | 360 |
| 2-Not an open-end line of credit | 509000 | NA | 3 | 360 |
| 2-Not an open-end line of credit | 647200 | NA | 3.99 | 360 |
| 2-Not an open-end line of credit | 68000 | 20220517 | 5.5 | 120 |
| 2-Not an open-end line of credit | 147500 | 20211209 | 2.99 | 180 |
| 2-Not an open-end line of credit | 300000 | 20220401 | 4.125 | 180 |
| 2-Not an open-end line of credit | 154000 | 20220422 | 4.99 | 180 |
| 2-Not an open-end line of credit | 1498278.45 | NA | 5.25 | 360 |
| 2-Not an open-end line of credit | 364000 | 20220316 | 5.125 | 360 |
| 2-Not an open-end line of credit | 368920 | 20221005 | 6.375 | 360 |
| 2-Not an open-end line of credit | 975750 | NA | 5.125 | 360 |
| 2-Not an open-end line of credit | 632000 | 20220902 | 5.625 | 360 |
| 2-Not an open-end line of credit | 592000 | 20220526 | 4.875 | 360 |
| 2-Not an open-end line of credit | 647201 | 20220405 | 4.375 | 360 |
| 2-Not an open-end line of credit | 228159 | 20211223 | 3.125 | 360 |
| 2-Not an open-end line of credit | 1000000 | 20220718 | 4.75 | 360 |
| 2-Not an open-end line of credit | 813648.11 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 323000 | 20221118 | 6.375 | 360 |
| 2-Not an open-end line of credit | 488000 | NA | 2.375 | 180 |
| 2-Not an open-end line of credit | 282800 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 180000 | NA | 5.125 | 360 |
| 2-Not an open-end line of credit | 686000 | 20211220 | 2.25 | 360 |
| 2-Not an open-end line of credit | 669800 | 20220214 | 4.75 | 360 |
| 2-Not an open-end line of credit | 230250 | 20211103 | 4.375 | 360 |
| 2-Not an open-end line of credit | 130000 | 20220205 | 3.625 | 180 |
| 2-Not an open-end line of credit | 389500 | 20220221 | 4.75 | 360 |
| 2-Not an open-end line of credit | 232500 | 20220111 | 3.5 | 360 |
| 2-Not an open-end line of credit | 279360 | 20220318 | 4.99 | 360 |
| 2-Not an open-end line of credit | 65045 | 20220608 | 6.125 | 240 |
| 2-Not an open-end line of credit | 716125 | 20220506 | 5.375 | 360 |
| 2-Not an open-end line of credit | 130173.97 | NA | 5.375 | 360 |
| 2-Not an open-end line of credit | 285000 | NA | 5.25 | 360 |
| 2-Not an open-end line of credit | 514900 | NA | 3.575 | 360 |
| 2-Not an open-end line of credit | 595200 | NA | 4.25 | 360 |
| 2-Not an open-end line of credit | 287000 | NA | 3.375 | 360 |
| 2-Not an open-end line of credit | 1491000 | 20220203 | 3 | 360 |
| 2-Not an open-end line of credit | 592000 | 20220608 | 5.5 | 360 |
| 2-Not an open-end line of credit | 663033.68 | NA | 5.575 | 360 |
| 2-Not an open-end line of credit | 404000 | NA | 2.625 | 180 |
| 2-Not an open-end line of credit | 373000 | 20220218 | 4 | 360 |
| 2-Not an open-end line of credit | 346500 | 20220419 | 5 | 360 |


| NA | 1-Secured by a first lien | 800000 | NA |
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| NA | 1-Secured by a first lien | 930000 | NA |
| NA | 1-Secured by a first lien | 1494000 | NA |
| NA | 1-Secured by a first lien | 300000 | 34 |
| NA | 1-Secured by a first lien | 800000 | 71 |
| NA | 1-Secured by a first lien | 382500 | NA |
| NA | 1-Secured by a first lien | 1425000 | NA |
| NA | 1-Secured by a first lien | 851000 | NA |
| NA | 1-Secured by a first lien | 602000 | 70 |
| NA | 1-Secured by a first lien | 370000 | 67 |
| NA | 1-Secured by a first lien | 380000 | 69 |
| NA | 1-Secured by a first lien | 1550000 | 75 |
| NA | 1-Secured by a first lien | 650000 | NA |
| NA | 1-Secured by a first lien | 500000 | 72 |
| NA | 1-Secured by a first lien | 850000 | 80 |
| NA | 1-Secured by a first lien | 250000 | NA |
| NA | 1-Secured by a first lien | 550000 | 73 |
| NA | 1-Secured by a first lien | 245000 | 95 |
| NA | 1-Secured by a first lien | 600000 | 20 |
| NA | 1-Secured by a first lien | 1110000 | NA |
| NA | 1-Secured by a first lien | 775000 | NA |
| NA | 1-Secured by a first lien | 225000 | 31 |
| NA | 1-Secured by a first lien | 725000 | 21 |
| NA | 1-Secured by a first lien | 580000 | 52 |
| NA | 1-Secured by a first lien | 340000 | 46 |
| NA | 1-Secured by a first lien | 2925000 | NA |
| NA | 1-Secured by a first lien | 496500 | 74 |
| NA | 1-Secured by a first lien | 401000 | 92 |
| NA | 1-Secured by a first lien | 1301000 | NA |
| NA | 1-Secured by a first lien | 790000 | 80 |
| NA | 1-Secured by a first lien | 740000 | 80 |
| NA | 1-Secured by a first lien | 820000 | 78.92 |
| NA | 1-Secured by a first lien | 480000 | 48 |
| NA | 1-Secured by a first lien | 1350000 | 74.07 |
| NA | 1-Secured by a first lien | 890000 | NA |
| NA | 1-Secured by a first lien | 340000 | 95 |
| NA | 1-Secured by a first lien | 730000 | NA |
| NA | 1-Secured by a first lien | 353500 | NA |
| NA | 1-Secured by a first lien | 280000 | NA |
| NA | 1-Secured by a first lien | 2360000 | 29.06 |
| NA | 1-Secured by a first lien | 788000 | 85 |
| NA | 1-Secured by a first lien | 307000 | 75 |
| NA | 1-Secured by a first lien | 250000 | 52 |
| NA | 1-Secured by a first lien | 410000 | 95 |
| NA | 1-Secured by a first lien | 532500 | 44 |
| NA | 1-Secured by a first lien | 288000 | 97 |
| NA | 1-Secured by a first lien | 205000 | 32 |
| NA | 1-Secured by a first lien | 842500 | 85 |
| NA | 1-Secured by a first lien | 162900 | NA |
| NA | 1-Secured by a first lien | 300000 | NA |
| NA | 1-Secured by a first lien | 542000 | NA |
| NA | 1-Secured by a first lien | 700251 | NA |
| NA | 1-Secured by a first lien | 410000 | NA |
| NA | 1-Secured by a first lien | 2130000 | 70 |
| NA | 1-Secured by a first lien | 740000 | 80 |
| NA | 1-Secured by a first lien | 885000 | NA |
| NA | 1-Secured by a first lien | 505000 | NA |
| NA | 1-Secured by a first lien | 730000 | 52 |
| NA | 1-Secured by a first lien | 385000 | 90 |


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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
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| 2-Not Hispanic or Latino |
| 11-Mexican |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 11-Mexican |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
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| 14-Other Hispanic or Latino | - |
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| 14-Other Hispanic or Latino | - |
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| 716.00 | 6-Purchased loan | 1 |
| :--- | :--- | :--- | :--- |
| 8425.00 | 6-Purchased loan | 1 |
| 2415.00 | 1-Loan originated | 1 |
| 802.02 | 1-Loan originated | 1 |
| 406.00 | 1-Loan originated | 1 |
| 8381.00 | 1-Loan originated | 1 |
| 2106.01 | 1-Loan originated | 1 |
| 1003.00 | 6-Purchased loan | 1 |
| 627.00 | 1-Loan originated | 1 |
| 2434.00 | 1-Loan originated | 3 |
| 2212.00 | 1-Loan originated | 1 |
| 1007.00 | 1-Loan originated | 1 |
| 3301.01 | 1-Loan originated | 1 |
| 4108.00 | 1-Loan originated | 1 |
| 704.00 | 1-Loan originated | 1 |
| 8439.00 | 1-Loan originated | 1 |
| 814.02 | 1-Loan originated | 1 |
| 612.00 | 1-Loan originated | 1 |
| 1407.02 | 1-Loan originated | 1 |
| 8399.00 | 1-Loan originated | 1 |
| 404.02 | 1-Loan originated | 3 |
| 812.01 | 3-Application denied | 1 |
| 816.00 | 1-Loan originated | 1 |
| 314.00 | 1-Loan originated | 1 |
| 8331.00 | 6-Purchased loan | 1 |
| 8331.00 | 1-Loan originated | 1 |
| 5303.00 | 3-Application denied | 1 |
| 3510.00 | 3-Application denied | 1 |
| 8439.00 | 3-Application denied | 1 |
| 3206.00 | 3-Application denied | 1 |
| 1510.01 | 1-Loan originated | 1 |
| 6405.00 | 1-Loan originated | 1 |
| 8310.00 | 6-Purchased loan | 1 |
| 7111.00 | 1-Loan originated | 1 |
| 2511.00 | 1-Loan originated | 2 |
| 8343.00 | 1-Loan originated | 1 |
| 4503.00 | 1-Loan originated | 1 |
| 5401.01 | 1-Loan originated | 1 |
| 7004.01 | 1-Loan originated | 1 |
| 8343.00 | 6-Purchased loan | 1 |
| 4503.00 | 6-Purchased loan | 4 |
| 4905.00 | 1-Loan originated | 1 |
| 7305.00 | 1-Loan originated | 1 |
| 7301.00 | 6-Purchased loan | 1 |
| 5003.00 | 6-Purchased loan | 1 |
| 4305.00 | 1-Loan originated | 1 |
| 8314.00 | 6-Purchased loan | 3 |
| 513.00 | 3-Application denied | 1 |
| 5905.00 | 3-Application denied | 2 |
| 1902.00 | 3-Application denied | 2 |
| 6303.00 | 3-Application denied | 1 |
| 8423.00 | 3-Application denied | 4 |
| 301.04 | 3-Application denied | 1 |
| 8307.00 | 3-Application denied | 1 |
| 3201.01 | 3-Application denied | 1 |
| 307.02 | 3-Application denied | 1 |
| 6502.00 | 3-Application denied | 2 |
| 3301.03 | 3-Application denied | 1 |
| 2416.00 | 3-Application denied | 1 |
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| Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 3-Veterans Affairs guaranteed (VA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improvement |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |


| 2-Not an open-end line of credit | 895122.4 | NA | 4.75 | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 249750 | NA | 4.375 | 360 |
| 2-Not an open-end line of credit | 784000 | 20220523 | 4.75 | 360 |
| 2-Not an open-end line of credit | 315000 | 20220103 | 2.875 | 360 |
| 2-Not an open-end line of credit | 1647000 | 20220407 | 4.25 | 360 |
| 2-Not an open-end line of credit | 324000 | 20220415 | 4.875 | 360 |
| 2-Not an open-end line of credit | 452000 | 20220214 | 3.25 | 360 |
| 2-Not an open-end line of credit | 640000 | NA | 3.99 | 360 |
| 2-Not an open-end line of credit | 920000 | 20220607 | 4.375 | 360 |
| 2-Not an open-end line of credit | 1835250 | 20211220 | 3.125 | 360 |
| 2-Not an open-end line of credit | 600000 | 20220106 | 5 | 360 |
| 2-Not an open-end line of credit | 317000 | 20220614 | 4.875 | 360 |
| 2-Not an open-end line of credit | 483750 | 20211214 | 3 | 360 |
| 2-Not an open-end line of credit | 280250 | 20220313 | 3.625 | 360 |
| 2-Not an open-end line of credit | 763600 | 20220411 | 4.25 | 360 |
| 2-Not an open-end line of credit | 1420000 | 20220411 | 4 | 360 |
| 2-Not an open-end line of credit | 326250 | 20211130 | 3.375 | 360 |
| 2-Not an open-end line of credit | 2399200 | 20220606 | 4.75 | 360 |
| 2-Not an open-end line of credit | 545000 | 20220522 | 4.625 | 360 |
| 2-Not an open-end line of credit | 468000 | 20220421 | 5 | 360 |
| 2-Not an open-end line of credit | 159500 | 20211203 | 3.25 | 360 |
| 2-Not an open-end line of credit | 153549 | 20211220 | NA | 240 |
| 2-Not an open-end line of credit | 1000000 | 20220211 | 3.25 | 360 |
| 2-Not an open-end line of credit | 86250 | 20211206 | 3.375 | 360 |
| 2-Not an open-end line of credit | 1517952.53 | NA | 4.375 | 360 |
| 2-Not an open-end line of credit | 412000 | 20211207 | 2.375 | 360 |
| 2-Not an open-end line of credit | 140650 | 20220919 | NA | 360 |
| 2-Not an open-end line of credit | 120104 | 20220114 | NA | 120 |
| 2-Not an open-end line of credit | 212259 | 20211203 | NA | 180 |
| 2-Not an open-end line of credit | 251750 | 20220328 | NA | 360 |
| 2-Not an open-end line of credit | 417301 | 20220307 | 3.99 | 360 |
| 2-Not an open-end line of credit | 297000 | 20220516 | 5.75 | 360 |
| 2-Not an open-end line of credit | 351500 | NA | 6.125 | 360 |
| 2-Not an open-end line of credit | 264000 | 20220309 | 3.75 | 360 |
| 2-Not an open-end line of credit | 188000 | 20220602 | 4.99 | 360 |
| 2-Not an open-end line of credit | 184200 | 20220304 | 4.49 | 360 |
| 2-Not an open-end line of credit | 71400 | 20220922 | 7.625 | 360 |
| 2-Not an open-end line of credit | 115700 | 20211215 | 3.375 | 360 |
| 2-Not an open-end line of credit | 178560 | 20220107 | 3.75 | 360 |
| 2-Not an open-end line of credit | 380000 | NA | 3.6 | 360 |
| 2-Not an open-end line of credit | 311200 | NA | 4.125 | 360 |
| 2-Not an open-end line of credit | 160000 | 20220728 | 4.25 | 360 |
| 2-Not an open-end line of credit | 130766 | 20220419 | 5 | 180 |
| 2-Not an open-end line of credit | 179550 | NA | 5.875 | 360 |
| 2-Not an open-end line of credit | 164000 | NA | 4.75 | 180 |
| 2-Not an open-end line of credit | 365000 | 20220517 | 4.99 | 360 |
| 2-Not an open-end line of credit | 125000 | NA | 5.875 | 360 |
| 2-Not an open-end line of credit | 780000 | 20211210 | NA | 360 |
| 2-Not an open-end line of credit | 250000 | 20220622 | NA | 360 |
| 2-Not an open-end line of credit | 327525 | 20220504 | NA | 360 |
| 2-Not an open-end line of credit | 236683 | 20211101 | NA | 240 |
| 2-Not an open-end line of credit | 350400 | 20220324 | NA | 240 |
| 2-Not an open-end line of credit | 87000 | 20211028 | NA | 360 |
| 2-Not an open-end line of credit | 280000 | 20220124 | NA | 360 |
| 2-Not an open-end line of credit | 528000 | 20220318 | NA | 360 |
| 2-Not an open-end line of credit | 160000 | 20220204 | NA | 360 |
| 2-Not an open-end line of credit | 250000 | 20220202 | NA | 360 |
| 2-Not an open-end line of credit | 206100 | 20220527 | NA | 360 |
| 2-Not an open-end line of credit | 164800 | 20220810 | NA | 360 |


| NA | 1-Secured by a first lien | 1195000 | NA |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 333000 | NA |
| NA | 1-Secured by a first lien | 980000 | 80 |
| NA | 1-Secured by a first lien | 420000 | 75 |
| NA | 1-Secured by a first lien | 2200000 | 74.86 |
| NA | 1-Secured by a first lien | 405000 | 80 |
| NA | 1-Secured by a first lien | 565000 | 80 |
| NA | 1-Secured by a first lien | 800000 | NA |
| NA | 1-Secured by a first lien | 1150000 | 80 |
| NA | 1-Secured by a first lien | 2447000 | 75 |
| NA | 1-Secured by a first lien | 750000 | 80 |
| NA | 1-Secured by a first lien | 410000 | 78 |
| NA | 1-Secured by a first lien | 645000 | 75 |
| NA | 1-Secured by a first lien | 295000 | 95 |
| NA | 1-Secured by a first lien | 954500 | 80 |
| NA | 1-Secured by a first lien | 1775000 | 80 |
| NA | 1-Secured by a first lien | 435000 | 75 |
| NA | 1-Secured by a first lien | 2999000 | 80 |
| NA | 1-Secured by a first lien | 785000 | 70 |
| NA | 1-Secured by a first lien | 520000 | 90 |
| NA | 1-Secured by a first lien | 800000 | 20 |
| NA | 1-Secured by a first lien | 266000 | 58 |
| NA | 1-Secured by a first lien | 2450000 | 40.81 |
| NA | 1-Secured by a first lien | 115000 | 75 |
| NA | 1-Secured by a first lien | 1900000 | NA |
| NA | 1-Secured by a first lien | 515000 | 80 |
| NA | 1-Secured by a first lien | 145000 | 97 |
| NA | 1-Secured by a first lien | 170000 | 71 |
| NA | 1-Secured by a first lien | 177000 | 120 |
| NA | 1-Secured by a first lien | 265000 | 95 |
| NA | 1-Secured by a first lien | 425000 | 96.5 |
| NA | 1-Secured by a first lien | 330000 | 90 |
| NA | 1-Secured by a first lien | 370000 | NA |
| NA | 1-Secured by a first lien | 264000 | 100 |
| NA | 1-Secured by a first lien | 235000 | 80 |
| NA | 1-Secured by a first lien | 192000 | 96 |
| NA | 1-Secured by a first lien | 84000 | 85 |
| NA | 1-Secured by a first lien | 119900 | 97 |
| NA | 1-Secured by a first lien | 330000 | 55 |
| NA | 1-Secured by a first lien | 400000 | NA |
| NA | 1-Secured by a first lien | 389000 | NA |
| NA | 1-Secured by a first lien | 210000 | 77 |
| NA | 1-Secured by a first lien | 238000 | 55 |
| NA | 1-Secured by a first lien | 189000 | NA |
| NA | 1-Secured by a first lien | 205000 | NA |
| NA | 1-Secured by a first lien | 415000 | 88 |
| NA | 1-Secured by a first lien | 248000 | NA |
| NA | 1-Secured by a first lien | 905000 | 86.18 |
| NA | 1-Secured by a first lien | 295000 | 85 |
| NA | 1-Secured by a first lien | 436700 | 75 |
| NA | 1-Secured by a first lien | 250000 | 95 |
| NA | 1-Secured by a first lien | 438000 | 80 |
| NA | 1-Secured by a first lien | 134900 | 65 |
| NA | 1-Secured by a first lien | 335000 | 84 |
| NA | 1-Secured by a first lien | 645000 | 82 |
| NA | 1-Secured by a first lien | 150000 | 107 |
| NA | 1-Secured by a first lien | 350000 | 72 |
| NA | 1-Secured by a first lien | 229000 | 90 |
| NA | 1-Secured by a first lien | 206000 | 80 |


|  | 10-Not applicable |
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|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 5-Insufficient cash (downpayment, closing costs) |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 6-Unverifiable information |
|  | 3-Credit history |
|  | 4-Collateral |
|  | 4-Collateral |
|  | 10-Not applicable |
|  | 10-Not applicable |
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|  | 4-Collateral |
|  | 4-Collateral |
|  | 4-Collateral |
|  | 4-Collateral |
|  | 6-Unverifiable information |
|  | 1-Debt-to-income ratio |
|  | 4-Collateral |
|  | 4-Collateral |
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|  | 4-Collateral |
|  | 5-Insufficient cash (downpayment, closing costs) |


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| 1-Debt-to-income ratio | 5-Insufficient cash (downpayment, closing costs) |
| 1-Debt-to-income ratio | - |
| 1-Debt-to-income ratio | - |
| 1-Debt-to-income ratio | - |
| 1-Debt-to-income ratio | - |
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|  | 6-Information not provided by applicant in mail, internet, or telephone application |
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|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
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|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 21-Asian Indian |
|  | 21-Asian Indian |
|  | 21-Asian Indian |
|  | 21-Asian Indian |
|  | 22-Chinese |
|  | 22-Chinese |
|  | 26-Vietnamese |
|  | 2-Asian |
|  | 2-Asian |
|  | 2-Asian |
|  | 2-Asian |
|  | 2-Asian |
|  | 3-Black or African American |
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| 5-White |  |
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|  | 6-Information not provided by applicant in mail, internet, or telephone application |
| 23-Filipino |  |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
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| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 27-Other Asian |  |
| 5-White |  |
| 21-Asian Indian |  |
| 21-Asian Indian |  |
| 21-Asian Indian |  |
| 5-White |  |
| 22-Chinese |  |
| 26-Vietnamese |  |
| 8-No co-applicant |  |
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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
| :---: | :---: |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
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|  | 14-Other Hispanic or Latino |
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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
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|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 11-Mexican |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |




|  | 3-Information not provided by applicant in mail, internet, or telephone application |
| :---: | :---: |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
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| 1910.00 | 3-Application denied | 2 |
| :---: | :---: | :---: |
| 6504.00 | 1-Loan originated | 1 |
| 5805.02 | 1-Loan originated | 2 |
| 1404.00 | 1-Loan originated | 1 |
| 5905.00 | 1-Loan originated | 2 |
| 2227.00 | 6-Purchased loan | 1 |
| 209.02 | 1-Loan originated | 1 |
| 609.00 | 1-Loan originated | 1 |
| 1503.00 | 1-Loan originated | 1 |
| 1605.01 | 6-Purchased loan | 2 |
| 3301.01 | 1-Loan originated | 1 |
| 2004.02 | 1-Loan originated | 2 |
| 1801.00 | 1-Loan originated | 1 |
| 8344.00 | 6-Purchased loan | 3 |
| 2421.00 | 1-Loan originated | 1 |
| 2421.00 | 6-Purchased loan | 1 |
| 403.00 | 1-Loan originated | 1 |
| 8233.04 | 6-Purchased loan | 1 |
| 8306.00 | 1-Loan originated | 1 |
| 8425.00 | 6-Purchased loan | 1 |
| 2214.00 | 6-Purchased loan | 1 |
| 6204.00 | 1-Loan originated | 1 |
| 8437.00 | 6-Purchased loan | 1 |
| 705.00 | 1-Loan originated | 1 |
| 701.02 | 1-Loan originated | 1 |
| 818.00 | 1-Loan originated | 1 |
| 633.02 | 6-Purchased loan | 1 |
| 608.00 | 1-Loan originated | 1 |
| 633.01 | 6-Purchased loan | 1 |
| 2422.00 | 1-Loan originated | 3 |
| 621.00 | 1-Loan originated | 1 |
| 312.00 | 6-Purchased loan | 1 |
| 1502.00 | 1-Loan originated | 1 |
| 203.01 | 6-Purchased loan | 1 |
| 1605.02 | 1-Loan originated | 1 |
| 818.00 | 1-Loan originated | 1 |
| 703.00 | 1-Loan originated | 1 |
| 1710.00 | 1-Loan originated | 1 |
| 8323.00 | 1-Loan originated | 1 |
| 8421.00 | 1-Loan originated | 1 |
| 2431.00 | 1-Loan originated | 1 |
| 2422.00 | 1-Loan originated | 1 |
| 818.00 | 1-Loan originated | 1 |
| 1703.00 | 1-Loan originated | 2 |
| 8331.00 | 6-Purchased loan | 1 |
| 8404.00 | 1-Loan originated | 2 |
| 902.00 | 6-Purchased loan | 1 |
| 5906.00 | 1-Loan originated | 2 |
| 1003.00 | 1-Loan originated | 1 |
| 819.00 | 1-Loan originated | 1 |
| 6406.00 | 1-Loan originated | 1 |
| 3301.03 | 1-Loan originated | 1 |
| 3301.03 | 1-Loan originated | 1 |
| 601.00 | 1-Loan originated | 1 |
| 608.00 | 1-Loan originated | 1 |
| 2101.00 | 1-Loan originated | 1 |
| 802.02 | 1-Loan originated | 1 |
| 2420.00 | 1-Loan originated | 1 |
| 3201.01 | 6-Purchased Ioan | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |


| 2-Not an open-end line of credit | 202162 | 20211204 | NA | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 149000 | 20211213 | 2.75 | 180 |
| 2-Not an open-end line of credit | 213750 | 20220513 | 6.125 | 360 |
| 2-Not an open-end line of credit | 190750 | 20221026 | 6.99 | 360 |
| 2-Not an open-end line of credit | 315000 | 20220505 | 6.125 | 360 |
| 2-Not an open-end line of credit | 350000 | NA | 6.75 | 360 |
| 2-Not an open-end line of credit | 177721 | 20220806 | 5.75 | 360 |
| 2-Not an open-end line of credit | 63750 | 20220322 | 6.125 | 360 |
| 2-Not an open-end line of credit | 340575 | 20221018 | 6.875 | 360 |
| 2-Not an open-end line of credit | 232000 | NA | 5.375 | 360 |
| 2-Not an open-end line of credit | 515000 | 20220801 | 3.875 | 180 |
| 2-Not an open-end line of credit | 212000 | 20220622 | 6.75 | 360 |
| 2-Not an open-end line of credit | 131000 | 20220112 | 3.99 | 360 |
| 2-Not an open-end line of credit | 615000 | NA | 3.75 | 360 |
| 2-Not an open-end line of credit | 259000 | 20220128 | 3.125 | 360 |
| 2-Not an open-end line of credit | 490000 | NA | 4.49 | 360 |
| 2-Not an open-end line of credit | 336000 | 20211109 | 2.75 | 240 |
| 2-Not an open-end line of credit | 203700 | NA | 4.75 | 360 |
| 2-Not an open-end line of credit | 500400 | 20220913 | 6 | 360 |
| 2-Not an open-end line of credit | 484650 | NA | 4 | 360 |
| 2-Not an open-end line of credit | 287581.33 | NA | 3.95 | 360 |
| 2-Not an open-end line of credit | 118000 | 20220328 | 5.25 | 240 |
| 2-Not an open-end line of credit | 198000 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 380000 | 20220204 | 3.25 | 360 |
| 2-Not an open-end line of credit | 100000 | 20220112 | 3.375 | 180 |
| 2-Not an open-end line of credit | 261900 | 20220301 | 4.125 | 360 |
| 2-Not an open-end line of credit | 194750 | NA | 3.95 | 360 |
| 2-Not an open-end line of credit | 205520 | 20220216 | 3.99 | 360 |
| 2-Not an open-end line of credit | 213750 | NA | 6.125 | 360 |
| 2-Not an open-end line of credit | 1000000 | 20220324 | 4.25 | 360 |
| 2-Not an open-end line of credit | 680000 | 20220317 | 3.125 | 360 |
| 2-Not an open-end line of credit | 198850 | NA | 3.5 | 360 |
| 2-Not an open-end line of credit | 186300 | 20211130 | 2.99 | 360 |
| 2-Not an open-end line of credit | 646000 | NA | 3.5 | 360 |
| 2-Not an open-end line of credit | 680000 | 20220729 | 4.75 | 360 |
| 2-Not an open-end line of credit | 324000 | 20220412 | 4.75 | 360 |
| 2-Not an open-end line of credit | 382400 | 20220621 | 5 | 360 |
| 2-Not an open-end line of credit | 291000 | 20220114 | 3.625 | 360 |
| 2-Not an open-end line of credit | 150000 | 20220321 | 4.875 | 360 |
| 2-Not an open-end line of credit | 94805 | 20220404 | 4.99 | 180 |
| 2-Not an open-end line of credit | 405800 | 20220406 | 4.625 | 360 |
| 2-Not an open-end line of credit | 427200 | 20211202 | 3.25 | 360 |
| 2-Not an open-end line of credit | 169050 | 20220128 | 4.125 | 360 |
| 2-Not an open-end line of credit | 342400 | 20211228 | 3.375 | 360 |
| 2-Not an open-end line of credit | 325000 | NA | 3.25 | 180 |
| 2-Not an open-end line of credit | 313712 | 20220907 | 6 | 360 |
| 2-Not an open-end line of credit | 241000 | NA | 3.375 | 240 |
| 2-Not an open-end line of credit | 369189 | 20221019 | 6.625 | 360 |
| 2-Not an open-end line of credit | 223500 | 20220301 | 4.25 | 360 |
| 2-Not an open-end line of credit | 320800 | 20211129 | 4.25 | 360 |
| 2-Not an open-end line of credit | 297000 | 20211221 | 3.125 | 360 |
| 2-Not an open-end line of credit | 270400 | 20220505 | 5.75 | 360 |
| 2-Not an open-end line of credit | 181200 | 20211009 | 3.99 | 360 |
| 2-Not an open-end line of credit | 2440000 | 20220721 | 4.375 | 360 |
| 2-Not an open-end line of credit | 191250 | 20211230 | 3.99 | 360 |
| 2-Not an open-end line of credit | 406580 | 20211217 | 3.375 | 360 |
| 2-Not an open-end line of credit | 706000 | 20220520 | 4.75 | 360 |
| 2-Not an open-end line of credit | 576000 | 20220207 | 3.375 | 360 |
| 2-Not an open-end line of credit | 409500 | NA | 3.125 | 360 |


| NA | 1-Secured by a first lien | 305000 | 67 |
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| NA | 1-Secured by a first lien | 245000 | 61 |
| NA | 1-Secured by a first lien | 285000 | 75 |
| NA | 1-Secured by a first lien | 272500 | 70 |
| NA | 1-Secured by a first lien | 456000 | 70 |
| NA | 1-Secured by a first lien | 470000 | NA |
| NA | 1-Secured by a first lien | 181000 | 96.5 |
| NA | 1-Secured by a first lien | 85000 | 75 |
| NA | 1-Secured by a first lien | 358500 | 95 |
| NA | 1-Secured by a first lien | 454000 | NA |
| NA | 1-Secured by a first lien | 763500 | 68 |
| NA | 1-Secured by a first lien | 265000 | 80 |
| NA | 1-Secured by a first lien | 257000 | 51 |
| NA | 1-Secured by a first lien | 820000 | NA |
| NA | 1-Secured by a first lien | 400000 | 65 |
| NA | 1-Secured by a first lien | 612500 | NA |
| NA | 1-Secured by a first lien | 450000 | 75 |
| NA | 1-Secured by a first lien | 210000 | NA |
| NA | 1-Secured by a first lien | 625500 | 80 |
| NA | 1-Secured by a first lien | 538500 | NA |
| NA | 1-Secured by a first lien | 320000 | NA |
| NA | 1-Secured by a first lien | 242000 | 49 |
| NA | 1-Secured by a first lien | 220000 | NA |
| NA | 1-Secured by a first lien | 475000 | 80 |
| NA | 1-Secured by a first lien | 200000 | 50 |
| NA | 1-Secured by a first lien | 270000 | 97 |
| NA | 1-Secured by a first lien | 205000 | NA |
| NA | 1-Secured by a first lien | 256900 | 80 |
| NA | 1-Secured by a first lien | 225000 | NA |
| NA | 1-Secured by a first lien | 1485000 | 67.34 |
| NA | 1-Secured by a first lien | 850000 | 80 |
| NA | 1-Secured by a first lien | 205000 | NA |
| NA | 1-Secured by a first lien | 315000 | 60 |
| NA | 1-Secured by a first lien | 680000 | NA |
| NA | 1-Secured by a first lien | 850000 | 80 |
| NA | 1-Secured by a first lien | 405000 | 80 |
| NA | 1-Secured by a first lien | 478000 | 80 |
| NA | 1-Secured by a first lien | 380000 | 77 |
| NA | 1-Secured by a first lien | 827000 | 19 |
| NA | 1-Secured by a first lien | 270000 | 36 |
| NA | 1-Secured by a first lien | 510000 | 80 |
| NA | 1-Secured by a first lien | 535000 | 80 |
| NA | 1-Secured by a first lien | 329000 | 52 |
| NA | 1-Secured by a first lien | 430671 | 80 |
| NA | 1-Secured by a first lien | 425000 | NA |
| NA | 1-Secured by a first lien | 319500 | 96.5 |
| NA | 1-Secured by a first lien | 270000 | NA |
| NA | 1-Secured by a first lien | 376000 | 96.5 |
| NA | 1-Secured by a first lien | 325000 | 69 |
| NA | 1-Secured by a first lien | 401000 | 80 |
| NA | 1-Secured by a first lien | 330000 | 90 |
| NA | 1-Secured by a first lien | 338000 | 80 |
| NA | 1-Secured by a first lien | 226500 | 80 |
| NA | 1-Secured by a first lien | 3050000 | 80 |
| NA | 1-Secured by a first lien | 253500 | 76 |
| NA | 1-Secured by a first lien | 600000 | 68 |
| NA | 1-Secured by a first lien | 882500 | 80 |
| NA | 1-Secured by a first lien | 640000 | 90 |
| NA | 1-Secured by a first lien | 455000 | NA |


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| 8401.00 | 6-Purchased loan | 3 |
| :---: | :---: | :---: |
| 8318.00 | 1-Loan originated | 1 |
| 1303.00 | 1-Loan originated | 1 |
| 707.00 | 1-Loan originated | 1 |
| 3302.00 | 1-Loan originated | 1 |
| 703.00 | 6-Purchased loan | 1 |
| 1301.00 | 1-Loan originated | 1 |
| 402.01 | 1-Loan originated | 2 |
| 408.00 | 6-Purchased loan | 1 |
| 2214.00 | 1-Loan originated | 1 |
| 7207.00 | 1-Loan originated | 1 |
| 8381.00 | 6-Purchased loan | 1 |
| 802.02 | 1-Loan originated | 1 |
| 609.00 | 6-Purchased loan | 1 |
| 2205.00 | 6-Purchased loan | 2 |
| 1609.00 | 1-Loan originated | 1 |
| 608.00 | 1-Loan originated | 1 |
| 1710.00 | 1-Loan originated | 1 |
| 8447.00 | 6-Purchased loan | 1 |
| 601.00 | 1-Loan originated | 1 |
| 6502.00 | 1-Loan originated | 1 |
| 1906.02 | 1-Loan originated | 2 |
| 813.00 | 1-Loan originated | 1 |
| 818.00 | 1-Loan originated | 1 |
| 810.00 | 6-Purchased loan | 1 |
| 8326.00 | 6-Purchased loan | 1 |
| 3008.00 | 1-Loan originated | 4 |
| 8386.00 | 1-Loan originated | 3 |
| 204.00 | 1-Loan originated | 1 |
| 633.03 | 1-Loan originated | 1 |
| 1801.00 | 1-Loan originated | 1 |
| 8390.00 | 1-Loan originated | 1 |
| 701.03 | 1-Loan originated | 1 |
| 716.00 | 1-Loan originated | 1 |
| 305.00 | 1-Loan originated | 1 |
| 628.00 | 1-Loan originated | 1 |
| 321.00 | 6-Purchased loan | 1 |
| 2412.00 | 6-Purchased loan | 1 |
| 6203.00 | 1-Loan originated | 1 |
| 8331.00 | 1-Loan originated | 1 |
| 811.00 | 1-Loan originated | 1 |
| 1604.00 | 1-Loan originated | 1 |
| 804.00 | 1-Loan originated | 1 |
| 704.00 | 1-Loan originated | 1 |
| 1904.02 | 6-Purchased loan | 1 |
| 8421.00 | 1-Loan originated | 1 |
| 8330.00 | 1-Loan originated | 1 |
| 1104.00 | 6-Purchased loan | 2 |
| 307.01 | 1-Loan originated | 1 |
| 2827.00 | 1-Loan originated | 2 |
| 1606.01 | 1-Loan originated | 1 |
| 101.00 | 6-Purchased loan | 1 |
| 1503.00 | 1-Loan originated | 1 |
| 2205.00 | 1-Loan originated | 1 |
| 712.00 | 1-Loan originated | 1 |
| 1402.00 | 6-Purchased loan | 1 |
| 2435.00 | 6-Purchased loan | 1 |
| 2212.00 | 1-Loan originated | 1 |
| 401.00 | 6-Purchased loan | 1 |


| HS, or FSA) | 32-Cash Out |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchas |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purcha |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purc |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinanc |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31 |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purcha |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purch |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-H |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Pur |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31 |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-H |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improvem |
| 2-Federal Housing Administration insured (FHA) | me Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improvem |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purc |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purch |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purch |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |


| 2-Not an open-end line of credit | 303500 | NA | 3.875 | 240 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 110000 | 20220317 | 4.625 | 360 |
| 2-Not an open-end line of credit | 137750 | 20220917 | 6.375 | 360 |
| 2-Not an open-end line of credit | 409500 | 20220310 | 3.375 | 180 |
| 2-Not an open-end line of credit | 362000 | 20220106 | 2.75 | 180 |
| 2-Not an open-end line of credit | 2392268.52 | NA | 3.375 | 360 |
| 2-Not an open-end line of credit | 125052 | 20220203 | 3.75 | 360 |
| 2-Not an open-end line of credit | 497809 | 20220202 | 3.625 | 360 |
| 2-Not an open-end line of credit | 298814.98 | NA | 3.95 | 360 |
| 2-Not an open-end line of credit | 119000 | 20220308 | 3.49 | 180 |
| 2-Not an open-end line of credit | 380000 | 20211130 | 2.99 | 300 |
| 2-Not an open-end line of credit | 232750 | NA | 3.75 | 360 |
| 2-Not an open-end line of credit | 164000 | 20220311 | 4.125 | 360 |
| 2-Not an open-end line of credit | 144000 | NA | 3.75 | 360 |
| 2-Not an open-end line of credit | 555000 | NA | 4.99 | 360 |
| 2-Not an open-end line of credit | 401000 | 20220127 | 2.875 | 180 |
| 2-Not an open-end line of credit | 127500 | 20220427 | 4.99 | 360 |
| 2-Not an open-end line of credit | 90000 | 20220502 | 5.25 | 360 |
| 2-Not an open-end line of credit | 223100 | NA | 3.375 | 360 |
| 2-Not an open-end line of credit | 620000 | 20220317 | 5.49 | 360 |
| 2-Not an open-end line of credit | 138000 | 20220305 | 3.75 | 180 |
| 2-Not an open-end line of credit | 248000 | 20220322 | 4.875 | 360 |
| 2-Not an open-end line of credit | 2030000 | 20211108 | 2.500 | 360 |
| 2-Not an open-end line of credit | 380700 | 20220719 | 5.125 | 360 |
| 2-Not an open-end line of credit | 335000 | NA | 5.375 | 360 |
| 2-Not an open-end line of credit | 260000 | NA | 3.375 | 360 |
| 2-Not an open-end line of credit | 176000 | 20220318 | 5.75 | 360 |
| 2-Not an open-end line of credit | 441847 | 20211209 | 3.125 | 360 |
| 2-Not an open-end line of credit | 75000 | 20220728 | 6.125 | 360 |
| 2-Not an open-end line of credit | 236250 | 20211214 | 2.875 | 360 |
| 2-Not an open-end line of credit | 140000 | 20220526 | 6 | 360 |
| 2-Not an open-end line of credit | 342400 | 20220609 | 5.875 | 360 |
| 2-Not an open-end line of credit | 196500 | 20220407 | 5.625 | 360 |
| 2-Not an open-end line of credit | 1348000 | 20220405 | 3.99 | 360 |
| 2-Not an open-end line of credit | 151500 | 20211104 | 2.49 | 120 |
| 2-Not an open-end line of credit | 446250 | 20220418 | 3.125 | 360 |
| 2-Not an open-end line of credit | 338000 | NA | 2.625 | 360 |
| 2-Not an open-end line of credit | 1168000 | NA | 3.75 | 360 |
| 2-Not an open-end line of credit | 267602 | 20220927 | 6.25 | 360 |
| 2-Not an open-end line of credit | 298800 | 20211122 | 2.875 | 360 |
| 2-Not an open-end line of credit | 244000 | 20220511 | 4.5 | 180 |
| 2-Not an open-end line of credit | 102700 | 20211103 | 2.25 | 120 |
| 2-Not an open-end line of credit | 1382100 | 20220418 | 3.875 | 360 |
| 2-Not an open-end line of credit | 1545500 | 20210925 | 2.25 | 360 |
| 2-Not an open-end line of credit | 241674.93 | NA | 2.5 | 180 |
| 2-Not an open-end line of credit | 623200 | 20220211 | 3.625 | 360 |
| 2-Not an open-end line of credit | 345000 | 20220316 | 4.49 | 360 |
| 2-Not an open-end line of credit | 416000 | NA | 4.49 | 360 |
| 2-Not an open-end line of credit | 61200 | 20220118 | 3.5 | 360 |
| 2-Not an open-end line of credit | 483312 | 20220628 | 4.75 | 360 |
| 2-Not an open-end line of credit | 203700 | 20220520 | 5.625 | 360 |
| 2-Not an open-end line of credit | 168000 | NA | 6.125 | 360 |
| 2-Not an open-end line of credit | 126100 | 20220523 | 5.5 | 360 |
| 2-Not an open-end line of credit | 479200 | 20220407 | 4.49 | 360 |
| 2-Not an open-end line of credit | 1466250 | 20220404 | 4 | 360 |
| 2-Not an open-end line of credit | 306000 | NA | 4.125 | 360 |
| 2-Not an open-end line of credit | 332500 | NA | 5.25 | 360 |
| 2-Not an open-end line of credit | 245000 | 20211203 | 2.625 | 180 |
| 2-Not an open-end line of credit | 355000 | NA | 3.125 | 360 |


| NA | 1-Secured by a first lien | 645000 | NA |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 175000 | 63 |
| NA | 1-Secured by a first lien | 145365 | 95 |
| NA | 1-Secured by a first lien | 455000 | 90 |
| NA | 1-Secured by a first lien | 500000 | 73 |
| NA | 1-Secured by a first lien | 3000000 | NA |
| NA | 1-Secured by a first lien | 475000 | 27 |
| NA | 1-Secured by a first lien | 515000 | 95 |
| NA | 1-Secured by a first lien | 315000 | NA |
| NA | 1-Secured by a first lien | 390000 | 31 |
| NA | 1-Secured by a first lien | 500000 | 76 |
| NA | 1-Secured by a first lien | 245000 | NA |
| NA | 1-Secured by a first lien | 310000 | 53 |
| NA | 1-Secured by a first lien | 160000 | NA |
| NA | 1-Secured by a first lien | 740000 | NA |
| NA | 1-Secured by a first lien | 565000 | 71 |
| NA | 1-Secured by a first lien | 170000 | 75 |
| NA | 1-Secured by a first lien | 100000 | 90 |
| NA | 1-Secured by a first lien | 230000 | NA |
| NA | 1-Secured by a first lien | 790000 | 79 |
| NA | 1-Secured by a first lien | 246000 | 57 |
| NA | 1-Secured by a first lien | 310000 | 80 |
| NA | 1-Secured by a first lien | 2900000 | 70.000 |
| NA | 1-Secured by a first lien | 470000 | 81 |
| NA | 1-Secured by a first lien | 455000 | NA |
| NA | 1-Secured by a first lien | 435000 | NA |
| NA | 1-Secured by a first lien | 312000 | 57 |
| NA | 1-Secured by a first lien | 450000 | 96.5 |
| NA | 1-Secured by a first lien | 700000 | 11 |
| NA | 1-Secured by a first lien | 315000 | 75 |
| NA | 1-Secured by a first lien | 175000 | 80 |
| NA | 1-Secured by a first lien | 428000 | 80 |
| NA | 1-Secured by a first lien | 262000 | 75 |
| NA | 1-Secured by a first lien | 1685000 | 80 |
| NA | 1-Secured by a first lien | 284000 | 54 |
| NA | 1-Secured by a first lien | 595000 | 75 |
| NA | 1-Secured by a first lien | 376000 | NA |
| NA | 1-Secured by a first lien | 1460000 | NA |
| NA | 1-Secured by a first lien | 278000 | 94.6 |
| NA | 1-Secured by a first lien | 485000 | 62 |
| NA | 1-Secured by a first lien | 305000 | 80 |
| NA | 1-Secured by a first lien | 440000 | 24 |
| NA | 1-Secured by a first lien | 2475000 | 55.84 |
| NA | 1-Secured by a first lien | 2600000 | 59.44 |
| NA | 1-Secured by a first lien | 380000 | NA |
| NA | 1-Secured by a first lien | 779000 | 80 |
| NA | 1-Secured by a first lien | 600000 | 58 |
| NA | 1-Secured by a first lien | 520000 | NA |
| NA | 1-Secured by a first lien | 190000 | 33 |
| NA | 1-Secured by a first lien | 500000 | 95 |
| NA | 1-Secured by a first lien | 210000 | 97 |
| NA | 1-Secured by a first lien | 210000 | NA |
| NA | 1-Secured by a first lien | 130000 | 97 |
| NA | 1-Secured by a first lien | 599000 | 80 |
| NA | 1-Secured by a first lien | 1725000 | 85 |
| NA | 1-Secured by a first lien | 340000 | NA |
| NA | 1-Secured by a first lien | 350000 | NA |
| NA | 1-Secured by a first lien | 375000 | 76 |
| NA | 1-Secured by a first lien | 415000 | NA |


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| 8-No co-applicant |
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| 8316.00 | 1-Loan originated | 1 |
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| 8330.00 | 3-Application denied | 1 |
| 1608.00 | 3-Application denied | 2 |
| 815.00 | 1-Loan originated | 1 |
| 706.00 | 6-Purchased loan | 1 |
| 818.00 | 1-Loan originated | 1 |
| 2416.00 | 6-Purchased loan | 1 |
| 2225.00 | 1-Loan originated | 1 |
| 307.06 | 1-Loan originated | 1 |
| 3204.00 | 6-Purchased loan | 1 |
| 2215.00 | 1-Loan originated | 1 |
| 801.00 | 6-Purchased loan | 1 |
| 207.01 | 1-Loan originated | 1 |
| 1102.00 | 6-Purchased loan | 1 |
| 8312.00 | 1-Loan originated | 2 |
| 8410.00 | 1-Loan originated | 1 |
| 704.00 | 1-Loan originated | 1 |
| 409.00 | 1-Loan originated | 1 |
| 8437.00 | 1-Loan originated | 1 |
| 3201.01 | 3-Application denied | 1 |
| 818.00 | 1-Loan originated | 1 |
| 814.03 | 1-Loan originated | 1 |
| 816.00 | 1-Loan originated | 1 |
| 8391.00 | 1-Loan originated | 1 |
| 815.00 | 1-Loan originated | 1 |
| 7708.00 | 1-Loan originated | 1 |
| 2308.00 | 1-Loan originated | 1 |
| 106.00 | 1-Loan originated | 1 |
| 8306.00 | 1-Loan originated | 3 |
| 718.00 | 6-Purchased loan | 1 |
| 1701.00 | 1-Loan originated | 1 |
| 4108.00 | 6-Purchased loan | 1 |
| 7302.02 | 1-Loan originated | 1 |
| 5001.00 | 1-Loan originated | 1 |
| 4407.00 | 1-Loan originated | 1 |
| 3814.00 | 6-Purchased loan | 1 |
| 203.02 | 1-Loan originated | 1 |
| 8325.00 | 1-Loan originated | 1 |
| 3806.00 | 1-Loan originated | 1 |
| 2413.00 | 1-Loan originated | 1 |
| 202.00 | 1-Loan originated | 1 |
| 2505.00 | 1-Loan originated | 1 |
| 2004.02 | 6-Purchased loan | 1 |
| 633.01 | 6-Purchased loan | 1 |
| 8430.00 | 1-Loan originated | 1 |
| 3108.00 | 1-Loan originated | 3 |
| 1612.00 | 6-Purchased loan | 1 |
| 8439.00 | 6-Purchased loan | 1 |
| 1007.00 | 1-Loan originated | 1 |
| 3206.00 | 1-Loan originated | 1 |
| 804.00 | 1-Loan originated | 1 |
| 8424.00 | 1-Loan originated | 1 |
| 619.02 | 1-Loan originated | 1 |
| 1611.00 | 1-Loan originated | 1 |
| 7003.01 | 1-Loan originated | 1 |
| 608.00 | 6-Purchased loan | 1 |
| 7201.00 | 1-Loan originated | 1 |
| 5610.00 | 1-Loan originated | 1 |
| 1605.02 | 1-Loan originated | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
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| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |


| 2-Not an open-end line of credit | 89100 | 20221102 | 8 | 360 |
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| 2-Not an open-end line of credit | 686000 | 20220718 | NA | 360 |
| 2-Not an open-end line of credit | 296300 | 20211023 | NA | 360 |
| 2-Not an open-end line of credit | 537000 | 20220131 | 3.25 | 360 |
| 2-Not an open-end line of credit | 246600 | NA | 3.75 | 360 |
| 2-Not an open-end line of credit | 2760000 | 20220425 | 4.5 | 360 |
| 2-Not an open-end line of credit | 179450 | NA | 5.825 | 360 |
| 2-Not an open-end line of credit | 629000 | 20220503 | 4.875 | 360 |
| 2-Not an open-end line of credit | 176000 | 20220204 | 3.625 | 360 |
| 2-Not an open-end line of credit | 220500 | NA | 4.25 | 360 |
| 2-Not an open-end line of credit | 224900 | 20211209 | 2.99 | 180 |
| 2-Not an open-end line of credit | 238000 | NA | 4.25 | 360 |
| 2-Not an open-end line of credit | 359200 | 20220420 | 5.375 | 360 |
| 2-Not an open-end line of credit | 228000 | NA | 5.275 | 360 |
| 2-Not an open-end line of credit | 376000 | 20220510 | 4.875 | 360 |
| 2-Not an open-end line of credit | 226000 | 20220402 | 4.99 | 360 |
| 2-Not an open-end line of credit | 668000 | 20220209 | 3.625 | 360 |
| 2-Not an open-end line of credit | 586000 | 20211102 | 2 | 360 |
| 2-Not an open-end line of credit | 189000 | 20220217 | 4.49 | 360 |
| 2-Not an open-end line of credit | 1625000 | 20220121 | NA | 360 |
| 2-Not an open-end line of credit | 160350 | 20220126 | 3.25 | 360 |
| 2-Not an open-end line of credit | 521250 | 20220408 | 3.25 | 180 |
| 2-Not an open-end line of credit | 250200 | 20211028 | 2.75 | 360 |
| 2-Not an open-end line of credit | 380000 | 20220502 | 5.25 | 360 |
| 2-Not an open-end line of credit | 336000 | 20220311 | 4.125 | 360 |
| 2-Not an open-end line of credit | 75600 | 20220709 | 5.875 | 360 |
| 2-Not an open-end line of credit | 576000 | 20220317 | 4.125 | 360 |
| 2-Not an open-end line of credit | 109500 | 20220517 | 4.99 | 180 |
| 2-Not an open-end line of credit | 420000 | 20220405 | 4.25 | 180 |
| 2-Not an open-end line of credit | 844000 | NA | 4 | 360 |
| 2-Not an open-end line of credit | 200000 | 20220516 | 5.875 | 360 |
| 2-Not an open-end line of credit | 307800 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 116000 | 20220503 | 5.375 | 360 |
| 2-Not an open-end line of credit | 192000 | 20220113 | 4.125 | 360 |
| 2-Not an open-end line of credit | 245471 | 20221026 | 6.25 | 360 |
| 2-Not an open-end line of credit | 130000 | NA | 5.25 | 360 |
| 2-Not an open-end line of credit | 218000 | 20220106 | 3.375 | 360 |
| 2-Not an open-end line of credit | 647201 | 20221021 | 5 | 360 |
| 2-Not an open-end line of credit | 293250 | 20220218 | 4.49 | 360 |
| 2-Not an open-end line of credit | 513000 | 20220422 | 5.25 | 360 |
| 2-Not an open-end line of credit | 318622 | 20220307 | 4.49 | 360 |
| 2-Not an open-end line of credit | 294500 | 20220504 | 5.99 | 360 |
| 2-Not an open-end line of credit | 333000 | NA | 3.375 | 360 |
| 2-Not an open-end line of credit | 237500 | NA | 3.625 | 360 |
| 2-Not an open-end line of credit | 271600 | 20211216 | 3.99 | 360 |
| 2-Not an open-end line of credit | 187997 | 20211217 | 3.375 | 360 |
| 2-Not an open-end line of credit | 647200 | NA | 3 | 360 |
| 2-Not an open-end line of credit | 611000 | NA | 2.875 | 360 |
| 2-Not an open-end line of credit | 332000 | 20220824 | 5.75 | 360 |
| 2-Not an open-end line of credit | 100675 | 20211105 | 3.25 | 360 |
| 2-Not an open-end line of credit | 390915 | 20220311 | 4.125 | 360 |
| 2-Not an open-end line of credit | 132700 | 20220131 | 3.25 | 180 |
| 2-Not an open-end line of credit | 273750 | 20211130 | 2.625 | 360 |
| 2-Not an open-end line of credit | 366000 | 20220502 | 5 | 360 |
| 2-Not an open-end line of credit | 232000 | 20220223 | 5.375 | 360 |
| 2-Not an open-end line of credit | 147750 | NA | 5.375 | 360 |
| 2-Not an open-end line of credit | 456000 | 20220705 | 5.625 | 360 |
| 2-Not an open-end line of credit | 342000 | 20220214 | 3.625 | 360 |
| 2-Not an open-end line of credit | 204378 | 20211216 | 2.5 | 180 |


| NA | 1-Secured by a first lien | 99000 | 90 |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 1370000 | 50.07 |
| NA | 1-Secured by a first lien | 490000 | 61 |
| NA | 1-Secured by a first lien | 1000000 | 54 |
| NA | 1-Secured by a first lien | 274000 | NA |
| NA | 1-Secured by a first lien | 3450000 | 80 |
| NA | 1-Secured by a first lien | 185000 | NA |
| NA | 1-Secured by a first lien | 785000 | 81 |
| NA | 1-Secured by a first lien | 220000 | 80 |
| NA | 1-Secured by a first lien | 294000 | NA |
| NA | 1-Secured by a first lien | 545000 | 42 |
| NA | 1-Secured by a first lien | 340000 | NA |
| NA | 1-Secured by a first lien | 449000 | 80 |
| NA | 1-Secured by a first lien | 240000 | NA |
| NA | 1-Secured by a first lien | 470000 | 80 |
| NA | 1-Secured by a first lien | 355000 | 66 |
| NA | 1-Secured by a first lien | 835000 | 80 |
| NA | 1-Secured by a first lien | 2200000 | 34.43 |
| NA | 1-Secured by a first lien | 297000 | 80 |
| NA | 1-Secured by a first lien | 4100000 | 45.76 |
| NA | 1-Secured by a first lien | 260000 | 62 |
| NA | 1-Secured by a first lien | 695000 | 75 |
| NA | 1-Secured by a first lien | 320000 | 79 |
| NA | 1-Secured by a first lien | 400000 | 95 |
| NA | 1-Secured by a first lien | 420000 | 80 |
| NA | 1-Secured by a first lien | 84000 | 90 |
| NA | 1-Secured by a first lien | 640000 | 90 |
| NA | 1-Secured by a first lien | 150000 | 73 |
| NA | 1-Secured by a first lien | 560000 | 75 |
| NA | 1-Secured by a first lien | 1055000 | NA |
| NA | 1-Secured by a first lien | 500000 | 40 |
| NA | 1-Secured by a first lien | 342000 | NA |
| NA | 1-Secured by a first lien | 145000 | 80 |
| NA | 1-Secured by a first lien | 240000 | 80 |
| NA | 1-Secured by a first lien | 250000 | 96.5 |
| NA | 1-Secured by a first lien | 235000 | NA |
| NA | 1-Secured by a first lien | 265000 | 83 |
| NA | 1-Secured by a first lien | 899900 | 71.91 |
| NA | 1-Secured by a first lien | 345000 | 85 |
| NA | 1-Secured by a first lien | 575000 | 90 |
| NA | 1-Secured by a first lien | 470000 | 68 |
| NA | 1-Secured by a first lien | 310000 | 95 |
| NA | 1-Secured by a first lien | 353000 | NA |
| NA | 1-Secured by a first lien | 250000 | NA |
| NA | 1-Secured by a first lien | 280000 | 97 |
| NA | 1-Secured by a first lien | 600000 | 32 |
| NA | 1-Secured by a first lien | 699900 | NA |
| NA | 1-Secured by a first lien | 1088000 | NA |
| NA | 1-Secured by a first lien | 415000 | 80 |
| NA | 1-Secured by a first lien | 245000 | 42 |
| NA | 1-Secured by a first lien | 459900 | 85 |
| NA | 1-Secured by a first lien | 265000 | 51 |
| NA | 1-Secured by a first lien | 365000 | 75 |
| NA | 1-Secured by a first lien | 595000 | 62 |
| NA | 1-Secured by a first lien | 290000 | 80 |
| NA | 1-Secured by a first lien | 197000 | NA |
| NA | 1-Secured by a first lien | 570000 | 80 |
| NA | 1-Secured by a first lien | 427500 | 80 |
| NA | 1-Secured by a first lien | 300000 | 69 |


|  | 10-Not applicable |
| :---: | :---: |
|  | 3-Credit history |
|  | 4-Collateral |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
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|  | 3-Credit history |
|  | 10-Not applicable |
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| 2-Employment history | 1-Debt-to-income ratio |
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| 5-White |  |
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|  | 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
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| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 21-Asian Indian |  |
| 21-Asian Indian |  |
| 21-Asian Indian |  |
| 21-Asian Indian |  |
| 21-Asian Indian |  |
| 22-Chinese |  |
| 22-Chinese |  |
| 27-Other Asian |  |
| 27-Other Asian |  |
| 2-Asian |  |
| 2-Asian |  |
| 2-Asian |  |
| 2-Asian |  |
| 3-Black or African American |  |
| 3-Black or African American |  |
| 3-Black or African American |  |
| 3-Black or African American |  |
| 3-Black or African American |  |
| 3-Black or African American |  |
| 3-Black or African American |  |
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| 8-No co-applicant |
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| 8-No co-applicant |
| 2-Asian |
| 2-Asian |
| 8-No co-applicant |
| 8-No co-applicant |
| 3-Black or African American |
| 3-Black or African American |
| 3-Black or African American |
| 3-Black or African American |
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| 5-White |
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| 1-Male |
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|  | 2-Not Hispanic or Latino |
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|  | 2-Not Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 14-Other Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 14-Other Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 11-Mexican |
|  | 2-Not Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
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|  | 1-Hispanic or Latino |
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|  | 2-Not Hispanic or Latino |
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|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 11-Mexican |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 11-Mexican |
|  | 2-Not Hispanic or Latino |





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| 14-Other Hispanic or Latino | - |
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| 2209.02 | 1-Loan originated | 1 |
| :---: | :---: | :---: |
| 402.02 | 1-Loan originated | 1 |
| 5609.00 | 6-Purchased loan | 1 |
| 8423.00 | 6-Purchased loan | 1 |
| 1701.00 | 6-Purchased loan | 1 |
| 7203.00 | 1-Loan originated | 1 |
| 812.02 | 1-Loan originated | 1 |
| 107.01 | 1-Loan originated | 1 |
| 2424.00 | 6-Purchased loan | 2 |
| 404.02 | 1-Loan originated | 1 |
| 2306.00 | 1-Loan originated | 2 |
| 1403.02 | 1-Loan originated | 1 |
| 8421.00 | 1-Loan originated | 1 |
| 2801.00 | 1-Loan originated | 1 |
| 8434.00 | 1-Loan originated | 1 |
| 3301.02 | 6-Purchased loan | 1 |
| 2210.00 | 6-Purchased loan | 1 |
| 3206.00 | 1-Loan originated | 1 |
| 8429.00 | 1-Loan originated | 1 |
| 5603.00 | 1-Loan originated | 1 |
| 6611.00 | 6-Purchased loan | 1 |
| 8422.00 | 6-Purchased loan | 1 |
| 8326.00 | 1-Loan originated | 1 |
| 6007.00 | 1-Loan originated | 1 |
| 712.00 | 1-Loan originated | 1 |
| 8419.00 | 1-Loan originated | 1 |
| 6608.00 | 3-Application denied | 1 |
| 5607.00 | 6-Purchased loan | 1 |
| 2212.00 | 6-Purchased loan | 3 |
| 8316.00 | 1-Loan originated | 1 |
| 2206.02 | 1-Loan originated | 2 |
| 6404.00 | 1-Loan originated | 1 |
| 308.00 | 1-Loan originated | 3 |
| 2413.00 | 6-Purchased loan | 1 |
| 8424.00 | 1-Loan originated | 1 |
| 619.01 | 6-Purchased loan | 1 |
| 8396.00 | 1-Loan originated | 2 |
| 4409.00 | 1-Loan originated | 2 |
| 312.00 | 6-Purchased loan | 1 |
| 8374.00 | 3-Application denied | 1 |
| 208.01 | 1-Loan originated | 3 |
| 609.00 | 1-Loan originated | 1 |
| 814.02 | 1-Loan originated | 1 |
| 818.00 | 1-Loan originated | 1 |
| 7504.00 | 3-Application denied | 1 |
| 8361.00 | 3-Application denied | 2 |
| 6914.00 | 3-Application denied | 1 |
| 3902.00 | 6-Purchased loan | 1 |
| 314.00 | 1-Loan originated | 1 |
| 4503.00 | 1-Loan originated | 1 |
| 5302.00 | 1-Loan originated | 1 |
| 4906.00 | 1-Loan originated | 1 |
| 8447.00 | 1-Loan originated | 2 |
| 2912.00 | 1-Loan originated | 1 |
| 8343.00 | 1-Loan originated | 1 |
| 5102.00 | 1-Loan originated | 1 |
| 5305.03 | 6-Purchased loan | 1 |
| 4303.00 | 6-Purchased loan | 1 |
| 8446.00 | 1-Loan originated | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 2-Federal Housing Administration insured (FHA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |


| 2-Not an open-end line of credit | 380000 | 20220128 | 3.625 | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 376200 | 20220211 | 3.75 | 360 |
| 2-Not an open-end line of credit | 293910 | NA | 6.375 | 360 |
| 2-Not an open-end line of credit | 486000 | NA | 4.75 | 360 |
| 2-Not an open-end line of credit | 140000 | NA | 6.75 | 360 |
| 2-Not an open-end line of credit | 316000 | 20220505 | 5.49 | 360 |
| 2-Not an open-end line of credit | 452000 | 20220604 | 6.375 | 360 |
| 2-Not an open-end line of credit | 218500 | 20220217 | 4.25 | 360 |
| 2-Not an open-end line of credit | 255579.2 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 360000 | 20220614 | 6.625 | 360 |
| 2-Not an open-end line of credit | 285000 | 20210811 | 2.75 | 180 |
| 2-Not an open-end line of credit | 200000 | 20220412 | 5.5 | 360 |
| 2-Not an open-end line of credit | 479750 | 20211122 | 2.875 | 360 |
| 2-Not an open-end line of credit | 356000 | 20211220 | 2.49 | 180 |
| 2-Not an open-end line of credit | 138000 | 20220511 | 4.99 | 180 |
| 2-Not an open-end line of credit | 252000 | NA | 3.575 | 360 |
| 2-Not an open-end line of credit | 548000 | NA | 3.6 | 360 |
| 2-Not an open-end line of credit | 191601 | 20211204 | 2.5 | 180 |
| 2-Not an open-end line of credit | 338400 | 20211207 | 3.49 | 360 |
| 2-Not an open-end line of credit | 214000 | 20220219 | 3.75 | 240 |
| 2-Not an open-end line of credit | 258400 | NA | 5.125 | 360 |
| 2-Not an open-end line of credit | 157500 | NA | 3.75 | 180 |
| 2-Not an open-end line of credit | 704000 | 20220926 | 6.125 | 360 |
| 2-Not an open-end line of credit | 489930 | 20220302 | 3.75 | 360 |
| 2-Not an open-end line of credit | 1068750 | 20211029 | 4.5 | 240 |
| 2-Not an open-end line of credit | 176000 | 20220225 | 3.5 | 360 |
| 2-Not an open-end line of credit | 261800 | 20211223 | NA | 360 |
| 2-Not an open-end line of credit | 190000 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 989200 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 200000 | 20220909 | 5.875 | 360 |
| 2-Not an open-end line of credit | 107000 | 20211116 | 2.875 | 180 |
| 2-Not an open-end line of credit | 319113 | 20220706 | 5.125 | 360 |
| 2-Not an open-end line of credit | 1156000 | 20220210 | 3.125 | 360 |
| 2-Not an open-end line of credit | 532500 | NA | 5 | 360 |
| 2-Not an open-end line of credit | 381600 | 20220316 | 5.49 | 360 |
| 2-Not an open-end line of credit | 229126.36 | NA | 4.75 | 360 |
| 2-Not an open-end line of credit | 230700 | 20210820 | 3.375 | 300 |
| 2-Not an open-end line of credit | 373117 | 20220612 | 5.5 | 360 |
| 2-Not an open-end line of credit | 315000 | NA | 5.375 | 360 |
| 2-Not an open-end line of credit | 216014 | 20220730 | NA | 360 |
| 2-Not an open-end line of credit | 348750 | 20220722 | 5 | 360 |
| 2-Not an open-end line of credit | 84375 | 20220220 | 4.875 | 360 |
| 2-Not an open-end line of credit | 648000 | 20220225 | 3.25 | 360 |
| 2-Not an open-end line of credit | 426000 | 20211215 | 2.25 | 180 |
| 2-Not an open-end line of credit | 309294 | 20220303 | NA | 360 |
| 2-Not an open-end line of credit | 437500 | 20220215 | NA | 360 |
| 2-Not an open-end line of credit | 105750 | 20211202 | NA | 360 |
| 2-Not an open-end line of credit | 204250 | NA | 7.125 | 360 |
| 2-Not an open-end line of credit | 72120 | 20220218 | 2.875 | 180 |
| 2-Not an open-end line of credit | 105820 | 20220315 | 3.5 | 360 |
| 2-Not an open-end line of credit | 121000 | 20220427 | 5.25 | 360 |
| 2-Not an open-end line of credit | 186557 | 20220613 | 4.625 | 360 |
| 2-Not an open-end line of credit | 337750 | 20220804 | 6.25 | 360 |
| 2-Not an open-end line of credit | 160162 | 20220504 | 5.625 | 360 |
| 2-Not an open-end line of credit | 247000 | 20220324 | 4.99 | 360 |
| 2-Not an open-end line of credit | 124200 | 20211230 | 3.99 | 360 |
| 2-Not an open-end line of credit | 218250 | NA | 4.375 | 360 |
| 2-Not an open-end line of credit | 112500 | NA | 4.875 | 360 |
| 2-Not an open-end line of credit | 213750 | 20220127 | 3.875 | 360 |


| NA | 1-Secured by a first lien | 400000 | 95 |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 396000 | 95 |
| NA | 1-Secured by a first lien | 303000 | NA |
| NA | 1-Secured by a first lien | 540000 | NA |
| NA | 1-Secured by a first lien | 265000 | NA |
| NA | 1-Secured by a first lien | 395000 | 80 |
| NA | 1-Secured by a first lien | 565000 | 80 |
| NA | 1-Secured by a first lien | 230000 | 95 |
| NA | 1-Secured by a first lien | 850000 | NA |
| NA | 1-Secured by a first lien | 450000 | 80 |
| NA | 1-Secured by a first lien | 380000 | 75 |
| NA | 1-Secured by a first lien | 240000 | 84 |
| NA | 1-Secured by a first lien | 505000 | 95 |
| NA | 1-Secured by a first lien | 550000 | 65 |
| NA | 1-Secured by a first lien | 235000 | 59 |
| NA | 1-Secured by a first lien | 360000 | NA |
| NA | 1-Secured by a first lien | 685000 | NA |
| NA | 1-Secured by a first lien | 325000 | 59 |
| NA | 1-Secured by a first lien | 500000 | 68 |
| NA | 1-Secured by a first lien | 305000 | 71 |
| NA | 1-Secured by a first lien | 272000 | NA |
| NA | 1-Secured by a first lien | 210000 | NA |
| NA | 1-Secured by a first lien | 880000 | 80 |
| NA | 1-Secured by a first lien | 699900 | 70 |
| NA | 1-Secured by a first lien | 1425000 | 75 |
| NA | 1-Secured by a first lien | 220000 | 80 |
| NA | 1-Secured by a first lien | 270000 | 97 |
| NA | 1-Secured by a first lien | 200000 | NA |
| NA | 1-Secured by a first lien | 1299000 | NA |
| NA | 1-Secured by a first lien | 334900 | 60 |
| NA | 1-Secured by a first lien | 740000 | 25 |
| NA | 1-Secured by a first lien | 325000 | 96.5 |
| NA | 1-Secured by a first lien | 1445000 | 80 |
| NA | 1-Secured by a first lien | 710000 | NA |
| NA | 1-Secured by a first lien | 477000 | 80 |
| NA | 1-Secured by a first lien | 269900 | NA |
| NA | 1-Secured by a first lien | 341000 | 68 |
| NA | 1-Secured by a first lien | 380000 | 96.5 |
| NA | 1-Secured by a first lien | 340000 | NA |
| NA | 1-Secured by a first lien | 175000 | 121.31 |
| NA | 1-Secured by a first lien | 465000 | 75 |
| NA | 1-Secured by a first lien | 112500 | 75 |
| NA | 1-Secured by a first lien | 810000 | 80 |
| NA | 1-Secured by a first lien | 532500 | 80 |
| NA | 1-Secured by a first lien | 315000 | 96.5 |
| NA | 1-Secured by a first lien | 625000 | 70 |
| NA | 1-Secured by a first lien | 141000 | 75 |
| NA | 1-Secured by a first lien | 215000 | NA |
| NA | 1-Secured by a first lien | 190000 | 38 |
| NA | 1-Secured by a first lien | 169000 | 61.54 |
| NA | 1-Secured by a first lien | 139000 | 88 |
| NA | 1-Secured by a first lien | 190000 | 96.5 |
| NA | 1-Secured by a first lien | 350000 | 96.5 |
| NA | 1-Secured by a first lien | 256000 | 63 |
| NA | 1-Secured by a first lien | 260000 | 95 |
| NA | 1-Secured by a first lien | 211000 | 59 |
| NA | 1-Secured by a first lien | 225000 | NA |
| NA | 1-Secured by a first lien | 150000 | NA |
| NA | 1-Secured by a first lien | 225000 | 95 |


|  | 10-Not applicable |
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|  | 3-Credit history |
|  | 10-Not applicable |
|  | 10-Not applicable |
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|  | 4-Collateral |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 2-Employment history |
|  | 1-Debt-to-income ratio |
|  | 3-Credit history |
|  | 10-Not applicable |
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| 5-No co-applicant |  |
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| 1-Hispanic or Latino |
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| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
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| 1-Hispanic or Latino |
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| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 14-Other Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 1-Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 11-Mexican |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 14-Other Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
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| 2-Not Hispanic or Latino or Latino |




| 1-Hispanic or Latino |
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| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 11-Mexican |
| 14-Other Hispanic or Latino |
| 14-Other Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 1-Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 11-Mexican |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 5-No co-applicant |
| 5-No co-applicant |
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| 4301.01 | 1-Loan originated | 1 |
| :---: | :---: | :---: |
| 3201.02 | 1-Loan originated | 1 |
| 2506.00 | 1-Loan originated | 2 |
| 3301.02 | 1-Loan originated | 1 |
| 7202.00 | 1-Loan originated | 1 |
| 4909.02 | 1-Loan originated | 1 |
| 4804.00 | 1-Loan originated | 1 |
| 3007.00 | 3-Application denied | 1 |
| 101.00 | 3-Application denied | 1 |
| 6605.00 | 3-Application denied | 1 |
| 6605.00 | 3-Application denied | 1 |
| 2306.00 | 3-Application denied | 1 |
| 8317.00 | 3-Application denied | 1 |
| 1102.00 | 3-Application denied | 1 |
| 402.02 | 3-Application denied | 1 |
| 5609.00 | 1-Loan originated | 1 |
| 1004.00 | 6-Purchased loan | 1 |
| 2405.00 | 6-Purchased loan | 1 |
| 101.00 | 1-Loan originated | 1 |
| 622.00 | 6-Purchased loan | 1 |
| 2001.00 | 1-Loan originated | 1 |
| 6605.00 | 1-Loan originated | 1 |
| 3206.00 | 1-Loan originated | 1 |
| 8323.00 | 1-Loan originated | 1 |
| 1006.00 | 1-Loan originated | 1 |
| 715.00 | 1-Loan originated | 1 |
| 313.00 | 1-Loan originated | 1 |
| 8422.00 | 6-Purchased loan | 1 |
| 7503.00 | 1-Loan originated | 1 |
| 625.00 | 1-Loan originated | 1 |
| 8333.00 | 1-Loan originated | 1 |
| 6119.00 | 1-Loan originated | 1 |
| 501.00 | 6-Purchased loan | 1 |
| 3907.00 | 1-Loan originated | 1 |
| 402.02 | 6-Purchased loan | 1 |
| 702.00 | 1-Loan originated | 1 |
| 206.01 | 1-Loan originated | 1 |
| 102.01 | 1-Loan originated | 1 |
| 3206.00 | 1-Loan originated | 1 |
| 1904.02 | 1-Loan originated | 1 |
| 408.00 | 1-Loan originated | 1 |
| 507.00 | 1-Loan originated | 1 |
| 632.00 | 6-Purchased loan | 1 |
| 7004.01 | 1-Loan originated | 1 |
| 8306.00 | 1-Loan originated | 1 |
| 207.02 | 1-Loan originated | 1 |
| 3301.02 | 1-Loan originated | 1 |
| 8435.00 | 1-Loan originated | 1 |
| 1407.02 | 1-Loan originated | 1 |
| 1505.01 | 6-Purchased loan | 1 |
| 105.02 | 1-Loan originated | 1 |
| 3201.01 | 1-Loan originated | 1 |
| 8310.00 | 1-Loan originated | 1 |
| 1603.00 | 1-Loan originated | 1 |
| 8391.00 | 1-Loan originated | 1 |
| 1708.00 | 6-Purchased loan | 1 |
| 8420.00 | 1-Loan originated | 1 |
| 1613.00 | 1-Loan originated | 1 |
| 2505.00 | 1-Loan originated | 1 |


| nventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improvement |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-R |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improvement |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improvement |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchas |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
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| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
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| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |


| 2-Not an open-end line of credit | 122500 | 20210923 | 2.75 | 180 |
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| 2-Not an open-end line of credit | 384750 | 20220315 | 4.49 | 360 |
| 2-Not an open-end line of credit | 176705 | 20211014 | 3.375 | 240 |
| 2-Not an open-end line of credit | 228000 | 20220623 | 6.125 | 360 |
| 2-Not an open-end line of credit | 168000 | 20211220 | 2.875 | 120 |
| 2-Not an open-end line of credit | 142373 | 20220415 | 5.125 | 360 |
| 2-Not an open-end line of credit | 210000 | 20220309 | 3.875 | 180 |
| 2-Not an open-end line of credit | 58000 | 20211117 | NA | 360 |
| 2-Not an open-end line of credit | 247500 | 20220510 | NA | 360 |
| 2-Not an open-end line of credit | 187000 | 20211229 | NA | 360 |
| 2-Not an open-end line of credit | 117000 | 20211206 | NA | 360 |
| 2-Not an open-end line of credit | 218000 | 20220420 | NA | 360 |
| 2-Not an open-end line of credit | 357530 | 20220105 | NA | 360 |
| 2-Not an open-end line of credit | 58592 | 20220818 | NA | 360 |
| 2-Not an open-end line of credit | 129980 | 20220421 | NA | 360 |
| 2-Not an open-end line of credit | 299200 | 20220309 | 4.25 | 360 |
| 2-Not an open-end line of credit | 457269.45 | NA | 3.375 | 240 |
| 2-Not an open-end line of credit | 464776.96 | NA | 3.575 | 360 |
| 2-Not an open-end line of credit | 152000 | 20221115 | 6.5 | 360 |
| 2-Not an open-end line of credit | 486750 | NA | 3.6 | 360 |
| 2-Not an open-end line of credit | 276000 | 20220228 | 4.49 | 360 |
| 2-Not an open-end line of credit | 261250 | 20220131 | 3.25 | 360 |
| 2-Not an open-end line of credit | 230000 | 20220330 | 4.74 | 360 |
| 2-Not an open-end line of credit | 680000 | 20220222 | 3.875 | 360 |
| 2-Not an open-end line of credit | 207000 | 20220428 | 4.99 | 360 |
| 2-Not an open-end line of credit | 334400 | 20220125 | 3.625 | 360 |
| 2-Not an open-end line of credit | 220000 | 20220325 | 4.99 | 360 |
| 2-Not an open-end line of credit | 71511.04 | NA | 4 | 120 |
| 2-Not an open-end line of credit | 45000 | 20220828 | 5.5 | 120 |
| 2-Not an open-end line of credit | 176700 | 20220103 | 3.125 | 240 |
| 2-Not an open-end line of credit | 309000 | 20220817 | 4.875 | 240 |
| 2-Not an open-end line of credit | 164360 | 20221007 | 5.875 | 360 |
| 2-Not an open-end line of credit | 207000 | NA | 4.95 | 360 |
| 2-Not an open-end line of credit | 129500 | 20220323 | 4.75 | 240 |
| 2-Not an open-end line of credit | 157250 | NA | 5.5 | 360 |
| 2-Not an open-end line of credit | 145500 | 20220511 | 5.75 | 360 |
| 2-Not an open-end line of credit | 101600 | 20220125 | 3.5 | 360 |
| 2-Not an open-end line of credit | 92200 | 20211230 | 3.49 | 360 |
| 2-Not an open-end line of credit | 224000 | 20220325 | 4.875 | 360 |
| 2-Not an open-end line of credit | 200000 | 20220503 | 5.25 | 360 |
| 2-Not an open-end line of credit | 436000 | 20220607 | 5.75 | 360 |
| 2-Not an open-end line of credit | 1080000 | 20220202 | 3.375 | 360 |
| 2-Not an open-end line of credit | 251628.75 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 251750 | 20220301 | 3.875 | 360 |
| 2-Not an open-end line of credit | 150001 | 20211210 | 3.25 | 360 |
| 2-Not an open-end line of credit | 285000 | 20220114 | 5.49 | 360 |
| 2-Not an open-end line of credit | 174395 | 20220222 | 4.375 | 360 |
| 2-Not an open-end line of credit | 232340 | 20220404 | 5 | 360 |
| 2-Not an open-end line of credit | 207000 | 20220810 | 5.49 | 360 |
| 2-Not an open-end line of credit | 377500 | NA | 6.875 | 360 |
| 2-Not an open-end line of credit | 185000 | 20220308 | 3.875 | 360 |
| 2-Not an open-end line of credit | 271600 | 20220706 | 5.49 | 360 |
| 2-Not an open-end line of credit | 456000 | 20220419 | 4.99 | 360 |
| 2-Not an open-end line of credit | 136000 | 20220518 | 5.125 | 360 |
| 2-Not an open-end line of credit | 232000 | 20211203 | 2.49 | 180 |
| 2-Not an open-end line of credit | 198240.25 | NA | 3.55 | 360 |
| 2-Not an open-end line of credit | 78750 | 20220907 | 6.125 | 240 |
| 2-Not an open-end line of credit | 413000 | 20220325 | 4.75 | 360 |
| 2-Not an open-end line of credit | 273540 | 20220629 | 6.125 | 360 |


| NA | 1-Secured by a first lien | 178000 | 69 |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 405000 | 95 |
| NA | 1-Secured by a first lien | 295000 | 60 |
| NA | 1-Secured by a first lien | 285000 | 80 |
| NA | 1-Secured by a first lien | 210000 | 80 |
| NA | 1-Secured by a first lien | 145000 | 96.5 |
| NA | 1-Secured by a first lien | 287000 | 74 |
| NA | 1-Secured by a first lien | 78000 | 75 |
| NA | 1-Secured by a first lien | 274000 | 91 |
| NA | 1-Secured by a first lien | 241000 | 78 |
| NA | 1-Secured by a first lien | 180000 | 65 |
| NA | 1-Secured by a first lien | 273000 | 80 |
| NA | 1-Secured by a first lien | 500000 | 72 |
| NA | 1-Secured by a first lien | 345100 | 17 |
| NA | 1-Secured by a first lien | 134000 | 97 |
| NA | 1-Secured by a first lien | 374000 | 80 |
| NA | 1-Secured by a first lien | 725000 | NA |
| NA | 1-Secured by a first lien | 490000 | NA |
| NA | 1-Secured by a first lien | 172000 | 89 |
| NA | 1-Secured by a first lien | 649000 | NA |
| NA | 1-Secured by a first lien | 345000 | 80 |
| NA | 1-Secured by a first lien | 275000 | 95 |
| NA | 1-Secured by a first lien | 757000 | 31 |
| NA | 1-Secured by a first lien | 800000 | 85 |
| NA | 1-Secured by a first lien | 345000 | 60 |
| NA | 1-Secured by a first lien | 420000 | 80 |
| NA | 1-Secured by a first lien | 260000 | 85 |
| NA | 1-Secured by a first lien | 140000 | NA |
| NA | 1-Secured by a first lien | 250000 | 18 |
| NA | 1-Secured by a first lien | 420000 | 43 |
| NA | 1-Secured by a first lien | 705000 | 44 |
| NA | 1-Secured by a first lien | 185000 | 100 |
| NA | 1-Secured by a first lien | 230000 | NA |
| NA | 1-Secured by a first lien | 184500 | 71 |
| NA | 1-Secured by a first lien | 185000 | NA |
| NA | 1-Secured by a first lien | 150000 | 97 |
| NA | 1-Secured by a first lien | 127000 | 80 |
| NA | 1-Secured by a first lien | 275000 | 34 |
| NA | 1-Secured by a first lien | 260000 | 87 |
| NA | 1-Secured by a first lien | 390000 | 52 |
| NA | 1-Secured by a first lien | 545000 | 80 |
| NA | 1-Secured by a first lien | 1350000 | 80 |
| NA | 1-Secured by a first lien | 280000 | NA |
| NA | 1-Secured by a first lien | 265000 | 95 |
| NA | 1-Secured by a first lien | 190000 | 79 |
| NA | 1-Secured by a first lien | 300000 | 95 |
| NA | 1-Secured by a first lien | 245000 | 72 |
| NA | 1-Secured by a first lien | 335000 | 70 |
| NA | 1-Secured by a first lien | 230000 | 90 |
| NA | 1-Secured by a first lien | 405000 | NA |
| NA | 1-Secured by a first lien | 245000 | 76 |
| NA | 1-Secured by a first lien | 280000 | 97 |
| NA | 1-Secured by a first lien | 570000 | 80 |
| NA | 1-Secured by a first lien | 170000 | 80 |
| NA | 1-Secured by a first lien | 290000 | 80 |
| NA | 1-Secured by a first lien | 209000 | NA |
| NA | 1-Secured by a first lien | 105000 | 75 |
| NA | 1-Secured by a first lien | 714000 | 58 |
| NA | 1 -Secured by a first lien | 282000 | 97 |


|  | 10-Not applicable |
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|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 2-Employment history |
|  | 4-Collateral |
|  | 9-Other |
|  | 1-Debt-to-income ratio |
|  | 1-Debt-to-income ratio |
|  | 1-Debt-to-income ratio |
|  | 1-Debt-to-income ratio |
|  | 4-Collateral |
|  | 10-Not applicable |
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| 1-Debt-to-income ratio | - |
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| 3-Credit history | - |
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| 303.00 | 1-Loan originated | 2 |
| :---: | :---: | :---: |
| 1201.00 | 6-Purchased loan | 1 |
| 5203.00 | 1-Loan originated | 1 |
| 319.00 | 1-Loan originated | 1 |
| 1202.00 | 1-Loan originated | 1 |
| 1406.02 | 1-Loan originated | 1 |
| 8312.00 | 1-Loan originated | 1 |
| 3201.02 | 6-Purchased loan | 1 |
| 706.00 | 1-Loan originated | 1 |
| 314.00 | 1-Loan originated | 1 |
| 8437.00 | 1-Loan originated | 1 |
| 718.00 | 1-Loan originated | 1 |
| 209.01 | 1-Loan originated | 1 |
| 2422.00 | 6-Purchased loan | 1 |
| 3017.02 | 1-Loan originated | 2 |
| 312.00 | 6-Purchased loan | 1 |
| 1007.00 | 1-Loan originated | 1 |
| 308.00 | 6-Purchased loan | 1 |
| 3906.00 | 1-Loan originated | 1 |
| 2203.00 | 6-Purchased loan | 1 |
| 1906.01 | 1-Loan originated | 1 |
| 7608.02 | 1-Loan originated | 1 |
| 6309.00 | 1-Loan originated | 1 |
| 301.02 | 6-Purchased loan | 1 |
| 903.00 | 1-Loan originated | 1 |
| 801.00 | 1-Loan originated | 1 |
| 7505.00 | 1-Loan originated | 1 |
| 629.00 | 1-Loan originated | 2 |
| 902.00 | 6-Purchased loan | 1 |
| 307.02 | 1-Loan originated | 1 |
| 628.00 | 1-Loan originated | 1 |
| 6201.00 | 1-Loan originated | 1 |
| 8429.00 | 3-Application denied | 1 |
| 2216.00 | 3-Application denied | 4 |
| 8314.00 | 6-Purchased loan | 1 |
| 3511.00 | 1-Loan originated | 1 |
| 513.00 | 1-Loan originated | 1 |
| 8428.00 | 6-Purchased loan | 1 |
| 714.00 | 1-Loan originated | 1 |
| 2003.00 | 1-Loan originated | 1 |
| 629.00 | 1-Loan originated | 1 |
| 8311.00 | 6-Purchased loan | 2 |
| 3301.02 | 1-Loan originated | 1 |
| 7402.00 | 3-Application denied | 1 |
| 1505.02 | 1-Loan originated | 1 |
| 1301.00 | 1-Loan originated | 1 |
| 204.00 | 1-Loan originated | 1 |
| 308.00 | 6-Purchased loan | 1 |
| 902.00 | 1-Loan originated | 1 |
| 814.03 | 6-Purchased loan | 1 |
| 1404.00 | 1-Loan originated | 1 |
| 816.00 | 6-Purchased loan | 1 |
| 8233.04 | 6-Purchased loan | 1 |
| 2109.00 | 1-Loan originated | 2 |
| 312.00 | 6-Purchased loan | 1 |
| 501.00 | 6-Purchased loan | 1 |
| 8330.00 | 6-Purchased loan | 1 |
| 7115.00 | 1-Loan originated | 1 |
| 3902.00 | 6-Purchased Ioan | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improvement |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |


| 2-Not an open-end line of credit | 460000 | 20220804 | 5.5 | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 309000 | NA | 2.99 | 360 |
| 2-Not an open-end line of credit | 93435 | 20220826 | 6.375 | 360 |
| 2-Not an open-end line of credit | 593750 | 20221026 | 6.625 | 360 |
| 2-Not an open-end line of credit | 315550 | 20211230 | 2.625 | 180 |
| 2-Not an open-end line of credit | 103879 | 20211231 | 3.49 | 360 |
| 2-Not an open-end line of credit | 307490 | 20220221 | 3.99 | 360 |
| 2-Not an open-end line of credit | 189000 | NA | 4.875 | 360 |
| 2-Not an open-end line of credit | 740000 | 20220520 | 4.625 | 360 |
| 2-Not an open-end line of credit | 82500 | 20220907 | 6.875 | 360 |
| 2-Not an open-end line of credit | 212500 | 20220616 | 5.875 | 360 |
| 2-Not an open-end line of credit | 1106526 | 20210901 | 2.875 | 360 |
| 2-Not an open-end line of credit | 140000 | 20220928 | 6.875 | 360 |
| 2-Not an open-end line of credit | 454100 | NA | 4 | 360 |
| 2-Not an open-end line of credit | 101600 | 20220725 | 5.875 | 180 |
| 2-Not an open-end line of credit | 374000 | NA | 3.625 | 360 |
| 2-Not an open-end line of credit | 274178 | 20220301 | 4 | 360 |
| 2-Not an open-end line of credit | 213750 | NA | 5.25 | 360 |
| 2-Not an open-end line of credit | 369000 | 20220502 | 5.125 | 360 |
| 2-Not an open-end line of credit | 364800 | NA | 2.99 | 360 |
| 2-Not an open-end line of credit | 210000 | 20220922 | 6.875 | 360 |
| 2-Not an open-end line of credit | 68500 | 20211103 | 3.5 | 360 |
| 2-Not an open-end line of credit | 72000 | 20220129 | 3.625 | 120 |
| 2-Not an open-end line of credit | 104000 | NA | 3.75 | 180 |
| 2-Not an open-end line of credit | 154200 | 20221005 | 6.875 | 360 |
| 2-Not an open-end line of credit | 418500 | 20220411 | 5.375 | 360 |
| 2-Not an open-end line of credit | 203024 | 20211206 | 2.99 | 360 |
| 2-Not an open-end line of credit | 336000 | 20211221 | 2.875 | 360 |
| 2-Not an open-end line of credit | 155000 | NA | 3.75 | 360 |
| 2-Not an open-end line of credit | 131500 | 20221107 | 6.125 | 360 |
| 2-Not an open-end line of credit | 632000 | 20220112 | 3.49 | 360 |
| 2-Not an open-end line of credit | 122000 | 20220124 | 3.375 | 180 |
| 2-Not an open-end line of credit | 138750 | 20220830 | NA | 300 |
| 2-Not an open-end line of credit | 522500 | 20220201 | NA | 360 |
| 2-Not an open-end line of credit | 186000 | NA | 5.75 | 360 |
| 2-Not an open-end line of credit | 42000 | 20210813 | 2.75 | 120 |
| 2-Not an open-end line of credit | 362200 | 20211220 | 2.49 | 180 |
| 2-Not an open-end line of credit | 513000 | NA | 3.375 | 360 |
| 2-Not an open-end line of credit | 162500 | 20220914 | 6.875 | 240 |
| 2-Not an open-end line of credit | 208000 | 20220503 | 5.375 | 240 |
| 2-Not an open-end line of credit | 513750 | 20220427 | 4.75 | 360 |
| 2-Not an open-end line of credit | 297500 | NA | 5.75 | 360 |
| 2-Not an open-end line of credit | 397500 | 20220414 | 3.5 | 180 |
| 2-Not an open-end line of credit | 258900 | 20211116 | NA | 360 |
| 2-Not an open-end line of credit | 205600 | 20220421 | 5.25 | 360 |
| 2-Not an open-end line of credit | 161400 | 20211218 | 2.625 | 120 |
| 2-Not an open-end line of credit | 116935 | 20220429 | 4.99 | 360 |
| 2-Not an open-end line of credit | 209000 | NA | 5.175 | 360 |
| 2-Not an open-end line of credit | 359200 | 20210323 | 3.25 | 360 |
| 2-Not an open-end line of credit | 2617440 | NA | 4.625 | 360 |
| 2-Not an open-end line of credit | 301043 | 20220629 | 5.875 | 360 |
| 2-Not an open-end line of credit | 143200 | NA | 4.99 | 360 |
| 2-Not an open-end line of credit | 227732.32 | NA | 5.125 | 360 |
| 2-Not an open-end line of credit | 457500 | 20220224 | 4.375 | 360 |
| 2-Not an open-end line of credit | 428000 | NA | 5.15 | 360 |
| 2-Not an open-end line of credit | 1250050 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 1198271.02 | NA | 4 | 360 |
| 2-Not an open-end line of credit | 191467 | 20220713 | 5.625 | 360 |
| 2-Not an open-end line of credit | 151900 | NA | 3.875 | 240 |


| NA | 1-Secured by a first lien | 575000 | 80 |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 485000 | NA |
| NA | 1-Secured by a first lien | 179500 | 53 |
| NA | 1-Secured by a first lien | 625000 | 95 |
| NA | 1-Secured by a first lien | 500000 | 64 |
| NA | 1-Secured by a first lien | 170000 | 62 |
| NA | 1-Secured by a first lien | 317000 | 97 |
| NA | 1-Secured by a first lien | 210000 | NA |
| NA | 1-Secured by a first lien | 925000 | 80 |
| NA | 1-Secured by a first lien | 110000 | 75 |
| NA | 1-Secured by a first lien | 362500 | 59 |
| NA | 1-Secured by a first lien | 1400000 | 79.03 |
| NA | 1-Secured by a first lien | 148600 | 95 |
| NA | 1-Secured by a first lien | 478000 | NA |
| NA | 1-Secured by a first lien | 127000 | 80 |
| NA | 1-Secured by a first lien | 440000 | NA |
| NA | 1-Secured by a first lien | 365000 | 76 |
| NA | 1-Secured by a first lien | 225000 | NA |
| NA | 1-Secured by a first lien | 410000 | 90 |
| NA | 1-Secured by a first lien | 384000 | NA |
| NA | 1-Secured by a first lien | 230000 | 92 |
| NA | 1-Secured by a first lien | 86000 | 80 |
| NA | 1-Secured by a first lien | 250000 | 29 |
| NA | 1-Secured by a first lien | 165000 | NA |
| NA | 1-Secured by a first lien | 262000 | 59 |
| NA | 1-Secured by a first lien | 465000 | 90 |
| NA | 1-Secured by a first lien | 402000 | 51 |
| NA | 1-Secured by a first lien | 420000 | 80 |
| NA | 1-Secured by a first lien | 195000 | NA |
| NA | 1-Secured by a first lien | 179000 | 74 |
| NA | 1-Secured by a first lien | 790000 | 80 |
| NA | 1-Secured by a first lien | 270000 | 46 |
| NA | 1-Secured by a first lien | 185000 | 75 |
| NA | 1-Secured by a first lien | 950000 | 55 |
| NA | 1-Secured by a first lien | 200000 | NA |
| NA | 1-Secured by a first lien | 315000 | 14 |
| NA | 1-Secured by a first lien | 500000 | 73 |
| NA | 1-Secured by a first lien | 540000 | NA |
| NA | 1-Secured by a first lien | 325000 | 50 |
| NA | 1-Secured by a first lien | 385000 | 55 |
| NA | 1-Secured by a first lien | 685000 | 75 |
| NA | 1-Secured by a first lien | 425000 | NA |
| NA | 1-Secured by a first lien | 795000 | 50 |
| NA | 1-Secured by a first lien | 417500 | 63 |
| NA | 1-Secured by a first lien | 257000 | 80 |
| NA | 1-Secured by a first lien | 440000 | 37 |
| NA | 1-Secured by a first lien | 179900 | 65 |
| NA | 1-Secured by a first lien | 649000 | NA |
| NA | 1-Secured by a first lien | 449000 | 80 |
| NA | 1-Secured by a first lien | 3271800 | NA |
| NA | 1-Secured by a first lien | 316888 | 95 |
| NA | 1-Secured by a first lien | 179000 | NA |
| NA | 1-Secured by a first lien | 240000 | NA |
| NA | 1-Secured by a first lien | 610000 | 75 |
| NA | 1-Secured by a first lien | 535000 | NA |
| NA | 1-Secured by a first lien | 1685000 | NA |
| NA | 1-Secured by a first lien | 2400000 | NA |
| NA | 1-Secured by a first lien | 195000 | 96.5 |
| NA | 1-Secured by a first lien | 179900 | NA |


|  | 10-Not applicable |
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|  | 10-Not applicable |
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|  | 10-Not applicable |
|  | 4-Collateral |
|  | 9-Other |
|  | 10-Not applicable |
|  | 10-Not applicable |
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|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 1-Debt-to-income ratio |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
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| 6-Information not provided by applicant in mail, internet, or telephone application |  |
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| 6-Information not provided by applicant in mail, internet, or telephone application |  |
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| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 22-Chinese |  |
| 23-Filipino |  |
| 23-Filipino |  |
| 26-Vietnamese |  |
| 26-Vietnamese |  |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
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| 8-No co-applicant |
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| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
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| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 8-No co-applicant |
| 8-No co-applicant |




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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
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| 5-No co-applicant |  |
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| 3-Information not provided by applicant in mail, internet, or telephone application |  |
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| 3-Information not provided by applicant in mail, internet, or telephone application |  |
| 5-No co-applicant |  |
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| 5-No co-applicant |  |


| 1-Hispanic or Latino |
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| 2-Not Hispanic or Latino |
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| 1-Hispanic or Latino |
| 1-Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 12-Puerto Rican |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
| 14-Other Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
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| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
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| 5-No co-applicant |  |
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| 3-Information not provided by applicant in mail, internet, or telephone application |  |
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| 3-Information not provided by applicant in mail, internet, or telephone application |  |
| 2-Not Hispanic or Latino |  |
| 3-Information not provided by applicant in mail, internet, or telephone application |  |
| 5-No co-applicant |  |
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| 7201.00 | 6-Purchased loan | 1 |
| :---: | :---: | :---: |
| 8447.00 | 1-Loan originated | 1 |
| 3301.02 | 1-Loan originated | 1 |
| 7112.00 | 1-Loan originated | 1 |
| 1702.00 | 6-Purchased loan | 1 |
| 2428.00 | 1-Loan originated | 1 |
| 8312.00 | 6-Purchased loan | 3 |
| 209.02 | 6-Purchased loan | 1 |
| 814.03 | 6-Purchased loan | 1 |
| 105.02 | 6-Purchased loan | 1 |
| 903.00 | 6-Purchased loan | 1 |
| 8326.00 | 6-Purchased loan | 1 |
| 1801.00 | 6-Purchased loan | 1 |
| 818.00 | 1-Loan originated | 1 |
| 608.00 | 3-Application denied | 1 |
| 2105.02 | 1-Loan originated | 2 |
| 712.00 | 6-Purchased loan | 1 |
| 1606.02 | 6-Purchased loan | 1 |
| 6009.00 | 1-Loan originated | 2 |
| 5906.00 | 1-Loan originated | 1 |
| 817.00 | 1-Loan originated | 1 |
| 813.00 | 1-Loan originated | 1 |
| 715.00 | 6-Purchased loan | 1 |
| 8309.00 | 6-Purchased loan | 2 |
| 603.00 | 1-Loan originated | 3 |
| 2809.00 | 1-Loan originated | 1 |
| 1906.02 | 1-Loan originated | 1 |
| 8307.00 | 6-Purchased loan | 1 |
| 8400.00 | 1-Loan originated | 1 |
| 203.01 | 1-Loan originated | 1 |
| 8330.00 | 1-Loan originated | 1 |
| 814.03 | 1-Loan originated | 1 |
| 3301.01 | 1-Loan originated | 1 |
| 632.00 | 1-Loan originated | 1 |
| 8360.00 | 3-Application denied | 1 |
| 7111.00 | 6-Purchased loan | 1 |
| 7112.00 | 1-Loan originated | 3 |
| 2104.00 | 6-Purchased loan | 1 |
| 6505.00 | 3-Application denied | 1 |
| 710.00 | 3-Application denied | 1 |
| 2420.00 | 3-Application denied | 3 |
| 1104.00 | 3-Application denied | 2 |
| 6303.00 | 1-Loan originated | 1 |
| 6503.01 | 1-Loan originated | 1 |
| 804.00 | 6-Purchased loan | 1 |
| 5203.00 | 1-Loan originated | 2 |
| 1505.02 | 1-Loan originated | 1 |
| 8422.00 | 1-Loan originated | 1 |
| 513.00 | 1-Loan originated | 1 |
| 508.00 | 1-Loan originated | 1 |
| 2109.00 | 1-Loan originated | 1 |
| 704.00 | 1-Loan originated | 1 |
| 814.02 | 1-Loan originated | 1 |
| 8311.00 | 6-Purchased loan | 2 |
| 628.00 | 1-Loan originated | 1 |
| 803.00 | 6-Purchased loan | 1 |
| 714.00 | 1-Loan originated | 1 |
| 317.00 | 1-Loan originated | 1 |
| 8435.00 | 1-Loan originated | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |


| 2-Not an open-end line of credit | 510000 | NA | 3.95 | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 260205 | 20220917 | 5.125 | 360 |
| 2-Not an open-end line of credit | 296100 | 20220502 | 5.49 | 360 |
| 2-Not an open-end line of credit | 148300 | 20211209 | 3.375 | 360 |
| 2-Not an open-end line of credit | 211595.64 | NA | 2.375 | 360 |
| 2-Not an open-end line of credit | 1088000 | 20211222 | 2.500 | 360 |
| 2-Not an open-end line of credit | 456000 | NA | 7.25 | 360 |
| 2-Not an open-end line of credit | 154800 | NA | 5.625 | 360 |
| 2-Not an open-end line of credit | 180237.61 | NA | 3.95 | 360 |
| 2-Not an open-end line of credit | 180500 | NA | 6.375 | 360 |
| 2-Not an open-end line of credit | 459000 | NA | 3.95 | 360 |
| 2-Not an open-end line of credit | 467500 | NA | 3.575 | 360 |
| 2-Not an open-end line of credit | 274550 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 264800 | 20220206 | 3.125 | 180 |
| 2-Not an open-end line of credit | 176000 | 20221130 | NA | 360 |
| 2-Not an open-end line of credit | 386750 | 20211212 | 4.25 | 360 |
| 2-Not an open-end line of credit | 208000 | NA | 3.975 | 360 |
| 2-Not an open-end line of credit | 222390.5 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 110000 | 20220215 | 3.875 | 360 |
| 2-Not an open-end line of credit | 281600 | 20220909 | 5.875 | 360 |
| 2-Not an open-end line of credit | 264100 | 20220928 | 6.75 | 360 |
| 2-Not an open-end line of credit | 820000 | 20220315 | 3.75 | 360 |
| 2-Not an open-end line of credit | 795379.05 | NA | 7.25 | 360 |
| 2-Not an open-end line of credit | 548250 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 607500 | 20220628 | 5.74 | 360 |
| 2-Not an open-end line of credit | 398050 | 20220211 | 3.99 | 360 |
| 2-Not an open-end line of credit | 353478 | 20220621 | 5.625 | 360 |
| 2-Not an open-end line of credit | 288000 | NA | 6.125 | 360 |
| 2-Not an open-end line of credit | 289000 | 20220222 | 3.25 | 180 |
| 2-Not an open-end line of credit | 456000 | 20220603 | 5.125 | 360 |
| 2-Not an open-end line of credit | 562250 | 20220727 | 4.375 | 360 |
| 2-Not an open-end line of credit | 187425 | 20220729 | 4.875 | 360 |
| 2-Not an open-end line of credit | 980000 | 20211103 | 3.25 | 360 |
| 2-Not an open-end line of credit | 647200 | 20211230 | 1.875 | 180 |
| 2-Not an open-end line of credit | 356250 | 20220502 | NA | 360 |
| 2-Not an open-end line of credit | 304000 | NA | 5.5 | 360 |
| 2-Not an open-end line of credit | 241500 | 20211109 | 3.625 | 360 |
| 2-Not an open-end line of credit | 350100 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 223168 | 20220802 | NA | 360 |
| 2-Not an open-end line of credit | 1763750 | 20220207 | NA | 360 |
| 2-Not an open-end line of credit | 60000 | 20220207 | NA | 360 |
| 2-Not an open-end line of credit | 407750 | 20220113 | NA | 360 |
| 2-Not an open-end line of credit | 148627 | 20220215 | 3.25 | 180 |
| 2-Not an open-end line of credit | 163577 | 20220602 | 4.875 | 120 |
| 2-Not an open-end line of credit | 489250 | NA | 3.75 | 360 |
| 2-Not an open-end line of credit | 135000 | 20220224 | 4.75 | 360 |
| 2-Not an open-end line of credit | 225000 | 20220510 | 6.125 | 360 |
| 2-Not an open-end line of credit | 152500 | 20211120 | 2.125 | 180 |
| 2-Not an open-end line of credit | 267350 | 20211029 | 2.5 | 180 |
| 2-Not an open-end line of credit | 1402500 | 20220118 | 3.000 | 360 |
| 2-Not an open-end line of credit | 536250 | 20211214 | 2.99 | 360 |
| 2-Not an open-end line of credit | 630500 | 20211214 | 2.49 | 180 |
| 2-Not an open-end line of credit | 1147500 | 20220415 | 4.5 | 360 |
| 2-Not an open-end line of credit | 378901.2 | NA | 3.99 | 360 |
| 2-Not an open-end line of credit | 1495000 | 20220223 | 3.25 | 360 |
| 2-Not an open-end line of credit | 1290000 | NA | 4.375 | 360 |
| 2-Not an open-end line of credit | 306400 | 20220525 | 5 | 360 |
| 2-Not an open-end line of credit | 136000 | 20220204 | 3.625 | 360 |
| 2-Not an open-end line of credit | 197000 | 20220928 | 7.625 | 360 |


| NA | 1-Secured by a first lien | 850000 | NA |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 273900 | 95 |
| NA | 1-Secured by a first lien | 329000 | 90 |
| NA | 1-Secured by a first lien | 200000 | 75 |
| NA | 1-Secured by a first lien | 265000 | NA |
| NA | 1-Secured by a first lien | 1280000 | 85.000 |
| NA | 1-Secured by a first lien | 570000 | NA |
| NA | 1-Secured by a first lien | 172000 | NA |
| NA | 1-Secured by a first lien | 190000 | NA |
| NA | 1-Secured by a first lien | 190000 | NA |
| NA | 1-Secured by a first lien | 510000 | NA |
| NA | 1-Secured by a first lien | 550000 | NA |
| NA | 1-Secured by a first lien | 289000 | NA |
| NA | 1-Secured by a first lien | 400000 | 67 |
| NA | 1-Secured by a first lien | 220000 | 80 |
| NA | 1-Secured by a first lien | 455000 | 85 |
| NA | 1-Secured by a first lien | 260000 | NA |
| NA | 1-Secured by a first lien | 297500 | NA |
| NA | 1-Secured by a first lien | 500000 | 22 |
| NA | 1-Secured by a first lien | 352000 | 80 |
| NA | 1-Secured by a first lien | 278000 | 95 |
| NA | 1-Secured by a first lien | 1025000 | 80 |
| NA | 1-Secured by a first lien | 995000 | NA |
| NA | 1-Secured by a first lien | 970000 | NA |
| NA | 1-Secured by a first lien | 810000 | 75 |
| NA | 1-Secured by a first lien | 419000 | 95 |
| NA | 1-Secured by a first lien | 360000 | 96.5 |
| NA | 1-Secured by a first lien | 320000 | NA |
| NA | 1-Secured by a first lien | 600000 | 49 |
| NA | 1-Secured by a first lien | 480000 | 95 |
| NA | 1-Secured by a first lien | 865000 | 65 |
| NA | 1-Secured by a first lien | 249900 | 75 |
| NA | 1-Secured by a first lien | 1225000 | 80 |
| NA | 1-Secured by a first lien | 845000 | 77 |
| NA | 1-Secured by a first lien | 375000 | 95 |
| NA | 1-Secured by a first lien | 320000 | NA |
| NA | 1-Secured by a first lien | 345000 | 70 |
| NA | 1-Secured by a first lien | 389000 | NA |
| NA | 1-Secured by a first lien | 270000 | 83 |
| NA | 1-Secured by a first lien | 2075000 | 85 |
| NA | 1-Secured by a first lien | 560000 | 11 |
| NA | 1-Secured by a first lien | 510000 | 80 |
| NA | 1-Secured by a first lien | 307000 | 50 |
| NA | 1-Secured by a first lien | 310000 | 53 |
| NA | 1-Secured by a first lien | 515000 | NA |
| NA | 1-Secured by a first lien | 180000 | 75 |
| NA | 1-Secured by a first lien | 300000 | 75 |
| NA | 1-Secured by a first lien | 1300000 | 12 |
| NA | 1-Secured by a first lien | 500000 | 54 |
| NA | 1-Secured by a first lien | 1650000 | 85.000 |
| NA | 1-Secured by a first lien | 715000 | 75 |
| NA | 1-Secured by a first lien | 950000 | 67 |
| NA | 1-Secured by a first lien | 1350000 | 85 |
| NA | 1-Secured by a first lien | 595000 | NA |
| NA | 1-Secured by a first lien | 2300000 | 65 |
| NA | 1-Secured by a first lien | 2150000 | NA |
| NA | 1-Secured by a first lien | 383000 | 80 |
| NA | 1-Secured by a first lien | 485000 | 29 |
| NA | 1-Secured by a first lien | 333000 | 60 |


|  | 10-Not applicable |
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|  | 10-Not applicable |
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|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 1-Debt-to-income ratio |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
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|  | 1-Debt-to-income ratio |
|  | 10-Not applicable |
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|  | 10-Not applicable |
|  | 4-Collateral |
|  | 1-Debt-to-income ratio |
|  | 1-Debt-to-income ratio |
|  | 4-Collateral |
|  | 10-Not applicable |
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| 6-Information not provided by applicant in mail, internet, or telephone application |
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| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 2-Asian |
| 2-Asian |
| 1-American Indian or Alaska Native |
| 1-American Indian or Alaska Native |
| 2-Asian |
| 2-Asian |
| 2-Asian |
| 5-White |
| 2-Asian |
| 5-White |
| 5-White |
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| 5-White |
| 5-White |
| 2-Asian |
| 2-Asian |
| 2-Asian |
| 2-Asian |
| 2-Asian |
| 2-Asian |
| 3-Black or African American |
| 3-Black or African American |
| 3-Black or African American |
| 5-White |
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| 8-No co-applicant |
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| 8-No co-applicant |
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| 8-No co-applicant |
| 8-No co-applicant |
| 5-White |
| 8-No co-applicant |
| 8-No co-applicant |
| 8-No co-applicant |
| 8-No co-applicant |
| 2-Asian |
| 5-White |
| 8-No co-applicant |
| 1-American Indian or Alaska Native |
| 5-White |
| 5-White |
| 5-White |
| 5-White |
| 5-White |
| 5-White |
| 5-White |
| 5-White |
| 5-White |
| 5-White |
| 5-White |
| 5-White |
| 5-White |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 2-Asian |
| 2-Asian |
| 2-Asian |
| 2-Asian |
| 2-Asian |
| 5-White |
| 3-Black or African American |
| 3-Black or African American |
| 3-Black or African American |
| 2-Asian |
| 5-White |
| 5-White |
| 5-White |
| 5-White |
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| 3-Information not provided by applicant in mail, internet, or telephone application |  |
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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |  |
| 3-Information not provided by applicant in mail, internet, or telephone application |  |
| 1-Male |  |
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| 5-No co-applicant |
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| 5-No co-applicant |
| 5-No co-applicant |
| 5-No co-applicant |
| 5-No co-applicant |
| 2-Female |
| 5-No co-applicant |
| 5-No co-applicant |
| 5-No co-applicant |
| 5-No co-applicant |
| 2-Female |
| 2-Female |
| 5-No co-applicant |
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| 3-Information not provided by applicant in mail, internet, or telephone application |
| :--- |
| 11-Mexican |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 1-Hispanic or Latino |
| 1-Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 14-Other Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
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| 1-Hispanic or Latino |
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| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino Hispanic or Latino or Latino |




| 5-No co-applicant |
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| 5-No co-applicant |
| 5-No co-applicant |
| 5-No co-applicant |
| 5-No co-applicant |
| 2-Not Hispanic or Latino |
| 5-No co-applicant |
| 5-No co-applicant |
| 5-No co-applicant |
| 5-No co-applicant |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 5-No co-applicant |
| 11-Mexican |
| 1-Hispanic or Latino |
| 1-Hispanic or Latino |
| 1-Hispanic or Latino |
| 1-Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
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| 11-Mexican |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
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| 309.00 | 1-Loan originated | 1 |
| :---: | :---: | :---: |
| 7206.00 | 1-Loan originated | 1 |
| 8432.00 | 1-Loan originated | 1 |
| 2402.00 | 1-Loan originated | 1 |
| 2403.00 | 1-Loan originated | 1 |
| 2413.00 | 1-Loan originated | 1 |
| 624.00 | 1-Loan originated | 1 |
| 317.00 | 1-Loan originated | 1 |
| 715.00 | 6-Purchased loan | 1 |
| 819.00 | 1-Loan originated | 1 |
| 8420.00 | 6-Purchased loan | 1 |
| 1612.00 | 6-Purchased loan | 1 |
| 1301.00 | 1-Loan originated | 1 |
| 8421.00 | 6-Purchased loan | 1 |
| 1904.02 | 1-Loan originated | 1 |
| 1101.00 | 6-Purchased loan | 1 |
| 308.00 | 1-Loan originated | 1 |
| 8429.00 | 6-Purchased loan | 1 |
| 812.02 | 1-Loan originated | 1 |
| 7202.00 | 1-Loan originated | 1 |
| 1604.00 | 1-Loan originated | 1 |
| 8425.00 | 1-Loan originated | 1 |
| 2211.00 | 6-Purchased loan | 1 |
| 601.00 | 1-Loan originated | 1 |
| 2433.00 | 1-Loan originated | 1 |
| 1403.02 | 1-Loan originated | 1 |
| 1408.00 | 1-Loan originated | 1 |
| 1708.00 | 1-Loan originated | 1 |
| 3301.02 | 1-Loan originated | 1 |
| 626.00 | 6-Purchased loan | 1 |
| 1202.00 | 6-Purchased loan | 1 |
| 1401.00 | 6-Purchased loan | 1 |
| 1709.00 | 1-Loan originated | 1 |
| 202.00 | 6-Purchased loan | 1 |
| 1105.01 | 1-Loan originated | 1 |
| 8330.00 | 1-Loan originated | 1 |
| 2216.00 | 1-Loan originated | 1 |
| 8325.00 | 1-Loan originated | 1 |
| 2213.00 | 1-Loan originated | 1 |
| 7504.00 | 6-Purchased loan | 1 |
| 713.00 | 1-Loan originated | 1 |
| 404.02 | 6-Purchased loan | 1 |
| 608.00 | 1-Loan originated | 1 |
| 306.04 | 1-Loan originated | 1 |
| 401.00 | 1-Loan originated | 1 |
| 311.00 | 1-Loan originated | 3 |
| 313.00 | 6-Purchased loan | 1 |
| 311.00 | 1-Loan originated | 1 |
| 1202.00 | 1-Loan originated | 1 |
| 4106.00 | 1-Loan originated | 1 |
| 8422.00 | 1-Loan originated | 1 |
| 812.02 | 1-Loan originated | 1 |
| 633.02 | 1-Loan originated | 1 |
| 622.00 | 6-Purchased loan | 1 |
| 2426.00 | 6-Purchased loan | 1 |
| 2002.00 | 1-Loan originated | 1 |
| 8331.00 | 1-Loan originated | 1 |
| 2415.00 | 1-Loan originated | 1 |
| 107.02 | 1-Loan originated | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |


| 2-Not an open-end line of credit | 600000 | 20211228 | 2.875 | 360 |
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| 2-Not an open-end line of credit | 380000 | 20220819 | 6.625 | 360 |
| 2-Not an open-end line of credit | 257050 | 20220601 | 5.5 | 360 |
| 2-Not an open-end line of credit | 610000 | 20220105 | 2.875 | 360 |
| 2-Not an open-end line of credit | 1596000 | 20220104 | 2.875 | 360 |
| 2-Not an open-end line of credit | 1529900 | 20220516 | 4.75 | 360 |
| 2-Not an open-end line of credit | 1030000 | 20220323 | 3.75 | 360 |
| 2-Not an open-end line of credit | 452430 | 20211110 | 3 | 360 |
| 2-Not an open-end line of credit | 373500 | NA | 5.25 | 360 |
| 2-Not an open-end line of credit | 647000 | 20220102 | 2.5 | 180 |
| 2-Not an open-end line of credit | 348000 | NA | 2.375 | 180 |
| 2-Not an open-end line of credit | 280000 | NA | 3.75 | 180 |
| 2-Not an open-end line of credit | 166862 | 20220311 | 3.875 | 360 |
| 2-Not an open-end line of credit | 408750 | NA | 3.49 | 360 |
| 2-Not an open-end line of credit | 256000 | 20211112 | 4.625 | 360 |
| 2-Not an open-end line of credit | 333000 | NA | 3.99 | 360 |
| 2-Not an open-end line of credit | 462600 | 20220105 | 2.375 | 120 |
| 2-Not an open-end line of credit | 259000 | NA | 2.99 | 360 |
| 2-Not an open-end line of credit | 2339112 | 20211014 | 2.625 | 360 |
| 2-Not an open-end line of credit | 132600 | 20220107 | 3.25 | 360 |
| 2-Not an open-end line of credit | 150000 | 20220606 | 6.25 | 360 |
| 2-Not an open-end line of credit | 570000 | 20220201 | 3 | 360 |
| 2-Not an open-end line of credit | 647200 | NA | 6.375 | 360 |
| 2-Not an open-end line of credit | 680000 | 20220901 | 5.125 | 360 |
| 2-Not an open-end line of credit | 674250 | 20220324 | 4 | 360 |
| 2-Not an open-end line of credit | 323000 | 20220320 | 4.625 | 360 |
| 2-Not an open-end line of credit | 652000 | 20221011 | 4.75 | 360 |
| 2-Not an open-end line of credit | 342000 | 20220713 | 6.5 | 360 |
| 2-Not an open-end line of credit | 795950 | 20220126 | 3.375 | 240 |
| 2-Not an open-end line of credit | 244400 | NA | 4.75 | 360 |
| 2-Not an open-end line of credit | 548250 | NA | 3 | 360 |
| 2-Not an open-end line of credit | 162000 | NA | 4.75 | 360 |
| 2-Not an open-end line of credit | 352000 | 20220713 | 6.75 | 360 |
| 2-Not an open-end line of credit | 337500 | NA | 3.75 | 360 |
| 2-Not an open-end line of credit | 200530 | 20211229 | 3.125 | 360 |
| 2-Not an open-end line of credit | 404000 | 20211130 | 3.125 | 360 |
| 2-Not an open-end line of credit | 528000 | 20211213 | 2.75 | 360 |
| 2-Not an open-end line of credit | 700000 | 20220331 | 4.25 | 360 |
| 2-Not an open-end line of credit | 730000 | 20220311 | 3.625 | 360 |
| 2-Not an open-end line of credit | 221435.42 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 1637000 | 20220125 | 2.875 | 360 |
| 2-Not an open-end line of credit | 1083750 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 202500 | 20221007 | 6.375 | 360 |
| 2-Not an open-end line of credit | 296000 | 20220603 | 5.75 | 360 |
| 2-Not an open-end line of credit | 448000 | 20220422 | 5.24 | 360 |
| 2-Not an open-end line of credit | 896800 | 20210228 | 5.375 | 360 |
| 2-Not an open-end line of credit | 268200 | NA | 6 | 360 |
| 2-Not an open-end line of credit | 180100 | 20211129 | 2.5 | 120 |
| 2-Not an open-end line of credit | 420750 | 20211021 | 2.875 | 360 |
| 2-Not an open-end line of credit | 145350 | 20220301 | 3.49 | 180 |
| 2-Not an open-end line of credit | 725900 | 20220301 | 2.75 | 360 |
| 2-Not an open-end line of credit | 2853930 | 20211014 | 2.375 | 360 |
| 2-Not an open-end line of credit | 169900 | 20220926 | 8 | 360 |
| 2-Not an open-end line of credit | 805916.91 | NA | 5.5 | 360 |
| 2-Not an open-end line of credit | 627000 | NA | 3.775 | 360 |
| 2-Not an open-end line of credit | 153600 | 20220220 | 4.125 | 360 |
| 2-Not an open-end line of credit | 849200 | 20220223 | 3.5 | 360 |
| 2-Not an open-end line of credit | 453600 | 20220318 | 4.25 | 360 |
| 2-Not an open-end line of credit | 249350 | 20220727 | 4.75 | 180 |


| NA | 1-Secured by a first lien | 1100000 | 55 |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 400000 | 95 |
| NA | 1-Secured by a first lien | 265000 | 97 |
| NA | 1-Secured by a first lien | 820000 | 74.39 |
| NA | 1-Secured by a first lien | 1995000 | 80.000 |
| NA | 1-Secured by a first lien | 1800000 | 84.99 |
| NA | 1-Secured by a first lien | 1315000 | 78.32 |
| NA | 1-Secured by a first lien | 502700 | 90 |
| NA | 1-Secured by a first lien | 415000 | NA |
| NA | 1-Secured by a first lien | 850000 | 77 |
| NA | 1-Secured by a first lien | 1000000 | NA |
| NA | 1-Secured by a first lien | 378000 | NA |
| NA | 1-Secured by a first lien | 418000 | 40 |
| NA | 1-Secured by a first lien | 545000 | NA |
| NA | 1-Secured by a first lien | 320000 | 80 |
| NA | 1-Secured by a first lien | 370000 | NA |
| NA | 1-Secured by a first lien | 1500000 | 31 |
| NA | 1-Secured by a first lien | 619000 | NA |
| NA | 1-Secured by a first lien | 3350000 | 69.824 |
| NA | 1-Secured by a first lien | 325000 | 41 |
| NA | 1-Secured by a first lien | 200000 | 75 |
| NA | 1-Secured by a first lien | 712500 | 80 |
| NA | 1-Secured by a first lien | 699000 | NA |
| NA | 1-Secured by a first lien | 850000 | 80 |
| NA | 1-Secured by a first lien | 750000 | 89.9 |
| NA | 1-Secured by a first lien | 505000 | 74 |
| NA | 1-Secured by a first lien | 815000 | 80 |
| NA | 1-Secured by a first lien | 360000 | 95 |
| NA | 1-Secured by a first lien | 1245000 | 63.93 |
| NA | 1-Secured by a first lien | 305500 | NA |
| NA | 1-Secured by a first lien | 615000 | NA |
| NA | 1-Secured by a first lien | 180000 | NA |
| NA | 1-Secured by a first lien | 422800 | 84 |
| NA | 1-Secured by a first lien | 375000 | NA |
| NA | 1-Secured by a first lien | 365000 | 55 |
| NA | 1-Secured by a first lien | 580000 | 70 |
| NA | 1-Secured by a first lien | 660000 | 80 |
| NA | 1-Secured by a first lien | 1399900 | 50 |
| NA | 1-Secured by a first lien | 912555 | 80 |
| NA | 1-Secured by a first lien | 300000 | NA |
| NA | 1-Secured by a first lien | 2400000 | 68.2 |
| NA | 1-Secured by a first lien | 1275000 | NA |
| NA | 1-Secured by a first lien | 225000 | 90 |
| NA | 1-Secured by a first lien | 370000 | 80 |
| NA | 1-Secured by a first lien | 560000 | 80 |
| NA | 1-Secured by a first lien | 1121000 | 80 |
| NA | 1-Secured by a first lien | 298000 | NA |
| NA | 1-Secured by a first lien | 950000 | 19 |
| NA | 1-Secured by a first lien | 495000 | 85 |
| NA | 1-Secured by a first lien | 1500000 | 10 |
| NA | 1-Secured by a first lien | 1260000 | 57.61 |
| NA | 1-Secured by a first lien | 4000000 | 79.998 |
| NA | 1-Secured by a first lien | 269900 | 63 |
| NA | 1-Secured by a first lien | 1008500 | NA |
| NA | 1-Secured by a first lien | 660000 | NA |
| NA | 1-Secured by a first lien | 340000 | 46 |
| NA | 1-Secured by a first lien | 1061500 | 80 |
| NA | 1-Secured by a first lien | 567000 | 80 |
| NA | 1-Secured by a first lien | 311688 | 80 |


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|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 21-Asian Indian |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |




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| 2420.00 | 1-Loan originated | 1 |
| :---: | :---: | :---: |
| 603.00 | 1-Loan originated | 1 |
| 630.00 | 1-Loan originated | 4 |
| 716.00 | 6-Purchased loan | 1 |
| 2106.02 | 1-Loan originated | 1 |
| 5205.00 | 1-Loan originated | 1 |
| 612.00 | 1-Loan originated | 1 |
| 603.00 | 1-Loan originated | 1 |
| 5611.00 | 6-Purchased loan | 1 |
| 704.00 | 1-Loan originated | 1 |
| 2423.00 | 6-Purchased loan | 1 |
| 3201.01 | 1-Loan originated | 1 |
| 8331.00 | 1-Loan originated | 1 |
| 8424.00 | 1-Loan originated | 1 |
| 313.00 | 1-Loan originated | 1 |
| 8391.00 | 3-Application denied | 1 |
| 4111.00 | 1-Loan originated | 1 |
| 6505.00 | 6-Purchased loan | 1 |
| 3201.01 | 3-Application denied | 1 |
| 314.00 | 1-Loan originated | 1 |
| 814.03 | 1-Loan originated | 1 |
| 3302.00 | 1-Loan originated | 1 |
| 3301.03 | 1-Loan originated | 1 |
| 8331.00 | 1-Loan originated | 1 |
| 5701.00 | 1-Loan originated | 3 |
| 2101.00 | 1-Loan originated | 1 |
| 816.00 | 1-Loan originated | 1 |
| 8349.00 | 3-Application denied | 1 |
| 2435.00 | 3-Application denied | 1 |
| 7005.01 | 3-Application denied | 1 |
| 4909.02 | 3-Application denied | 1 |
| 2507.00 | 3-Application denied | 2 |
| 8350.00 | 3-Application denied | 2 |
| 609.00 | 6-Purchased loan | 1 |
| 4908.00 | 1-Loan originated | 1 |
| 2109.00 | 1-Loan originated | 1 |
| 3901.00 | 1-Loan originated | 1 |
| 4802.00 | 1-Loan originated | 1 |
| 8364.00 | 1-Loan originated | 1 |
| 7504.00 | 6-Purchased loan | 1 |
| 8358.00 | 1-Loan originated | 1 |
| 315.02 | 1-Loan originated | 1 |
| 6116.00 | 1-Loan originated | 2 |
| 8330.00 | 1-Loan originated | 1 |
| 4604.00 | 6-Purchased loan | 1 |
| 8437.00 | 1-Loan originated | 1 |
| 4301.02 | 1-Loan originated | 1 |
| 801.00 | 3-Application denied | 1 |
| 407.00 | 3-Application denied | 3 |
| 818.00 | 3-Application denied | 1 |
| 8316.00 | 3-Application denied | 1 |
| 1710.00 | 3-Application denied | 1 |
| 3009.00 | 3-Application denied | 1 |
| 818.00 | 3-Application denied | 1 |
| 603.00 | 3-Application denied | 3 |
| 1502.00 | 3-Application denied | 3 |
| 7402.00 | 3-Application denied | 1 |
| 2408.00 | 3-Application denied | 2 |
| 5807.00 | 6 -Purchased loan | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 3-Veterans Affairs guaranteed (VA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 32-Cash Out |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |


| 2-Not an open-end line of credit | 604000 | 20220202 | 3.625 | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 680000 | 20220509 | 4.625 | 360 |
| 2-Not an open-end line of credit | 847000 | 20211216 | 3.375 | 360 |
| 2-Not an open-end line of credit | 1184000 | NA | 5.75 | 360 |
| 2-Not an open-end line of credit | 500400 | 20220808 | 5.49 | 360 |
| 2-Not an open-end line of credit | 148335 | 20220823 | 5.99 | 360 |
| 2-Not an open-end line of credit | 420000 | 20211122 | 2.875 | 240 |
| 2-Not an open-end line of credit | 776000 | 20220617 | 4.99 | 360 |
| 2-Not an open-end line of credit | 205000 | NA | 5.775 | 360 |
| 2-Not an open-end line of credit | 2000000 | 20220307 | 3.125 | 360 |
| 2-Not an open-end line of credit | 520374.51 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 284000 | 20220311 | 4.75 | 360 |
| 2-Not an open-end line of credit | 474000 | 20211216 | 2.375 | 360 |
| 2-Not an open-end line of credit | 192900 | 20220418 | 5.375 | 360 |
| 2-Not an open-end line of credit | 120000 | 20220425 | 5.25 | 360 |
| 2-Not an open-end line of credit | 417000 | 20220912 | NA | 360 |
| 2-Not an open-end line of credit | 358000 | 20211209 | 2.875 | 240 |
| 2-Not an open-end line of credit | 286150 | NA | 2.99 | 360 |
| 2-Not an open-end line of credit | 500000 | 20211028 | NA | 180 |
| 2-Not an open-end line of credit | 86250 | 20211206 | 3.375 | 360 |
| 2-Not an open-end line of credit | 243200 | 20220728 | 4.875 | 180 |
| 2-Not an open-end line of credit | 190639 | 20220309 | 3.99 | 180 |
| 2-Not an open-end line of credit | 326250 | 20220726 | 5.5 | 360 |
| 2-Not an open-end line of credit | 675000 | 20211206 | 2.5 | 360 |
| 2-Not an open-end line of credit | 180000 | 20211102 | 5.25 | 180 |
| 2-Not an open-end line of credit | 170500 | 20211105 | 3.49 | 360 |
| 2-Not an open-end line of credit | 230000 | 20221010 | 7 | 360 |
| 2-Not an open-end line of credit | 76000 | 20220914 | NA | 360 |
| 2-Not an open-end line of credit | 341600 | 20220425 | NA | 360 |
| 2-Not an open-end line of credit | 194750 | 20220425 | NA | 360 |
| 2-Not an open-end line of credit | 242500 | 20220706 | NA | 360 |
| 2-Not an open-end line of credit | 232000 | 20220314 | NA | 180 |
| 2-Not an open-end line of credit | 142000 | 20220525 | NA | 360 |
| 2-Not an open-end line of credit | 156000 | NA | 4.75 | 360 |
| 2-Not an open-end line of credit | 81552 | 20220126 | 3.75 | 360 |
| 2-Not an open-end line of credit | 331550 | 20211223 | 3.125 | 360 |
| 2-Not an open-end line of credit | 179500 | 20211130 | 2.5 | 240 |
| 2-Not an open-end line of credit | 216000 | 20220222 | 4.75 | 360 |
| 2-Not an open-end line of credit | 249024 | 20211012 | 3.25 | 360 |
| 2-Not an open-end line of credit | 208905 | NA | 5.25 | 360 |
| 2-Not an open-end line of credit | 168750 | 20220525 | 5.625 | 360 |
| 2-Not an open-end line of credit | 250381 | 20220603 | 4.625 | 360 |
| 2-Not an open-end line of credit | 314204 | 20220429 | 5.375 | 360 |
| 2-Not an open-end line of credit | 372000 | 20220509 | 4.99 | 360 |
| 2-Not an open-end line of credit | 121250 | NA | 5.525 | 360 |
| 2-Not an open-end line of credit | 139700 | 20211217 | 3.375 | 360 |
| 2-Not an open-end line of credit | 141600 | 20220425 | 5.125 | 360 |
| 2-Not an open-end line of credit | 510000 | 20220724 | NA | 360 |
| 2-Not an open-end line of credit | 380000 | 20220127 | NA | 180 |
| 2-Not an open-end line of credit | 1062600 | 20220906 | NA | 360 |
| 2-Not an open-end line of credit | 256384 | 20220304 | NA | 300 |
| 2-Not an open-end line of credit | 329913 | 20220126 | NA | 360 |
| 2-Not an open-end line of credit | 154125 | 20220521 | NA | 360 |
| 2-Not an open-end line of credit | 250000 | 20220318 | NA | 360 |
| 2-Not an open-end line of credit | 720000 | 20220412 | NA | 360 |
| 2-Not an open-end line of credit | 544946 | 20220511 | NA | 360 |
| 2-Not an open-end line of credit | 227525 | 20220215 | NA | 360 |
| 2-Not an open-end line of credit | 244000 | 20220407 | NA | 360 |
| 2-Not an open-end line of credit | 193806.87 | NA | 6 | 360 |


| NA | 1-Secured by a first lien | 755000 | 80 |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 850000 | 80 |
| NA | 1-Secured by a first lien | 1520000 | 56 |
| NA | 1-Secured by a first lien | 1480000 | NA |
| NA | 1-Secured by a first lien | 556000 | 90 |
| NA | 1-Secured by a first lien | 145000 | 100 |
| NA | 1-Secured by a first lien | 600000 | 70 |
| NA | 1-Secured by a first lien | 970000 | 80 |
| NA | 1-Secured by a first lien | 355000 | NA |
| NA | 1-Secured by a first lien | 2500000 | 80 |
| NA | 1-Secured by a first lien | 695000 | NA |
| NA | 1-Secured by a first lien | 378750 | 75 |
| NA | 1-Secured by a first lien | 995000 | 48 |
| NA | 1-Secured by a first lien | 325000 | 60 |
| NA | 1-Secured by a first lien | 130000 | 93 |
| NA | 1-Secured by a first lien | 480000 | 87 |
| NA | 1-Secured by a first lien | 680000 | 53 |
| NA | 1-Secured by a first lien | 295000 | NA |
| NA | 1-Secured by a first lien | 1195232 | 42 |
| NA | 1-Secured by a first lien | 115000 | 75 |
| NA | 1-Secured by a first lien | 315500 | 78 |
| NA | 1-Secured by a first lien | 340000 | 57 |
| NA | 1-Secured by a first lien | 435000 | 75 |
| NA | 1-Secured by a first lien | 900000 | 75 |
| NA | 1-Secured by a first lien | 469000 | 39 |
| NA | 1-Secured by a first lien | 300000 | 57 |
| NA | 1-Secured by a first lien | 330000 | 70 |
| NA | 1-Secured by a first lien | 165000 | 47 |
| NA | 1-Secured by a first lien | 488000 | 70 |
| NA | 1-Secured by a first lien | 205000 | 95 |
| NA | 1-Secured by a first lien | 250000 | 97 |
| NA | 1-Secured by a first lien | 390000 | 60 |
| NA | 1-Secured by a first lien | 248100 | 58 |
| NA | 1-Secured by a first lien | 195000 | NA |
| NA | 1-Secured by a first lien | 225000 | 35.62 |
| NA | 1-Secured by a first lien | 349000 | 95 |
| NA | 1-Secured by a first lien | 255000 | 71 |
| NA | 1-Secured by a first lien | 225000 | 96 |
| NA | 1-Secured by a first lien | 425000 | 59 |
| NA | 1-Secured by a first lien | 219900 | NA |
| NA | 1-Secured by a first lien | 225000 | 75 |
| NA | 1-Secured by a first lien | 255000 | 96.5 |
| NA | 1-Secured by a first lien | 320000 | 96.5 |
| NA | 1-Secured by a first lien | 465000 | 80 |
| NA | 1-Secured by a first lien | 125000 | NA |
| NA | 1-Secured by a first lien | 293300 | 48 |
| NA | 1-Secured by a first lien | 177000 | 80 |
| NA | 1-Secured by a first lien | 850000 | 60 |
| NA | 1-Secured by a first lien | 950000 | 40 |
| NA | 1-Secured by a first lien | 1610000 | 66 |
| NA | 1-Secured by a first lien | 365000 | 69.03 |
| NA | 1-Secured by a first lien | 336000 | 96.5 |
| NA | 1-Secured by a first lien | 250000 | 62 |
| NA | 1-Secured by a first lien | 312500 | 80 |
| NA | 1-Secured by a first lien | 900000 | 80 |
| NA | 1-Secured by a first lien | 555000 | 96.5 |
| NA | 1-Secured by a first lien | 285000 | 80 |
| NA | 1-Secured by a first lien | 305000 | 80 |
| NA | 1 -Secured by a first lien | 200000 | NA |


|  | 10-Not applicable |
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|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 9-Other |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 1-Debt-to-income ratio |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 1-Debt-to-income ratio |
|  | 1-Debt-to-income ratio |
|  | 1-Debt-to-income ratio |
|  | 3-Credit history |
|  | 4-Collateral |
|  | 9-Other |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
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|  | 10-Not applicable |
|  | 2-Employment history |
|  | 2-Employment history |
|  | 4-Collateral |
|  | 1-Debt-to-income ratio |
|  | 1-Debt-to-income ratio |
|  | 3-Credit history |
|  | 4-Collateral |
|  | 6-Unverifiable information |
|  | 9-Other |
|  | 9-Other |
|  | 9-Other |
|  | 10-Not applicable |


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| 5-Insufficient cash (downpayment, closing costs) | - |
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| 1-Debt-to-income ratio | - |
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| 5-Insufficient cash (downpayment, closing costs) | - |
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| 6-Information not provided by applicant in mail, internet, or telephone application |
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| 6-Information not provided by applicant in mail, internet, or telephone application |
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| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 2-Asian |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 21-Asian Indian |
| 21-Asian Indian |
| 23-Filipino |
| 23-Filipino |
| 5-White |
| 25-Korean |
| 8-No co-applicant |
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| 5-No co-applicant |  |
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| 3-Information not provided by applicant in mail, internet, or telephone application |
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| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 14-Other Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
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| 14-Other Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
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| 1-Hispanic or Latino |
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| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 14-Other Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 11-Mexican |
| 1-Hispanic or Latino |
| 11-Mexican |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |




|  | 3-Information not provided by applicant in mail, internet, or telephone application |
| :---: | :---: |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 14-Other Hispanic or Latino |
|  | 5-No co-applicant |
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| 1911.00 | 1-Loan originated | 4 |
| :--- | :--- | :--- |
| 3017.02 | 6-Purchased loan | 2 |
| 6605.00 | 1-Loan originated | 1 |
| 5608.00 | 1-Loan originated | 1 |
| 3206.00 | 1-Loan originated | 1 |
| 2109.00 | 1-Loan originated | 2 |
| 1609.00 | 1-Loan originated | 2 |
| 6202.00 | 1-Loan originated | 1 |
| 2406.00 | 1-Loan originated | 1 |
| 1203.00 | 1-Loan originated | 1 |
| 2429.00 | 1-Loan originated | 1 |
| 2422.00 | 1-Loan originated | 1 |
| 508.00 | 1-Loan originated | 3 |
| 310.00 | 6-Purchased loan | 1 |
| 1508.00 | 6-Purchased loan | 2 |
| 1607.00 | 1-Loan originated | 1 |
| 102.01 | 6-Purchased loan | 1 |
| 1704.00 | 1-Loan originated | 1 |
| 8422.00 | 1-Loan originated | 1 |
| 2211.00 | 6-Purchased loan | 1 |
| 506.00 | 6-Purchased loan | 1 |
| 5703.00 | 1-Loan originated | 2 |
| 6122.00 | 1-Loan originated | 2 |
| 2101.00 | 1-Loan originated | 1 |
| 1007.00 | 1-Loan originated | 1 |
| 2101.00 | 1-Loan originated | 1 |
| 5610.00 | 6-Purchased loan | 1 |
| 8371.00 | 6-Purchased loan | 3 |
| 5501.00 | 6-Purchased loan | 1 |
| 6714.00 | 1-Loan originated | 1 |
| 404.01 | 1-Loan originated | 1 |
| 2827.00 | 6-Purchased loan | 1 |
| 102.02 | 6-Purchased loan | 1 |
| 308.00 | 6-Purchased loan | 1 |
| 615.00 | 6-Purchased loan | 2 |
| 8391.00 | 1-Loan originated | 1 |
| 1701.00 | 1-Loan originated | 1 |
| 7403.00 | 1-Loan originated | 1 |
| 1906.01 | 6-Purchased loan | 1 |
| 814.02 | 1-Loan originated | 1 |
| 703.00 | 1-Loan originated | 1 |
| 5205.00 | 1-Loan originated | 1 |
| 104.00 | 1-Loan originated | 1 |
| 2412.00 | 1-Loan originated | 2 |
| 301.01 | 1-Loan originated | 1 |
| 2505.00 | 6-Purchased loan | 1 |
| 3104.00 | 1-Loan originated | 1 |
| 8326.00 | 1-Loan originated | 1 |
| 1506.00 | 1-Loan originated | 1 |
| 1801.00 | 1-Loan originated | 1 |
| 513.00 | 1-Loan originated | 1 |
| 8431.00 | 1-Loan originated | 1 |
| 818.00 | 6-Purchased loan | 1 |
| 634.00 | 1-Loan originated | 1 |
| 204.00 | 1-Loan originated | 1 |
| 7708.00 | 1-Loan originated | 1 |
| 8326.00 | 1-Loan originated | 1 |
| 302.00 | 1-Loan originated | 1 |
|  |  |  |


| AS, or FSA) | 1-Home Purchase |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchas |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchas |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improv |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31- |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31- |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purch |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purch |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purch |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home P |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Pu |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | me |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purcha |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purch |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improveme |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |


| 2-Not an open-end line of credit | 368000 | 20220722 | 5.49 | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 187000 | NA | 3.375 | 240 |
| 2-Not an open-end line of credit | 115000 | 20221107 | 7.49 | 360 |
| 2-Not an open-end line of credit | 212900 | 20211109 | 2.875 | 240 |
| 2-Not an open-end line of credit | 324000 | 20220208 | 3.99 | 360 |
| 2-Not an open-end line of credit | 186500 | 20211018 | 3.25 | 240 |
| 2-Not an open-end line of credit | 405000 | 20211220 | 3.125 | 360 |
| 2-Not an open-end line of credit | 175000 | 20220503 | 4.875 | 360 |
| 2-Not an open-end line of credit | 235650 | 20211214 | 3 | 360 |
| 2-Not an open-end line of credit | 330000 | 20220630 | 5.625 | 360 |
| 2-Not an open-end line of credit | 573256 | 20220118 | 2.75 | 180 |
| 2-Not an open-end line of credit | 331200 | 20211202 | 3.375 | 360 |
| 2-Not an open-end line of credit | 245500 | 20211008 | 3.375 | 120 |
| 2-Not an open-end line of credit | 260000 | NA | 5.375 | 360 |
| 2-Not an open-end line of credit | 270000 | NA | 4.125 | 360 |
| 2-Not an open-end line of credit | 450000 | 20220324 | 3.5 | 180 |
| 2-Not an open-end line of credit | 146250 | NA | 3.75 | 360 |
| 2-Not an open-end line of credit | 142500 | 20220110 | 3.75 | 360 |
| 2-Not an open-end line of credit | 396000 | 20220207 | 4.125 | 360 |
| 2-Not an open-end line of credit | 246525 | NA | 5.375 | 360 |
| 2-Not an open-end line of credit | 1095000 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 229000 | 20220120 | 5.875 | 360 |
| 2-Not an open-end line of credit | 91300 | 20210910 | 3.125 | 180 |
| 2-Not an open-end line of credit | 990250 | 20220617 | 4.99 | 360 |
| 2-Not an open-end line of credit | 100000 | 20220728 | 5.625 | 360 |
| 2-Not an open-end line of credit | 443000 | 20211220 | 2.25 | 180 |
| 2-Not an open-end line of credit | 274500 | NA | 2.75 | 180 |
| 2-Not an open-end line of credit | 487000 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 118000 | NA | 3.75 | 360 |
| 2-Not an open-end line of credit | 112100 | 20220420 | 5.99 | 360 |
| 2-Not an open-end line of credit | 1392000 | 20220105 | 3.375 | 360 |
| 2-Not an open-end line of credit | 192000 | NA | 6.625 | 360 |
| 2-Not an open-end line of credit | 125400 | NA | 5.25 | 360 |
| 2-Not an open-end line of credit | 647200 | NA | 3.75 | 360 |
| 2-Not an open-end line of credit | 599076.19 | NA | 3.625 | 360 |
| 2-Not an open-end line of credit | 185625 | 20220303 | 4 | 360 |
| 2-Not an open-end line of credit | 120000 | 20220524 | 5.125 | 360 |
| 2-Not an open-end line of credit | 190450 | 20211201 | 3.125 | 360 |
| 2-Not an open-end line of credit | 237500 | NA | 5.375 | 360 |
| 2-Not an open-end line of credit | 304000 | 20220313 | 4.375 | 360 |
| 2-Not an open-end line of credit | 337075 | 20220103 | 3.25 | 360 |
| 2-Not an open-end line of credit | 106859 | 20220517 | 5.875 | 360 |
| 2-Not an open-end line of credit | 147000 | 20220321 | 6 | 360 |
| 2-Not an open-end line of credit | 500000 | 20211203 | 3 | 360 |
| 2-Not an open-end line of credit | 324000 | 20220509 | 5.5 | 360 |
| 2-Not an open-end line of credit | 89200 | NA | 3.5 | 360 |
| 2-Not an open-end line of credit | 208000 | 20211202 | 2.875 | 240 |
| 2-Not an open-end line of credit | 1404000 | 20211229 | 3.125 | 300 |
| 2-Not an open-end line of credit | 573750 | 20220613 | 4.875 | 360 |
| 2-Not an open-end line of credit | 315000 | 20220121 | 3.125 | 360 |
| 2-Not an open-end line of credit | 1067500 | 20220209 | 3.625 | 360 |
| 2-Not an open-end line of credit | 244150 | 20220610 | 5.5 | 360 |
| 2-Not an open-end line of credit | 291000 | NA | 4.75 | 360 |
| 2-Not an open-end line of credit | 529000 | 20220826 | 5.5 | 360 |
| 2-Not an open-end line of credit | 99425 | 20220119 | 3.875 | 360 |
| 2-Not an open-end line of credit | 194750 | 20220207 | 3.875 | 360 |
| 2-Not an open-end line of credit | 527200 | 20220112 | 2.625 | 180 |
| 2-Not an open-end line of credit | 75200 | 20211102 | 2.875 | 180 |
| 2-Not an open-end line of credit | 59500 | 20220506 | 6.125 | 360 |


| NA | 1-Secured by a first lien | 460000 | 80 |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 220000 | NA |
| NA | 1-Secured by a first lien | 210000 | 55 |
| NA | 1-Secured by a first lien | 480000 | 45 |
| NA | 1-Secured by a first lien | 405000 | 80 |
| NA | 1-Secured by a first lien | 490000 | 49 |
| NA | 1-Secured by a first lien | 540000 | 75 |
| NA | 1-Secured by a first lien | 250000 | 70 |
| NA | 1-Secured by a first lien | 375000 | 63 |
| NA | 1-Secured by a first lien | 915000 | 37 |
| NA | 1-Secured by a first lien | 1330000 | 44 |
| NA | 1-Secured by a first lien | 631000 | 53 |
| NA | 1-Secured by a first lien | 870000 | 29 |
| NA | 1-Secured by a first lien | 325000 | NA |
| NA | 1-Secured by a first lien | 393000 | NA |
| NA | 1-Secured by a first lien | 570000 | 79 |
| NA | 1-Secured by a first lien | 162500 | NA |
| NA | 1-Secured by a first lien | 190000 | 75 |
| NA | 1-Secured by a first lien | 470000 | 85 |
| NA | 1-Secured by a first lien | 259500 | NA |
| NA | 1-Secured by a first lien | 1530000 | NA |
| NA | 1-Secured by a first lien | 379000 | 61 |
| NA | 1-Secured by a first lien | 155000 | 59 |
| NA | 1-Secured by a first lien | 1165000 | 85 |
| NA | 1-Secured by a first lien | 125000 | 80 |
| NA | 1-Secured by a first lien | 700000 | 64 |
| NA | 1-Secured by a first lien | 345000 | NA |
| NA | 1-Secured by a first lien | 615000 | NA |
| NA | 1-Secured by a first lien | 200000 | NA |
| NA | 1-Secured by a first lien | 118000 | 95 |
| NA | 1-Secured by a first lien | 1740000 | 80 |
| NA | 1-Secured by a first lien | 240000 | NA |
| NA | 1-Secured by a first lien | 132000 | NA |
| NA | 1-Secured by a first lien | 1788000 | NA |
| NA | 1-Secured by a first lien | 800000 | NA |
| NA | 1-Secured by a first lien | 247500 | 75 |
| NA | 1-Secured by a first lien | 180000 | 67 |
| NA | 1-Secured by a first lien | 395000 | 49 |
| NA | 1-Secured by a first lien | 250000 | NA |
| NA | 1-Secured by a first lien | 380000 | 80 |
| NA | 1-Secured by a first lien | 455000 | 75 |
| NA | 1-Secured by a first lien | 209000 | 52 |
| NA | 1-Secured by a first lien | 210000 | 70 |
| NA | 1-Secured by a first lien | 735000 | 68.02 |
| NA | 1-Secured by a first lien | 360000 | 90 |
| NA | 1-Secured by a first lien | 111500 | NA |
| NA | 1-Secured by a first lien | 290000 | 72 |
| NA | 1-Secured by a first lien | 2300000 | 61.04 |
| NA | 1-Secured by a first lien | 637500 | 90 |
| NA | 1-Secured by a first lien | 450000 | 70 |
| NA | 1-Secured by a first lien | 1525000 | 70 |
| NA | 1-Secured by a first lien | 257000 | 95 |
| NA | 1-Secured by a first lien | 485000 | NA |
| NA | 1-Secured by a first lien | 575000 | 92 |
| NA | 1-Secured by a first lien | 102500 | 97 |
| NA | 1-Secured by a first lien | 205000 | 95 |
| NA | 1-Secured by a first lien | 795000 | 67 |
| NA | 1-Secured by a first lien | 430000 | 18 |
| NA | 1-Secured by a first lien | 76500 | 78 |


|  | 10-Not applicable |
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|  | 10-Not applicable |
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| 819.00 | 1-Loan originated | 1 |
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| 633.02 | 1-Loan originated | 1 |
| 1510.02 | 1-Loan originated | 1 |
| 2505.00 | 1-Loan originated | 1 |
| 605.00 | 1-Loan originated | 1 |
| 8397.00 | 1-Loan originated | 1 |
| 1103.00 | 6-Purchased loan | 1 |
| 512.00 | 1-Loan originated | 1 |
| 706.00 | 6-Purchased loan | 1 |
| 804.00 | 1-Loan originated | 1 |
| 2414.00 | 1-Loan originated | 1 |
| 8428.00 | 6-Purchased loan | 2 |
| 8331.00 | 1-Loan originated | 1 |
| 8331.00 | 1-Loan originated | 1 |
| 309.00 | 1-Loan originated | 1 |
| 1903.00 | 1-Loan originated | 1 |
| 2108.00 | 1-Loan originated | 1 |
| 1605.02 | 6-Purchased loan | 1 |
| 301.02 | 1-Loan originated | 1 |
| 2306.00 | 1-Loan originated | 2 |
| 6201.00 | 1-Loan originated | 1 |
| 7707.00 | 6-Purchased loan | 1 |
| 1405.00 | 1-Loan originated | 1 |
| 2433.00 | 1-Loan originated | 1 |
| 710.00 | 6-Purchased loan | 1 |
| 3405.00 | 1-Loan originated | 1 |
| 1511.00 | 1-Loan originated | 1 |
| 1405.00 | 1-Loan originated | 2 |
| 8324.00 | 1-Loan originated | 1 |
| 705.00 | 1-Loan originated | 1 |
| 625.00 | 1-Loan originated | 1 |
| 8419.00 | 3-Application denied | 1 |
| 1105.01 | 6-Purchased loan | 2 |
| 3301.03 | 1-Loan originated | 1 |
| 713.00 | 1-Loan originated | 1 |
| 107.02 | 1-Loan originated | 2 |
| 5704.00 | 1-Loan originated | 1 |
| 2827.00 | 6-Purchased loan | 1 |
| 1105.02 | 1-Loan originated | 1 |
| 8419.00 | 1-Loan originated | 1 |
| 802.02 | 1-Loan originated | 1 |
| 819.00 | 1-Loan originated | 1 |
| 1902.00 | 1-Loan originated | 4 |
| 3204.00 | 3-Application denied | 1 |
| 2801.00 | 1-Loan originated | 1 |
| 207.01 | 1-Loan originated | 1 |
| 818.00 | 1-Loan originated | 1 |
| 703.00 | 1-Loan originated | 1 |
| 1606.02 | 1-Loan originated | 1 |
| 1906.01 | 1-Loan originated | 1 |
| 8326.00 | 1-Loan originated | 1 |
| 2214.00 | 1-Loan originated | 1 |
| 304.00 | 1-Loan originated | 1 |
| 818.00 | 1-Loan originated | 1 |
| 8323.00 | 1-Loan originated | 1 |
| 2819.00 | 1-Loan originated | 1 |
| 2422.00 | 1-Loan originated | 1 |
| 3201.02 | 1-Loan originated | 1 |
| 209.01 | 6-Purchased loan | 1 |
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| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
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| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
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| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
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| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |


| 2-Not an open-end line of credit | 689150 | 20220209 | 4.125 | 360 |
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| 2-Not an open-end line of credit | 152000 | 20220401 | 6.125 | 360 |
| 2-Not an open-end line of credit | 323000 | 20220130 | 2.625 | 180 |
| 2-Not an open-end line of credit | 358900 | 20220823 | 5 | 360 |
| 2-Not an open-end line of credit | 716000 | 20220307 | 4 | 360 |
| 2-Not an open-end line of credit | 350749 | 20210509 | 5.875 | 360 |
| 2-Not an open-end line of credit | 292500 | NA | 3.375 | 360 |
| 2-Not an open-end line of credit | 680000 | 20220127 | 3.125 | 360 |
| 2-Not an open-end line of credit | 762000 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 1536000 | 20220311 | 4.25 | 360 |
| 2-Not an open-end line of credit | 435000 | 20220121 | 3.25 | 360 |
| 2-Not an open-end line of credit | 226875 | NA | 5.875 | 360 |
| 2-Not an open-end line of credit | 453750 | 20220420 | 4.99 | 360 |
| 2-Not an open-end line of credit | 500000 | 20211209 | 2.625 | 180 |
| 2-Not an open-end line of credit | 246750 | 20220910 | 6.625 | 360 |
| 2-Not an open-end line of credit | 247200 | 20220922 | 5.875 | 360 |
| 2-Not an open-end line of credit | 311500 | 20220907 | 5.375 | 360 |
| 2-Not an open-end line of credit | 265050 | NA | 3.5 | 360 |
| 2-Not an open-end line of credit | 120000 | 20220804 | 5.125 | 360 |
| 2-Not an open-end line of credit | 422209 | 20220120 | 3.625 | 360 |
| 2-Not an open-end line of credit | 332500 | 20220915 | 6.625 | 360 |
| 2-Not an open-end line of credit | 355520.46 | NA | 4.375 | 360 |
| 2-Not an open-end line of credit | 488000 | 20220421 | 5.25 | 360 |
| 2-Not an open-end line of credit | 150000 | 20220131 | 2.75 | 180 |
| 2-Not an open-end line of credit | 460000 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 304900 | 20211028 | 2.365 | 180 |
| 2-Not an open-end line of credit | 296600 | 20211012 | 3.5 | 360 |
| 2-Not an open-end line of credit | 250000 | 20220901 | 6.125 | 360 |
| 2-Not an open-end line of credit | 240000 | 20211209 | 3.25 | 360 |
| 2-Not an open-end line of credit | 649013 | 20210712 | 2.375 | 360 |
| 2-Not an open-end line of credit | 671500 | 20220714 | 4.99 | 360 |
| 2-Not an open-end line of credit | 100000 | 20220601 | NA | 240 |
| 2-Not an open-end line of credit | 252750 | NA | 5.25 | 360 |
| 2-Not an open-end line of credit | 372400 | 20220401 | 4.74 | 360 |
| 2-Not an open-end line of credit | 4200000 | 20220411 | 4.125 | 360 |
| 2-Not an open-end line of credit | 156000 | 20220304 | 3.875 | 360 |
| 2-Not an open-end line of credit | 129340 | 20220403 | 5.25 | 360 |
| 2-Not an open-end line of credit | 279000 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 138000 | 20211213 | 3.125 | 360 |
| 2-Not an open-end line of credit | 208000 | 20221122 | 7.625 | 360 |
| 2-Not an open-end line of credit | 2600000 | 20220421 | 4 | 360 |
| 2-Not an open-end line of credit | 1112000 | 20220527 | 4.375 | 360 |
| 2-Not an open-end line of credit | 487500 | 20220907 | 5.75 | 360 |
| 2-Not an open-end line of credit | 645000 | 20220121 | NA | 180 |
| 2-Not an open-end line of credit | 388000 | 20211216 | 3.375 | 360 |
| 2-Not an open-end line of credit | 340000 | 20220116 | 3.375 | 360 |
| 2-Not an open-end line of credit | 367500 | 20220706 | 5.375 | 360 |
| 2-Not an open-end line of credit | 252200 | 20220531 | 5.625 | 360 |
| 2-Not an open-end line of credit | 150750 | 20220517 | 5.99 | 360 |
| 2-Not an open-end line of credit | 327750 | 20220126 | 3.5 | 360 |
| 2-Not an open-end line of credit | 477000 | 20220629 | 5.875 | 360 |
| 2-Not an open-end line of credit | 450000 | 20220818 | 4.99 | 360 |
| 2-Not an open-end line of credit | 584000 | 20220607 | 5.125 | 360 |
| 2-Not an open-end line of credit | 479750 | 20220124 | 3.75 | 360 |
| 2-Not an open-end line of credit | 424150 | 20220607 | 5.625 | 360 |
| 2-Not an open-end line of credit | 206100 | 20220617 | 6.625 | 360 |
| 2-Not an open-end line of credit | 418100 | 20210905 | 2.75 | 360 |
| 2-Not an open-end line of credit | 238500 | 20220330 | 4.375 | 360 |
| 2-Not an open-end line of credit | 150000 | NA | 5.25 | 180 |


| NA | 1-Secured by a first lien | 770000 | 89.5 |
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| NA | 1-Secured by a first lien | 190000 | 80 |
| NA | 1-Secured by a first lien | 465000 | 70 |
| NA | 1-Secured by a first lien | 370000 | 97 |
| NA | 1-Secured by a first lien | 895000 | 80 |
| NA | 1-Secured by a first lien | 438436 | 80 |
| NA | 1-Secured by a first lien | 325000 | NA |
| NA | 1-Secured by a first lien | 1100000 | 61.81 |
| NA | 1-Secured by a first lien | 1160000 | NA |
| NA | 1-Secured by a first lien | 1920000 | 80 |
| NA | 1-Secured by a first lien | 585000 | 75 |
| NA | 1-Secured by a first lien | 302500 | NA |
| NA | 1-Secured by a first lien | 605000 | 75 |
| NA | 1-Secured by a first lien | 750000 | 67 |
| NA | 1-Secured by a first lien | 329000 | 75 |
| NA | 1-Secured by a first lien | 309000 | 80 |
| NA | 1-Secured by a first lien | 445000 | 70 |
| NA | 1-Secured by a first lien | 285000 | NA |
| NA | 1-Secured by a first lien | 150000 | 80 |
| NA | 1-Secured by a first lien | 430000 | 96.5 |
| NA | 1-Secured by a first lien | 350000 | 95 |
| NA | 1-Secured by a first lien | 460000 | NA |
| NA | 1-Secured by a first lien | 610000 | 80 |
| NA | 1-Secured by a first lien | 540000 | 28 |
| NA | 1-Secured by a first lien | 525000 | NA |
| NA | 1-Secured by a first lien | 650000 | 47 |
| NA | 1-Secured by a first lien | 380000 | 79 |
| NA | 1-Secured by a first lien | 420000 | 60 |
| NA | 1-Secured by a first lien | 300000 | 80 |
| NA | 1-Secured by a first lien | 870000 | 74.59 |
| NA | 1-Secured by a first lien | 790000 | 85 |
| NA | 1-Secured by a first lien | 290000 | 35 |
| NA | 1-Secured by a first lien | 337000 | NA |
| NA | 1-Secured by a first lien | 392000 | 95 |
| NA | 1-Secured by a first lien | 5250000 | 80.000 |
| NA | 1-Secured by a first lien | 450000 | 35 |
| NA | 1-Secured by a first lien | 246000 | 53 |
| NA | 1-Secured by a first lien | 312553 | NA |
| NA | 1-Secured by a first lien | 190000 | 73 |
| NA | 1-Secured by a first lien | 260000 | 80 |
| NA | 1-Secured by a first lien | 3250000 | 80 |
| NA | 1-Secured by a first lien | 1390000 | 80 |
| NA | 1-Secured by a first lien | 650000 | 75 |
| NA | 1-Secured by a first lien | 830000 | 78 |
| NA | 1-Secured by a first lien | 485000 | 80 |
| NA | 1-Secured by a first lien | 425000 | 80 |
| NA | 1-Secured by a first lien | 525000 | 70 |
| NA | 1-Secured by a first lien | 260000 | 97 |
| NA | 1-Secured by a first lien | 201000 | 75 |
| NA | 1-Secured by a first lien | 345000 | 95 |
| NA | 1-Secured by a first lien | 530000 | 90 |
| NA | 1-Secured by a first lien | 600000 | 75 |
| NA | 1-Secured by a first lien | 730000 | 80 |
| NA | 1-Secured by a first lien | 505000 | 95 |
| NA | 1-Secured by a first lien | 499000 | 85 |
| NA | 1-Secured by a first lien | 229000 | 90 |
| NA | 1-Secured by a first lien | 650000 | 65 |
| NA | 1-Secured by a first lien | 477000 | 50 |
| NA | 1-Secured by a first lien | 200000 | NA |


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| 6-Information not provided by applicant in mail, internet, or telephone application |
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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 1-Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 11-Mexican |
|  | 12-Puerto Rican |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 1-Hispanic or Latino |
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| 801.00 | 6-Purchased loan | 1 |
| :---: | :---: | :---: |
| 402.02 | 6-Purchased loan | 3 |
| 1609.00 | 1-Loan originated | 1 |
| 812.01 | 1-Loan originated | 1 |
| 2505.00 | 1-Loan originated | 1 |
| 8339.00 | 6-Purchased loan | 3 |
| 8360.00 | 1-Loan originated | 1 |
| 1203.00 | 1-Loan originated | 1 |
| 1003.00 | 3-Application denied | 1 |
| 8318.00 | 6-Purchased loan | 1 |
| 1611.00 | 1-Loan originated | 1 |
| 302.00 | 6-Purchased loan | 1 |
| 3301.01 | 1-Loan originated | 1 |
| 7402.00 | 6-Purchased loan | 1 |
| 1202.00 | 1-Loan originated | 1 |
| 507.00 | 6-Purchased loan | 1 |
| 6203.00 | 1-Loan originated | 1 |
| 701.01 | 1-Loan originated | 1 |
| 2305.00 | 1-Loan originated | 1 |
| 2215.00 | 1-Loan originated | 1 |
| 301.01 | 1-Loan originated | 1 |
| 626.00 | 1-Loan originated | 1 |
| 810.00 | 1-Loan originated | 1 |
| 1007.00 | 1-Loan originated | 1 |
| 8308.00 | 6-Purchased loan | 1 |
| 8104.00 | 1-Loan originated | 1 |
| 1406.02 | 1-Loan originated | 2 |
| 203.02 | 1-Loan originated | 1 |
| 2423.00 | 1-Loan originated | 1 |
| 2305.00 | 1-Loan originated | 1 |
| 713.00 | 1-Loan originated | 1 |
| 803.00 | 1-Loan originated | 1 |
| 1911.00 | 1-Loan originated | 1 |
| 2422.00 | 1-Loan originated | 1 |
| 319.00 | 1-Loan originated | 1 |
| 2838.00 | 1-Loan originated | 1 |
| 3301.03 | 1-Loan originated | 1 |
| 629.00 | 1-Loan originated | 3 |
| 8322.00 | 1-Loan originated | 1 |
| 817.00 | 1-Loan originated | 1 |
| 2421.00 | 6-Purchased loan | 4 |
| 302.00 | 1-Loan originated | 1 |
| 8430.00 | 1-Loan originated | 1 |
| 406.00 | 1-Loan originated | 1 |
| 5607.00 | 1-Loan originated | 1 |
| 209.02 | 6-Purchased loan | 1 |
| 611.00 | 6-Purchased loan | 1 |
| 706.00 | 6-Purchased loan | 1 |
| 7004.02 | 1-Loan originated | 1 |
| 2511.00 | 1-Loan originated | 1 |
| 8391.00 | 1-Loan originated | 1 |
| 3301.01 | 1-Loan originated | 1 |
| 609.00 | 1-Loan originated | 1 |
| 2912.00 | 6-Purchased loan | 3 |
| 2421.00 | 1-Loan originated | 1 |
| 1911.00 | 1-Loan originated | 2 |
| 1102.00 | 1-Loan originated | 1 |
| 2415.00 | 1-Loan originated | 1 |
| 2421.00 | 1-Loan originated | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |


| 2-Not an open-end line of credit | 588000 | NA | 3.75 | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 412500 | NA | 4.125 | 360 |
| 2-Not an open-end line of credit | 150000 | 20220114 | 3.5 | 240 |
| 2-Not an open-end line of credit | 675000 | 20220330 | 4 | 360 |
| 2-Not an open-end line of credit | 363750 | 20220825 | 6.25 | 360 |
| 2-Not an open-end line of credit | 353479 | NA | 5.75 | 360 |
| 2-Not an open-end line of credit | 351500 | 20220420 | 5.625 | 360 |
| 2-Not an open-end line of credit | 468750 | 20220712 | 5.25 | 360 |
| 2-Not an open-end line of credit | 116000 | 20221004 | NA | 360 |
| 2-Not an open-end line of credit | 541450 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 616000 | 20220114 | 4.75 | 360 |
| 2-Not an open-end line of credit | 189200 | NA | 4.125 | 360 |
| 2-Not an open-end line of credit | 393500 | 20211213 | 2 | 180 |
| 2-Not an open-end line of credit | 160000 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 295000 | 20220106 | 3.49 | 240 |
| 2-Not an open-end line of credit | 674243.63 | NA | 5.375 | 360 |
| 2-Not an open-end line of credit | 204250 | 20220815 | 7 | 360 |
| 2-Not an open-end line of credit | 1080000 | 20211021 | 3.25 | 360 |
| 2-Not an open-end line of credit | 159306 | 20211220 | 3.25 | 360 |
| 2-Not an open-end line of credit | 400000 | 20220228 | 4.125 | 360 |
| 2-Not an open-end line of credit | 123000 | 20221103 | 6.75 | 360 |
| 2-Not an open-end line of credit | 603250 | 20220512 | 5.375 | 360 |
| 2-Not an open-end line of credit | 788000 | 20220418 | 4.375 | 360 |
| 2-Not an open-end line of credit | 98000 | 20220509 | 6.125 | 360 |
| 2-Not an open-end line of credit | 254000 | NA | 4.375 | 360 |
| 2-Not an open-end line of credit | 640000 | 20220208 | 3.5 | 360 |
| 2-Not an open-end line of credit | 510000 | 20220907 | 5.49 | 360 |
| 2-Not an open-end line of credit | 70400 | 20220319 | 4.49 | 180 |
| 2-Not an open-end line of credit | 548250 | 20211214 | 2.75 | 240 |
| 2-Not an open-end line of credit | 243750 | 20220613 | 5.5 | 180 |
| 2-Not an open-end line of credit | 466000 | 20211019 | 2.625 | 360 |
| 2-Not an open-end line of credit | 292563 | 20220201 | 3.75 | 360 |
| 2-Not an open-end line of credit | 272500 | 20220922 | 6.625 | 360 |
| 2-Not an open-end line of credit | 434000 | 20220104 | 3.375 | 360 |
| 2-Not an open-end line of credit | 183000 | 20220622 | 5.875 | 360 |
| 2-Not an open-end line of credit | 377000 | 20220222 | 4.5 | 360 |
| 2-Not an open-end line of credit | 310000 | 20211227 | 2.5 | 180 |
| 2-Not an open-end line of credit | 960000 | 20211223 | 3 | 360 |
| 2-Not an open-end line of credit | 548200 | 20211018 | 3 | 360 |
| 2-Not an open-end line of credit | 226000 | 20220609 | 5.375 | 360 |
| 2-Not an open-end line of credit | 897500 | NA | 3.5 | 360 |
| 2-Not an open-end line of credit | 150000 | 20220831 | 5.75 | 360 |
| 2-Not an open-end line of credit | 493600 | 20220212 | 3.75 | 360 |
| 2-Not an open-end line of credit | 1200000 | 20220309 | 4.25 | 360 |
| 2-Not an open-end line of credit | 341050 | 20211116 | 3.375 | 360 |
| 2-Not an open-end line of credit | 365750 | NA | 4.5 | 360 |
| 2-Not an open-end line of credit | 468118.58 | NA | 4.375 | 360 |
| 2-Not an open-end line of credit | 349999 | NA | 4.875 | 360 |
| 2-Not an open-end line of credit | 111154 | 20211220 | 3.25 | 240 |
| 2-Not an open-end line of credit | 196000 | 20211201 | 3.375 | 360 |
| 2-Not an open-end line of credit | 133500 | 20220131 | 3.125 | 180 |
| 2-Not an open-end line of credit | 355500 | 20220720 | 5.25 | 180 |
| 2-Not an open-end line of credit | 133970 | 20211223 | 2.75 | 180 |
| 2-Not an open-end line of credit | 380000 | NA | 6.125 | 360 |
| 2-Not an open-end line of credit | 378480 | 20211122 | 3.25 | 360 |
| 2-Not an open-end line of credit | 320000 | 20220127 | 3.75 | 360 |
| 2-Not an open-end line of credit | 209600 | 20220225 | 5.375 | 360 |
| 2-Not an open-end line of credit | 528200 | 20220728 | 4.875 | 360 |
| 2-Not an open-end line of credit | 310000 | 20220411 | 5 | 360 |


| NA | 1-Secured by a first lien | 735000 | NA |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 550000 | NA |
| NA | 1-Secured by a first lien | 465000 | 33 |
| NA | 1-Secured by a first lien | 1675000 | 40.29 |
| NA | 1-Secured by a first lien | 375000 | 97 |
| NA | 1-Secured by a first lien | 360000 | NA |
| NA | 1-Secured by a first lien | 370000 | 95 |
| NA | 1-Secured by a first lien | 625000 | 75 |
| NA | 1-Secured by a first lien | 145000 | 80 |
| NA | 1-Secured by a first lien | 637000 | NA |
| NA | 1-Secured by a first lien | 770000 | 80 |
| NA | 1-Secured by a first lien | 236500 | NA |
| NA | 1-Secured by a first lien | 1557000 | 26 |
| NA | 1-Secured by a first lien | 200000 | NA |
| NA | 1-Secured by a first lien | 455000 | 65 |
| NA | 1-Secured by a first lien | 900000 | NA |
| NA | 1-Secured by a first lien | 215000 | 95 |
| NA | 1-Secured by a first lien | 1350000 | 80 |
| NA | 1-Secured by a first lien | 365000 | 44 |
| NA | 1-Secured by a first lien | 725000 | 56 |
| NA | 1-Secured by a first lien | 246000 | 50 |
| NA | 1-Secured by a first lien | 635000 | 95 |
| NA | 1-Secured by a first lien | 985000 | 80 |
| NA | 1-Secured by a first lien | 390000 | 26 |
| NA | 1-Secured by a first lien | 317500 | NA |
| NA | 1-Secured by a first lien | 800000 | 80 |
| NA | 1-Secured by a first lien | 600000 | 85 |
| NA | 1-Secured by a first lien | 183000 | 39 |
| NA | 1-Secured by a first lien | 995000 | 56 |
| NA | 1-Secured by a first lien | 375000 | 65 |
| NA | 1-Secured by a first lien | 1000000 | 47 |
| NA | 1-Secured by a first lien | 410000 | 72 |
| NA | 1-Secured by a first lien | 312500 | 88 |
| NA | 1-Secured by a first lien | 570000 | 77 |
| NA | 1-Secured by a first lien | 290000 | 64 |
| NA | 1-Secured by a first lien | 430000 | 88 |
| NA | 1-Secured by a first lien | 403000 | 77 |
| NA | 1-Secured by a first lien | 1543000 | 63 |
| NA | 1-Secured by a first lien | 865000 | 64 |
| NA | 1-Secured by a first lien | 452000 | 50 |
| NA | 1-Secured by a first lien | 1220000 | NA |
| NA | 1-Secured by a first lien | 602000 | 25 |
| NA | 1-Secured by a first lien | 617000 | 80 |
| NA | 1-Secured by a first lien | 1630000 | 73.61 |
| NA | 1-Secured by a first lien | 359000 | 95 |
| NA | 1-Secured by a first lien | 385000 | NA |
| NA | 1-Secured by a first lien | 625000 | NA |
| NA | 1-Secured by a first lien | 499999 | NA |
| NA | 1-Secured by a first lien | 220000 | 51 |
| NA | 1-Secured by a first lien | 245000 | 80 |
| NA | 1-Secured by a first lien | 375000 | 36 |
| NA | 1-Secured by a first lien | 395000 | 90 |
| NA | 1-Secured by a first lien | 195000 | 69 |
| NA | 1-Secured by a first lien | 400000 | NA |
| NA | 1-Secured by a first lien | 398400 | 95 |
| NA | 1-Secured by a first lien | 400000 | 80 |
| NA | 1-Secured by a first lien | 262000 | 80 |
| NA | 1-Secured by a first lien | 999999 | 53 |
| NA | 1-Secured by a first lien | 460000 | 68 |


|  | 10-Not applicable |
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|  | 10-Not applicable |
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|  | 9-Other |
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| 2-Asian 2-Asian |  |
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| 3-Black or African American |  |
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| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 21-Asian Indian |  |
| 21-Asian Indian |  |
| 25-Korean |  |
| 3-Black or African American |  |
| 5-White |  |
| 5-White |  |
| 5-White |  |
| 6-Information not provided by applicant in mail, internet, or telephone application 2-Asian |  |
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| 25-Korean | - | - |
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| 26-Vietnamese | - | - |
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| 8-No co-applicant |
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| 8-No co-applicant |
| 2-Asian |
| 3-Black or African American |
| 3-Black or African American |
| 3-Black or African American |
| 3-Black or African American |
| 2-Asian |
| 5-White |
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| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 5-White |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 5-White |
| 21-Asian Indian |
| 5-White |
| 3-Black or African American |
| 5-White |
| 5-White |
| 5-White |
| 5-White |
| 8-No co-applicant |





| 5-No co-applicant5-No co-applicant |  |  |  |
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| 1-Male |  |  |  |
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| 2-Female |  |  |  |
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| 5-No co-applicant |  |  |  |


| 2-Not Hispanic or Latino |
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| 2-Not Hispanic or Latino |
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| 1-Hispanic or Latino |
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| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 11-Mexican |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |




| 5-No co-applicant |
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| 5-No co-applicant |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
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| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 11-Mexican |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
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| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
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| 2-Not Hispanic or Latino |
| 5-No co-applicant |


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| 2222.00 | 1-Loan originated | 1 |
| :---: | :---: | :---: |
| 814.03 | 1-Loan originated | 1 |
| 1407.02 | 1-Loan originated | 1 |
| 101.00 | 1-Loan originated | 1 |
| 1003.00 | 1-Loan originated | 1 |
| 2414.00 | 1-Loan originated | 1 |
| 2434.00 | 1-Loan originated | 2 |
| 814.03 | 1-Loan originated | 1 |
| 102.02 | 3-Application denied | 1 |
| 3301.03 | 3-Application denied | 1 |
| 5303.00 | 3-Application denied | 1 |
| 2909.00 | 3-Application denied | 1 |
| 2409.00 | 3-Application denied | 2 |
| 8395.00 | 6-Purchased loan | 1 |
| 4805.00 | 1-Loan originated | 1 |
| 8381.00 | 1-Loan originated | 1 |
| 8436.00 | 1-Loan originated | 1 |
| 103.00 | 6-Purchased loan | 1 |
| 1105.02 | 1-Loan originated | 1 |
| 4408.00 | 1-Loan originated | 1 |
| 6607.00 | 1-Loan originated | 1 |
| 3301.01 | 1-Loan originated | 1 |
| 8330.00 | 1-Loan originated | 1 |
| 321.00 | 1-Loan originated | 1 |
| 7306.00 | 1-Loan originated | 1 |
| 8364.00 | 1-Loan originated | 1 |
| 5303.00 | 1-Loan originated | 1 |
| 8344.00 | 1-Loan originated | 1 |
| 701.03 | 6-Purchased loan | 1 |
| 7505.00 | 1-Loan originated | 1 |
| 8316.00 | 6-Purchased loan | 1 |
| 8390.00 | 6-Purchased loan | 1 |
| 8343.00 | 1-Loan originated | 1 |
| 6814.00 | 1-Loan originated | 1 |
| 4601.00 | 1-Loan originated | 2 |
| 8373.00 | 6-Purchased loan | 1 |
| 2831.00 | 1-Loan originated | 1 |
| 7307.00 | 6-Purchased loan | 1 |
| 2311.00 | 3-Application denied | 2 |
| 1508.00 | 3-Application denied | 2 |
| 7502.00 | 3-Application denied | 3 |
| 1606.02 | 3-Application denied | 1 |
| 107.02 | 3-Application denied | 1 |
| 2416.00 | 3-Application denied | 1 |
| 514.00 | 3-Application denied | 1 |
| 301.03 | 1-Loan originated | 1 |
| 7707.00 | 6-Purchased loan | 1 |
| 5703.00 | 6-Purchased loan | 1 |
| 6201.00 | 1-Loan originated | 1 |
| 2315.00 | 6-Purchased loan | 2 |
| 1512.00 | 6-Purchased loan | 1 |
| 2004.02 | 6-Purchased loan | 3 |
| 1508.00 | 6-Purchased loan | 3 |
| 627.00 | 6-Purchased loan | 1 |
| 1201.00 | 6-Purchased loan | 1 |
| 7608.02 | 1-Loan originated | 1 |
| 2307.00 | 1-Loan originated | 2 |
| 817.00 | 1-Loan originated | 1 |
| 802.01 | 1-Loan originated | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purcha |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 3-Veterans Affairs guaranteed (VA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improvement |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |


| 2-Not an open-end line of credit | 436000 | 20211220 | 3.125 | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 279375 | 20220209 | 3.25 | 180 |
| 2-Not an open-end line of credit | 244000 | 20220207 | 2.99 | 180 |
| 2-Not an open-end line of credit | 129706 | 20211220 | 3.125 | 240 |
| 2-Not an open-end line of credit | 182500 | 20220114 | 2.75 | 180 |
| 2-Not an open-end line of credit | 257500 | 20220427 | 3 | 180 |
| 2-Not an open-end line of credit | 237500 | 20220111 | 3.75 | 180 |
| 2-Not an open-end line of credit | 233600 | 20220816 | 5.99 | 360 |
| 2-Not an open-end line of credit | 157500 | 20220329 | NA | 360 |
| 2-Not an open-end line of credit | 294403 | 20221028 | NA | 360 |
| 2-Not an open-end line of credit | 237650 | 20220516 | NA | 360 |
| 2-Not an open-end line of credit | 235653 | 20220418 | NA | 360 |
| 2-Not an open-end line of credit | 206045 | 20211221 | NA | 360 |
| 2-Not an open-end line of credit | 236500 | NA | 3.75 | 360 |
| 2-Not an open-end line of credit | 125000 | 20210907 | 2.99 | 360 |
| 2-Not an open-end line of credit | 227050 | 20220502 | 5.25 | 360 |
| 2-Not an open-end line of credit | 495000 | 20211116 | 3.375 | 300 |
| 2-Not an open-end line of credit | 180203.3 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 124800 | 20221020 | 7.125 | 360 |
| 2-Not an open-end line of credit | 121400 | 20221024 | 5.99 | 360 |
| 2-Not an open-end line of credit | 237500 | 20220922 | 6.125 | 360 |
| 2-Not an open-end line of credit | 280000 | 20220613 | 4.99 | 180 |
| 2-Not an open-end line of credit | 712000 | 20211122 | 2.625 | 360 |
| 2-Not an open-end line of credit | 380000 | 20220425 | 5.375 | 360 |
| 2-Not an open-end line of credit | 211200 | 20220830 | 7.125 | 360 |
| 2-Not an open-end line of credit | 468750 | 20220718 | 5.625 | 360 |
| 2-Not an open-end line of credit | 203603 | 20221021 | 7.875 | 360 |
| 2-Not an open-end line of credit | 302890 | 20211028 | 3.25 | 360 |
| 2-Not an open-end line of credit | 232000 | NA | 3.675 | 360 |
| 2-Not an open-end line of credit | 71380 | 20220119 | 4.75 | 300 |
| 2-Not an open-end line of credit | 246050 | NA | 3.75 | 360 |
| 2-Not an open-end line of credit | 230850 | NA | 5.625 | 360 |
| 2-Not an open-end line of credit | 63500 | 20220218 | 3.99 | 360 |
| 2-Not an open-end line of credit | 48500 | 20211026 | 3.5 | 360 |
| 2-Not an open-end line of credit | 211105 | 20220902 | 6.25 | 360 |
| 2-Not an open-end line of credit | 223250 | NA | 5 | 360 |
| 2-Not an open-end line of credit | 381700 | 20220320 | 5.125 | 360 |
| 2-Not an open-end line of credit | 161500 | NA | 3.65 | 360 |
| 2-Not an open-end line of credit | 265000 | 20210909 | NA | 360 |
| 2-Not an open-end line of credit | 409447 | 20220506 | NA | 360 |
| 2-Not an open-end line of credit | 380000 | 20221122 | NA | 360 |
| 2-Not an open-end line of credit | 200500 | 20220315 | NA | 360 |
| 2-Not an open-end line of credit | 153657 | 20220225 | NA | 180 |
| 2-Not an open-end line of credit | 608000 | 20220429 | NA | 360 |
| 2-Not an open-end line of credit | 492000 | 20220929 | NA | 360 |
| 2-Not an open-end line of credit | 135800 | 20220113 | 3.75 | 360 |
| 2-Not an open-end line of credit | 129200 | NA | 5.875 | 360 |
| 2-Not an open-end line of credit | 247200 | NA | 6.75 | 360 |
| 2-Not an open-end line of credit | 238700 | 20220823 | 6.125 | 360 |
| 2-Not an open-end line of credit | 416320 | NA | 5.75 | 360 |
| 2-Not an open-end line of credit | 380000 | NA | 4.125 | 360 |
| 2-Not an open-end line of credit | 350533 | NA | 5.5 | 360 |
| 2-Not an open-end line of credit | 427500 | NA | 4.5 | 360 |
| 2-Not an open-end line of credit | 388125 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 299517.46 | NA | 3.375 | 360 |
| 2-Not an open-end line of credit | 85000 | 20220831 | 6.125 | 360 |
| 2-Not an open-end line of credit | 38500 | 20220708 | 5.5 | 120 |
| 2-Not an open-end line of credit | 204000 | 20220527 | 5.375 | 360 |
| 2-Not an open-end line of credit | 82126 | 20220208 | 3.75 | 180 |


| NA | 1-Secured by a first lien | 545000 | 80 |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 372500 | 75 |
| NA | 1-Secured by a first lien | 305000 | 80 |
| NA | 1-Secured by a first lien | 220000 | 59 |
| NA | 1-Secured by a first lien | 375900 | 49 |
| NA | 1-Secured by a first lien | 500000 | 52 |
| NA | 1-Secured by a first lien | 475000 | 50 |
| NA | 1-Secured by a first lien | 292000 | 80 |
| NA | 1-Secured by a first lien | 169000 | 94 |
| NA | 1-Secured by a first lien | 404000 | 73 |
| NA | 1-Secured by a first lien | 245000 | 104 |
| NA | 1-Secured by a first lien | 240000 | 96.5 |
| NA | 1-Secured by a first lien | 610000 | 34 |
| NA | 1-Secured by a first lien | 280000 | NA |
| NA | 1-Secured by a first lien | 145000 | 87 |
| NA | 1-Secured by a first lien | 239000 | 95 |
| NA | 1-Secured by a first lien | 647000 | 77 |
| NA | 1-Secured by a first lien | 190000 | NA |
| NA | 1-Secured by a first lien | 156000 | 80 |
| NA | 1-Secured by a first lien | 153000 | 80 |
| NA | 1-Secured by a first lien | 250000 | 95 |
| NA | 1-Secured by a first lien | 405000 | 70 |
| NA | 1-Secured by a first lien | 890000 | 80 |
| NA | 1-Secured by a first lien | 475000 | 80 |
| NA | 1-Secured by a first lien | 220000 | 96 |
| NA | 1-Secured by a first lien | 625000 | 75 |
| NA | 1-Secured by a first lien | 209900 | 97 |
| NA | 1-Secured by a first lien | 500000 | 61 |
| NA | 1-Secured by a first lien | 290000 | NA |
| NA | 1-Secured by a first lien | 125000 | 58 |
| NA | 1-Secured by a first lien | 259000 | NA |
| NA | 1-Secured by a first lien | 243000 | NA |
| NA | 1-Secured by a first lien | 210000 | 31 |
| NA | 1-Secured by a first lien | 50000 | 97 |
| NA | 1-Secured by a first lien | 215000 | 96.5 |
| NA | 1-Secured by a first lien | 235000 | NA |
| NA | 1-Secured by a first lien | 505000 | 76 |
| NA | 1-Secured by a first lien | 170000 | NA |
| NA | 1-Secured by a first lien | 265000 | 100 |
| NA | 1-Secured by a first lien | 417000 | 96.5 |
| NA | 1-Secured by a first lien | 480000 | 80 |
| NA | 1-Secured by a first lien | 290000 | 70 |
| NA | 1-Secured by a first lien | 186000 | 83 |
| NA | 1-Secured by a first lien | 730000 | 84 |
| NA | 1-Secured by a first lien | 585000 | 85 |
| NA | 1-Secured by a first lien | 140000 | 97 |
| NA | 1-Secured by a first lien | 136000 | NA |
| NA | 1-Secured by a first lien | 309000 | NA |
| NA | 1-Secured by a first lien | 253000 | 95 |
| NA | 1-Secured by a first lien | 424000 | NA |
| NA | 1-Secured by a first lien | 400000 | NA |
| NA | 1-Secured by a first lien | 357000 | NA |
| NA | 1-Secured by a first lien | 450000 | NA |
| NA | 1-Secured by a first lien | 517500 | NA |
| NA | 1-Secured by a first lien | 395000 | NA |
| NA | 1-Secured by a first lien | 100000 | 85 |
| NA | 1-Secured by a first lien | 365000 | 11 |
| NA | 1-Secured by a first lien | 272000 | 75 |
| NA | 1-Secured by a first lien | 187000 | 44 |


|  | 10-Not applicable |
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|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 4-Collateral |
|  | 1-Debt-to-income ratio |
|  | 3-Credit history |
|  | 1-Debt-to-income ratio |
|  | 4-Collateral |
|  | 10-Not applicable |
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|  | 4-Collateral |
|  | 2-Employment history |
|  | 6-Unverifiable information |
|  | 1-Debt-to-income ratio |
|  | 4-Collateral |
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|  | 10-Not applicable |
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| 1-Debt-to-income ratio | - |
| 5-Insufficient cash (downpayment, closing costs) | - |
| 5-Insufficient cash (downpayment, closing costs) | - |
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| 1-Debt-to-income ratio | 5-Insufficient cash (downpayment, closing costs) |
| 1-Debt-to-income ratio | - |
| 4-Collateral | 1-Debt-to-income ratio |
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| 2435.00 | 6-Purchased loan | 1 |
| :---: | :---: | :---: |
| 714.00 | 1-Loan originated | 1 |
| 8438.00 | 6-Purchased loan | 1 |
| 1704.00 | 1-Loan originated | 1 |
| 2004.02 | 6-Purchased loan | 1 |
| 8309.00 | 1-Loan originated | 1 |
| 8325.00 | 1-Loan originated | 1 |
| 203.01 | 6-Purchased loan | 1 |
| 713.00 | 1-Loan originated | 1 |
| 5906.00 | 1-Loan originated | 1 |
| 633.02 | 1-Loan originated | 1 |
| 802.01 | 6-Purchased loan | 1 |
| 8420.00 | 6-Purchased loan | 1 |
| 2212.00 | 6-Purchased loan | 1 |
| 7503.00 | 1-Loan originated | 1 |
| 1505.02 | 1-Loan originated | 1 |
| 2909.00 | 1-Loan originated | 2 |
| 5609.00 | 1-Loan originated | 1 |
| 403.00 | 1-Loan originated | 1 |
| 7204.00 | 1-Loan originated | 1 |
| 1906.02 | 1-Loan originated | 1 |
| 622.00 | 1-Loan originated | 1 |
| 1103.00 | 6-Purchased loan | 1 |
| 7002.00 | 1-Loan originated | 1 |
| 208.02 | 1-Loan originated | 1 |
| 508.00 | 1-Loan originated | 1 |
| 6203.00 | 1-Loan originated | 1 |
| 2505.00 | 6-Purchased loan | 1 |
| 5603.00 | 1-Loan originated | 1 |
| 703.00 | 1-Loan originated | 1 |
| 3018.02 | 1-Loan originated | 2 |
| 107.01 | 1-Loan originated | 1 |
| 632.00 | 1-Loan originated | 1 |
| 307.02 | 1-Loan originated | 1 |
| 8422.00 | 1-Loan originated | 1 |
| 8438.00 | 1-Loan originated | 1 |
| 201.00 | 1-Loan originated | 1 |
| 6403.00 | 1-Loan originated | 1 |
| 2309.00 | 1-Loan originated | 1 |
| 814.03 | 1-Loan originated | 1 |
| 8413.00 | 6-Purchased loan | 4 |
| 8438.00 | 6-Purchased loan | 1 |
| 306.04 | 1-Loan originated | 1 |
| 8421.00 | 1-Loan originated | 1 |
| 1407.01 | 1-Loan originated | 1 |
| 3206.00 | 1-Loan originated | 1 |
| 306.01 | 1-Loan originated | 1 |
| 8420.00 | 1-Loan originated | 1 |
| 6103.00 | 1-Loan originated | 1 |
| 305.00 | 6-Purchased loan | 1 |
| 8426.00 | 1-Loan originated | 1 |
| 2207.02 | 1-Loan originated | 2 |
| 634.00 | 1-Loan originated | 1 |
| 6406.00 | 1-Loan originated | 1 |
| 7003.02 | 1-Loan originated | 1 |
| 7206.00 | 1-Loan originated | 1 |
| 107.01 | 1-Loan originated | 1 |
| 1902.00 | 1-Loan originated | 2 |
| 8435.00 | 6-Purchased loan | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |


| 2-Not an open-end line of credit | 288000 | NA | 3.99 | 360 |
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| 2-Not an open-end line of credit | 252000 | 20220421 | 5.375 | 360 |
| 2-Not an open-end line of credit | 187000 | NA | 3.625 | 360 |
| 2-Not an open-end line of credit | 97510 | 20220208 | 4.375 | 360 |
| 2-Not an open-end line of credit | 300700 | NA | 4.5 | 360 |
| 2-Not an open-end line of credit | 128662 | 20211223 | 2.75 | 180 |
| 2-Not an open-end line of credit | 450000 | 20220713 | 4.5 | 240 |
| 2-Not an open-end line of credit | 360000 | NA | 4.875 | 360 |
| 2-Not an open-end line of credit | 445500 | 20220322 | 4.5 | 360 |
| 2-Not an open-end line of credit | 100000 | 20220527 | 5.125 | 360 |
| 2-Not an open-end line of credit | 187000 | 20220503 | 5.875 | 360 |
| 2-Not an open-end line of credit | 165046.41 | NA | 3.25 | 240 |
| 2-Not an open-end line of credit | 132000 | NA | 5.775 | 360 |
| 2-Not an open-end line of credit | 273500 | NA | 3.5 | 360 |
| 2-Not an open-end line of credit | 238000 | 20220125 | 3.75 | 360 |
| 2-Not an open-end line of credit | 167000 | 20211209 | 3.375 | 360 |
| 2-Not an open-end line of credit | 155000 | 20220211 | 4.25 | 360 |
| 2-Not an open-end line of credit | 252000 | 20220425 | 4.75 | 360 |
| 2-Not an open-end line of credit | 198019 | 20220304 | 3.875 | 180 |
| 2-Not an open-end line of credit | 333275 | 20220914 | 6.875 | 360 |
| 2-Not an open-end line of credit | 245471 | 20220808 | 4.75 | 360 |
| 2-Not an open-end line of credit | 820000 | 20220329 | 3.750 | 360 |
| 2-Not an open-end line of credit | 255000 | NA | 3.375 | 360 |
| 2-Not an open-end line of credit | 188910 | 20221026 | 6.125 | 360 |
| 2-Not an open-end line of credit | 254000 | 20211105 | 2.875 | 240 |
| 2-Not an open-end line of credit | 264100 | 20211005 | 2.25 | 180 |
| 2-Not an open-end line of credit | 300000 | 20220616 | 5.5 | 360 |
| 2-Not an open-end line of credit | 185000 | NA | 3.75 | 180 |
| 2-Not an open-end line of credit | 266000 | 20211129 | 2.99 | 360 |
| 2-Not an open-end line of credit | 507000 | 20220808 | 5.125 | 360 |
| 2-Not an open-end line of credit | 210000 | 20220222 | 5.125 | 360 |
| 2-Not an open-end line of credit | 116585 | 20211208 | 2.875 | 180 |
| 2-Not an open-end line of credit | 210200 | 20220126 | 3.75 | 360 |
| 2-Not an open-end line of credit | 128800 | 20220316 | 4.25 | 360 |
| 2-Not an open-end line of credit | 202000 | 20220218 | 3.625 | 360 |
| 2-Not an open-end line of credit | 258000 | 20211229 | 2.125 | 180 |
| 2-Not an open-end line of credit | 52200 | 20220307 | 4.375 | 240 |
| 2-Not an open-end line of credit | 212071 | 20220301 | 3.125 | 180 |
| 2-Not an open-end line of credit | 305000 | 20220127 | 3.75 | 360 |
| 2-Not an open-end line of credit | 125922 | 20220812 | 7 | 360 |
| 2-Not an open-end line of credit | 260000 | NA | 3.75 | 360 |
| 2-Not an open-end line of credit | 211200 | NA | 3.99 | 360 |
| 2-Not an open-end line of credit | 148500 | 20211211 | 3.25 | 360 |
| 2-Not an open-end line of credit | 191000 | 20211209 | 3.375 | 360 |
| 2-Not an open-end line of credit | 187350 | 20220107 | 3.25 | 360 |
| 2-Not an open-end line of credit | 373350 | 20220811 | 5.49 | 360 |
| 2-Not an open-end line of credit | 323100 | 20220318 | 5.49 | 360 |
| 2-Not an open-end line of credit | 410000 | 20220810 | 4.25 | 180 |
| 2-Not an open-end line of credit | 154000 | 20220421 | 4.875 | 180 |
| 2-Not an open-end line of credit | 323000 | NA | 3.5 | 360 |
| 2-Not an open-end line of credit | 386250 | 20220412 | 4.625 | 360 |
| 2-Not an open-end line of credit | 225250 | 20211129 | 3.99 | 360 |
| 2-Not an open-end line of credit | 266000 | 20211219 | 2.625 | 180 |
| 2-Not an open-end line of credit | 160000 | 20220718 | 4.99 | 240 |
| 2-Not an open-end line of credit | 260000 | 20220105 | 3.125 | 360 |
| 2-Not an open-end line of credit | 111915 | 20220411 | 5.75 | 360 |
| 2-Not an open-end line of credit | 48300 | 20220317 | 5.625 | 360 |
| 2-Not an open-end line of credit | 384000 | 20220311 | 5.25 | 360 |
| 2-Not an open-end line of credit | 224000 | NA | 4.625 | 360 |


| NA | 1-Secured by a first lien | 360000 | NA |
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| NA | 1-Secured by a first lien | 315000 | 80 |
| NA | 1-Secured by a first lien | 296000 | NA |
| NA | 1-Secured by a first lien | 232400 | 42 |
| NA | 1-Secured by a first lien | 310000 | NA |
| NA | 1-Secured by a first lien | 320000 | 41 |
| NA | 1-Secured by a first lien | 600000 | 75 |
| NA | 1-Secured by a first lien | 673000 | NA |
| NA | 1-Secured by a first lien | 495000 | 90 |
| NA | 1-Secured by a first lien | 400000 | 25 |
| NA | 1-Secured by a first lien | 235000 | 80 |
| NA | 1-Secured by a first lien | 210000 | NA |
| NA | 1-Secured by a first lien | 332000 | NA |
| NA | 1-Secured by a first lien | 325000 | NA |
| NA | 1-Secured by a first lien | 462000 | 52 |
| NA | 1-Secured by a first lien | 350000 | 48 |
| NA | 1-Secured by a first lien | 200000 | 78 |
| NA | 1-Secured by a first lien | 315000 | 80 |
| NA | 1-Secured by a first lien | 475000 | 42 |
| NA | 1-Secured by a first lien | 343582 | 97 |
| NA | 1-Secured by a first lien | 250000 | 96.5 |
| NA | 1-Secured by a first lien | 1025000 | 80.000 |
| NA | 1-Secured by a first lien | 300000 | NA |
| NA | 1-Secured by a first lien | 209900 | 90 |
| NA | 1-Secured by a first lien | 500000 | 55 |
| NA | 1-Secured by a first lien | 550000 | 49 |
| NA | 1-Secured by a first lien | 325000 | 93 |
| NA | 1-Secured by a first lien | 315000 | NA |
| NA | 1-Secured by a first lien | 280000 | 95 |
| NA | 1-Secured by a first lien | 676000 | 75 |
| NA | 1-Secured by a first lien | 280000 | 75 |
| NA | 1-Secured by a first lien | 185000 | 64 |
| NA | 1-Secured by a first lien | 374000 | 57 |
| NA | 1-Secured by a first lien | 161000 | 80 |
| NA | 1-Secured by a first lien | 776000 | 27 |
| NA | 1-Secured by a first lien | 354000 | 73 |
| NA | 1-Secured by a first lien | 100000 | 53 |
| NA | 1-Secured by a first lien | 300000 | 71 |
| NA | 1-Secured by a first lien | 325000 | 94 |
| NA | 1-Secured by a first lien | 405000 | 32 |
| NA | 1-Secured by a first lien | 626000 | NA |
| NA | 1-Secured by a first lien | 264000 | NA |
| NA | 1-Secured by a first lien | 165000 | 90 |
| NA | 1-Secured by a first lien | 325000 | 59 |
| NA | 1-Secured by a first lien | 275000 | 69 |
| NA | 1-Secured by a first lien | 393000 | 95 |
| NA | 1-Secured by a first lien | 359000 | 90 |
| NA | 1-Secured by a first lien | 725000 | 57 |
| NA | 1-Secured by a first lien | 204000 | 76 |
| NA | 1-Secured by a first lien | 340000 | NA |
| NA | 1-Secured by a first lien | 515000 | 75 |
| NA | 1-Secured by a first lien | 265000 | 85 |
| NA | 1-Secured by a first lien | 775000 | 35 |
| NA | 1-Secured by a first lien | 340000 | 48 |
| NA | 1-Secured by a first lien | 325000 | 80 |
| NA | 1-Secured by a first lien | 385000 | 30 |
| NA | 1-Secured by a first lien | 130000 | 38 |
| NA | 1-Secured by a first lien | 480000 | 80 |
| NA | 1-Secured by a first lien | 239000 | NA |


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| 321.00 | 6-Purchased loan | 1 |
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| 2211.00 | 1-Loan originated | 2 |
| 5604.00 | 1-Loan originated | 1 |
| 715.00 | 1-Loan originated | 1 |
| 8431.00 | 1-Loan originated | 1 |
| 819.00 | 6-Purchased loan | 1 |
| 101.00 | 1-Loan originated | 1 |
| 803.00 | 1-Loan originated | 1 |
| 2434.00 | 1-Loan originated | 1 |
| 633.01 | 6-Purchased loan | 1 |
| 2801.00 | 1-Loan originated | 1 |
| 102.02 | 1-Loan originated | 1 |
| 4111.00 | 1-Loan originated | 1 |
| 701.02 | 3-Application denied | 1 |
| 4503.00 | 1-Loan originated | 1 |
| 7004.02 | 1-Loan originated | 1 |
| 1606.01 | 6-Purchased loan | 1 |
| 1406.02 | 6-Purchased loan | 1 |
| 713.00 | 6-Purchased loan | 1 |
| 2819.00 | 1-Loan originated | 1 |
| 812.02 | 1-Loan originated | 1 |
| 801.00 | 1-Loan originated | 1 |
| 609.00 | 1-Loan originated | 1 |
| 1104.00 | 1-Loan originated | 1 |
| 3201.01 | 1-Loan originated | 1 |
| 209.01 | 1-Loan originated | 1 |
| 202.00 | 1-Loan originated | 1 |
| 3206.00 | 6-Purchased loan | 1 |
| 8424.00 | 1-Loan originated | 1 |
| 701.02 | 1-Loan originated | 1 |
| 2431.00 | 6-Purchased loan | 2 |
| 2315.00 | 3-Application denied | 1 |
| 3903.00 | 3-Application denied | 1 |
| 5906.00 | 6-Purchased loan | 2 |
| 3302.00 | 6-Purchased loan | 1 |
| 4314.00 | 6-Purchased loan | 1 |
| 631.00 | 6-Purchased loan | 1 |
| 818.00 | 6-Purchased loan | 1 |
| 8419.00 | 6-Purchased loan | 1 |
| 715.00 | 6-Purchased loan | 1 |
| 818.00 | 6-Purchased loan | 1 |
| 8233.04 | 6-Purchased loan | 1 |
| 7201.00 | 6-Purchased loan | 1 |
| 2434.00 | 1-Loan originated | 1 |
| 2434.00 | 1-Loan originated | 1 |
| 8331.00 | 1-Loan originated | 1 |
| 802.01 | 6-Purchased loan | 1 |
| 2423.00 | 6-Purchased loan | 1 |
| 1007.00 | 6-Purchased loan | 1 |
| 1612.00 | 1-Loan originated | 1 |
| 814.01 | 1-Loan originated | 1 |
| 810.00 | 6-Purchased loan | 1 |
| 207.02 | 6-Purchased loan | 1 |
| 8397.00 | 1-Loan originated | 1 |
| 8390.00 | 1-Loan originated | 1 |
| 818.00 | 1-Loan originated | 1 |
| 306.04 | 6-Purchased loan | 1 |
| 815.00 | 6-Purchased loan | 1 |
| 8323.00 | 6-Purchased loan | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |


| 2-Not an open-end line of credit | 180000 | NA | 5.75 | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 702000 | 20211102 | 3.125 | 360 |
| 2-Not an open-end line of credit | 268850 | 20220508 | 5.375 | 360 |
| 2-Not an open-end line of credit | 251250 | 20220217 | 3.875 | 360 |
| 2-Not an open-end line of credit | 285000 | 20220124 | 4.125 | 360 |
| 2-Not an open-end line of credit | 250000 | NA | 3.425 | 360 |
| 2-Not an open-end line of credit | 128350 | 20211208 | 3.25 | 360 |
| 2-Not an open-end line of credit | 175000 | 20211110 | 2.875 | 360 |
| 2-Not an open-end line of credit | 203225 | 20220914 | 5.5 | 360 |
| 2-Not an open-end line of credit | 268000 | NA | 4.125 | 360 |
| 2-Not an open-end line of credit | 297580 | 20211208 | 2.625 | 360 |
| 2-Not an open-end line of credit | 230300 | 20220204 | 2.99 | 180 |
| 2-Not an open-end line of credit | 562600 | 20220311 | 3.99 | 360 |
| 2-Not an open-end line of credit | 1160000 | 20220720 | NA | 360 |
| 2-Not an open-end line of credit | 71250 | 20220105 | 3.75 | 180 |
| 2-Not an open-end line of credit | 165560 | 20211222 | 3.375 | 360 |
| 2-Not an open-end line of credit | 233770 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 231920 | NA | 4.75 | 360 |
| 2-Not an open-end line of credit | 200000 | NA | 5 | 360 |
| 2-Not an open-end line of credit | 341250 | 20220603 | 4.625 | 360 |
| 2-Not an open-end line of credit | 1599588 | 20211222 | 2.375 | 360 |
| 2-Not an open-end line of credit | 145500 | 20220427 | 5.625 | 360 |
| 2-Not an open-end line of credit | 213750 | 20220324 | 4.625 | 360 |
| 2-Not an open-end line of credit | 240480 | 20211112 | 3.375 | 360 |
| 2-Not an open-end line of credit | 295000 | 20220521 | 4.375 | 360 |
| 2-Not an open-end line of credit | 148000 | 20211108 | 3.125 | 360 |
| 2-Not an open-end line of credit | 184000 | 20211106 | 2.99 | 360 |
| 2-Not an open-end line of credit | 202500 | NA | 3.25 | 300 |
| 2-Not an open-end line of credit | 803250 | 20220901 | 4.500 | 360 |
| 2-Not an open-end line of credit | 3280000 | 20220316 | 3.375 | 360 |
| 2-Not an open-end line of credit | 380158.77 | NA | 3.5 | 360 |
| 2-Not an open-end line of credit | 147250 | 20220627 | NA | 360 |
| 2-Not an open-end line of credit | 118233 | 20220616 | NA | 360 |
| 2-Not an open-end line of credit | 236850 | NA | 3.375 | 240 |
| 2-Not an open-end line of credit | 283258 | NA | 3.375 | 360 |
| 2-Not an open-end line of credit | 156750 | NA | 4.375 | 360 |
| 2-Not an open-end line of credit | 374000 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 200000 | NA | 2.99 | 360 |
| 2-Not an open-end line of credit | 268000 | NA | 6.125 | 360 |
| 2-Not an open-end line of credit | 233100 | NA | 4.675 | 360 |
| 2-Not an open-end line of credit | 250000 | NA | 5.4 | 360 |
| 2-Not an open-end line of credit | 190942.45 | NA | 4.375 | 360 |
| 2-Not an open-end line of credit | 423000 | NA | 3.5 | 360 |
| 2-Not an open-end line of credit | 1110000 | 20210810 | 2.625 | 360 |
| 1-Open-end line of credit | 165000 | 20210810 | 3.000 | 360 |
| 2-Not an open-end line of credit | 1612500 | 20211231 | 2.250 | 360 |
| 2-Not an open-end line of credit | 145500 | NA | 6.625 | 360 |
| 2-Not an open-end line of credit | 498655 | NA | 3.575 | 360 |
| 2-Not an open-end line of credit | 603250 | NA | 2.875 | 360 |
| 2-Not an open-end line of credit | 623200 | 20220907 | 5.99 | 360 |
| 2-Not an open-end line of credit | 91017 | 20220624 | 5.125 | 360 |
| 2-Not an open-end line of credit | 130699.34 | NA | 3.65 | 360 |
| 2-Not an open-end line of credit | 152000 | NA | 3.75 | 360 |
| 2-Not an open-end line of credit | 599900 | 20220909 | 5.625 | 360 |
| 2-Not an open-end line of credit | 240473 | 20211104 | 3.375 | 360 |
| 2-Not an open-end line of credit | 182000 | 20220301 | 3.875 | 360 |
| 2-Not an open-end line of credit | 308000 | NA | 5.875 | 360 |
| 2-Not an open-end line of credit | 745816.64 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 625100 | NA | 3.75 | 360 |


| NA | 1-Secured by a first lien | 225000 | NA |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 1138000 | 62 |
| NA | 1-Secured by a first lien | 283000 | 95 |
| NA | 1-Secured by a first lien | 335000 | 75 |
| NA | 1-Secured by a first lien | 300000 | 95 |
| NA | 1-Secured by a first lien | 550000 | NA |
| NA | 1-Secured by a first lien | 151000 | 85 |
| NA | 1-Secured by a first lien | 255000 | 69 |
| NA | 1-Secured by a first lien | 369500 | 55 |
| NA | 1-Secured by a first lien | 335000 | NA |
| NA | 1-Secured by a first lien | 510000 | 59 |
| NA | 1-Secured by a first lien | 600000 | 39 |
| NA | 1-Secured by a first lien | 580000 | 97 |
| NA | 1-Secured by a first lien | 1300000 | 89.23 |
| NA | 1-Secured by a first lien | 90000 | 80 |
| NA | 1-Secured by a first lien | 250000 | 67 |
| NA | 1-Secured by a first lien | 241000 | NA |
| NA | 1-Secured by a first lien | 289900 | NA |
| NA | 1-Secured by a first lien | 370000 | NA |
| NA | 1-Secured by a first lien | 455000 | 75 |
| NA | 1-Secured by a first lien | 2800000 | 57.128 |
| NA | 1-Secured by a first lien | 150000 | 97 |
| NA | 1-Secured by a first lien | 225000 | 95 |
| NA | 1-Secured by a first lien | 285000 | 85 |
| NA | 1-Secured by a first lien | 445000 | 67 |
| NA | 1-Secured by a first lien | 188000 | 79 |
| NA | 1-Secured by a first lien | 353000 | 53 |
| NA | 1-Secured by a first lien | 254000 | NA |
| NA | 1-Secured by a first lien | 945000 | 85.000 |
| NA | 1-Secured by a first lien | 4100000 | 80.000 |
| NA | 1-Secured by a first lien | 650000 | NA |
| NA | 1-Secured by a first lien | 155000 | 95 |
| NA | 1-Secured by a first lien | 289000 | 40.21 |
| NA | 1-Secured by a first lien | 340000 | NA |
| NA | 1-Secured by a first lien | 340000 | NA |
| NA | 1-Secured by a first lien | 165000 | NA |
| NA | 1-Secured by a first lien | 440000 | NA |
| NA | 1-Secured by a first lien | 358500 | NA |
| NA | 1-Secured by a first lien | 335000 | NA |
| NA | 1-Secured by a first lien | 259000 | NA |
| NA | 1-Secured by a first lien | 312500 | NA |
| NA | 1-Secured by a first lien | 239000 | NA |
| NA | 1-Secured by a first lien | 450000 | NA |
| NA | 1-Secured by a first lien | 1650000 | 80.000 |
| NA | 2-Secured by a subordinate lien | 1650000 | 77.273 |
| NA | 1-Secured by a first lien | 2100000 | 76.786 |
| NA | 1-Secured by a first lien | 150000 | NA |
| NA | 1-Secured by a first lien | 524900 | NA |
| NA | 1-Secured by a first lien | 635000 | NA |
| NA | 1-Secured by a first lien | 779000 | 80 |
| NA | 1-Secured by a first lien | 183000 | 50 |
| NA | 1-Secured by a first lien | 189900 | NA |
| NA | 1-Secured by a first lien | 160000 | NA |
| NA | 1-Secured by a first lien | 669900 | 90 |
| NA | 1-Secured by a first lien | 305000 | 79 |
| NA | 1-Secured by a first lien | 294900 | 62 |
| NA | 1-Secured by a first lien | 385000 | NA |
| NA | 1-Secured by a first lien | 830000 | NA |
| NA | 1-Secured by a first lien | 658000 | NA |


|  | 10-Not applicable |
| :---: | :---: |
|  | 10-Not applicable |
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|  | 10-Not applicable |
|  | 10-Not applicable |
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|  | 4-Collateral |
|  | 10-Not applicable |
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|  | 4-Collateral |
|  | 4-Collateral |
|  | 10-Not applicable |
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| 1-Debt-to-income ratio | 5-Insufficient cash (downpayment, closing costs) |
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| 6-Information not provided by applicant in mail, internet, or telephone application |  |
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| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 21-Asian Indian |  |
| 23-Filipino |  |
| 23-Filipino |  |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
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| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 7-Not applicable |  |
| 7-Not applicable |  |
| 7-Not applicable |  |
| 1-American Indian or Alaska Native |  |
| 3-Black or African American |  |
| 2-Asian |  |
| 5-White |  |
| 1-American Indian or Alaska Native |  |
| 2-Asian |  |
| 2-Asian |  |
| 2-Asian |  |
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| 2-Asian |  |
| 5-White |  |
| 5-White 5-White |  |
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| 8-No co-applicant |
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| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 8-No co-applicant |
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| 8-No co-applicant |
| 8-No co-applicant |
| 8-No co-applicant |
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| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 8-No co-applicant |
| 8-No co-applicant |
| 8-No co-applicant |
| 8-No co-applicant |
| 5-White |
| 8-No co-applicant |
| 8-No co-applicant |
| 8-No co-applicant |
| 8-No co-applicant |
| 8-No co-applicant |
| 2-Asian |
| 2-Asian |
| 5-White |
| 5-White |




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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 4-Not applicable |
|  | 4-Not applicable |
|  | 4-Not applicable |
|  | 1-Male |
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|  | 5-No co-applicant |
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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 5-No co-applicant |
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|  | 5-No co-applicant |
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|  | 5-No co-applicant |
|  | 2-Female |
|  | 2-Female |
|  | 5-No co-applicant |
|  | 5-No co-applicant |
|  | 5-No co-applicant |
|  | 5-No co-applicant |
|  | 1-Male |
|  | 5-No co-applicant |
|  | 5-No co-applicant |
|  | 5-No co-applicant |
|  | 5-No co-applicant |
|  | 5-No co-applicant |
|  | 1-Male |
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2-Not Hispanic or Latino
2-Not Hispanic or Latino
1-Hispanic or Latino
2-Not Hispanic or Latino
2-Not Hispanic or Latino
2-Not Hispanic or Latino
2-Not Hispanic or Latino
2-Not Hispanic or Latino
2-Not Hispanic or Latino
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2-Not Hispanic or Latino
2-Not Hispanic or Latino
2-Not Hispanic or Latino
3-Information not provided by applicant in mail, internet, or telephone application
3-Information not provided by applicant in mail, internet, or telephone application
1-Hispanic or Latino
1-Hispanic or Latino
3-Information not provided by applicant in mail, internet, or telephone application
2-Not Hispanic or Latino
3-Information not provided by applicant in mail, internet, or telephone application
3-Information not provided by applicant in mail, internet, or telephone application
2-Not Hispanic or Latino
3-Information not provided by applicant in mail, internet, or telephone application
2-Not Hispanic or Latino
2-Not Hispanic or Latino
14-Other Hispanic or Latino
2-Not Hispanic or Latino
3-Information not provided by applicant in mail, internet, or telephone application
3-Information not provided by applicant in mail, internet, or telephone application
3-Information not provided by applicant in mail, internet, or telephone application
3-Information not provided by applicant in mail, internet, or telephone application
3-Information not provided by applicant in mail, internet, or telephone application
3-Information not provided by applicant in mail, internet, or telephone application
1-Hispanic or Latino
2-Not Hispanic or Latino
3-Information not provided by applicant in mail, internet, or telephone application
3-Information not provided by applicant in mail, internet, or telephone application
3-Information not provided by applicant in mail, internet, or telephone application
3-Information not provided by applicant in mail, internet, or telephone application
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3-Information not provided by applicant in mail, internet, or telephone application
3-Information not provided by applicant in mail, internet, or telephone application
3-Information not provided by applicant in mail, internet, or telephone application
4-Not applicable
4-Not applicable
4-Not applicable
11-Mexican
2-Not Hispanic or Latino
2-Not Hispanic or Latino
2-Not Hispanic or Latino
2-Not Hispanic or Latino
2-Not Hispanic or Latino
3-Information not provided by applicant in mail, internet, or telephone application
2-Not Hispanic or Latino
2-Not Hispanic or Latino
2-Not Hispanic or Latino
2-Not Hispanic or Latino
2-Not Hispanic or Latino
2-Not Hispanic or Latino



| 5-No co-applicant |
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| 5-No co-applicant |
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| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 5-No co-applicant |
| 5-No co-applicant |
| 5-No co-applicant |
| 5-No co-applicant |
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| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 5-No co-applicant |
| 5-No co-applicant |
| 5-No co-applicant |
| 5-No co-applicant |
| 11-Mexican |
| 5-No co-applicant |
| 5-No co-applicant |
| 5-No co-applicant |
| 5-No co-applicant |
| 5-No co-applicant |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |


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| 502.00 | 6-Purchased loan | 2 |
| :---: | :---: | :---: |
| 713.00 | 1-Loan originated | 1 |
| 1005.00 | 1-Loan originated | 1 |
| 706.00 | 3-Application denied | 1 |
| 3201.01 | 1-Loan originated | 1 |
| 3301.01 | 1-Loan originated | 1 |
| 301.04 | 1-Loan originated | 1 |
| 203.02 | 3-Application denied | 1 |
| 4908.00 | 1-Loan originated | 1 |
| 7104.00 | 6-Purchased loan | 1 |
| 103.00 | 1-Loan originated | 1 |
| 8344.00 | 1-Loan originated | 1 |
| 3301.01 | 1-Loan originated | 1 |
| 3902.00 | 1-Loan originated | 1 |
| 3901.00 | 1-Loan originated | 1 |
| 7202.00 | 1-Loan originated | 1 |
| 208.01 | 6-Purchased loan | 1 |
| 1401.00 | 6-Purchased loan | 1 |
| 626.00 | 1-Loan originated | 1 |
| 6204.00 | 3-Application denied | 1 |
| 1003.00 | 3-Application denied | 1 |
| 804.00 | 3-Application denied | 1 |
| 816.00 | 3-Application denied | 1 |
| 1605.01 | 3-Application denied | 2 |
| 8330.00 | 6-Purchased loan | 1 |
| 305.00 | 6-Purchased loan | 1 |
| 818.00 | 1-Loan originated | 1 |
| 1005.00 | 1-Loan originated | 1 |
| 509.00 | 1-Loan originated | 1 |
| 5805.01 | 1-Loan originated | 2 |
| 7402.00 | 1-Loan originated | 1 |
| 2828.00 | 1-Loan originated | 3 |
| 802.01 | 1-Loan originated | 1 |
| 513.00 | 1-Loan originated | 1 |
| 1202.00 | 1-Loan originated | 1 |
| 2211.00 | 1-Loan originated | 1 |
| 301.02 | 1-Loan originated | 1 |
| 608.00 | 1-Loan originated | 1 |
| 6611.00 | 1-Loan originated | 1 |
| 204.00 | 1-Loan originated | 1 |
| 810.00 | 1-Loan originated | 1 |
| 706.00 | 1-Loan originated | 1 |
| 2216.00 | 1-Loan originated | 1 |
| 510.00 | 1-Loan originated | 1 |
| 2109.00 | 1-Loan originated | 1 |
| 627.00 | 1-Loan originated | 1 |
| 2213.00 | 1-Loan originated | 1 |
| 2408.00 | 1-Loan originated | 1 |
| 624.00 | 1-Loan originated | 1 |
| 801.00 | 1-Loan originated | 1 |
| 1605.01 | 1-Loan originated | 2 |
| 629.00 | 1-Loan originated | 1 |
| 2215.00 | 6-Purchased loan | 2 |
| 102.01 | 1-Loan originated | 1 |
| 8421.00 | 1-Loan originated | 1 |
| 511.00 | 1-Loan originated | 1 |
| 8320.00 | 1-Loan originated | 1 |
| 407.00 | 1-Loan originated | 1 |
| 707.00 | 6-Purchased loan | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 3-Veterans Affairs guaranteed (VA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |


| 2-Not an open-end line of credit | 435000 | NA | 4.49 | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 545000 | 20210909 | 2.125 | 180 |
| 2-Not an open-end line of credit | 295850 | 20220218 | 3.375 | 360 |
| 2-Not an open-end line of credit | 1820000 | 20220601 | NA | 360 |
| 2-Not an open-end line of credit | 300499 | 20211024 | 2.125 | 180 |
| 2-Not an open-end line of credit | 471920 | 20220711 | 4.875 | 360 |
| 2-Not an open-end line of credit | 141954 | 20221012 | 5.75 | 360 |
| 2-Not an open-end line of credit | 108522 | 20220411 | NA | 120 |
| 2-Not an open-end line of credit | 83000 | 20211214 | 4.25 | 360 |
| 2-Not an open-end line of credit | 200400 | NA | 3.5 | 120 |
| 2-Not an open-end line of credit | 135500 | 20211220 | 3.75 | 360 |
| 2-Not an open-end line of credit | 616550 | 20220323 | 4.25 | 360 |
| 2-Not an open-end line of credit | 656250 | 20220428 | 4.25 | 360 |
| 2-Not an open-end line of credit | 268000 | 20220208 | 4.125 | 360 |
| 2-Not an open-end line of credit | 304000 | 20220203 | 3.875 | 360 |
| 2-Not an open-end line of credit | 213000 | 20220331 | 3.375 | 180 |
| 2-Not an open-end line of credit | 484500 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 467200 | NA | 3.5 | 360 |
| 2-Not an open-end line of credit | 1000000 | 20220926 | 5.5 | 360 |
| 2-Not an open-end line of credit | 225000 | 20220518 | NA | 360 |
| 2-Not an open-end line of credit | 732000 | 20220602 | NA | 360 |
| 2-Not an open-end line of credit | 765000 | 20220407 | NA | 360 |
| 2-Not an open-end line of credit | 197600 | 20220309 | NA | 360 |
| 2-Not an open-end line of credit | 137300 | 20211206 | NA | 180 |
| 2-Not an open-end line of credit | 878615.08 | NA | 3.5 | 360 |
| 2-Not an open-end line of credit | 150601.05 | NA | 4.49 | 360 |
| 2-Not an open-end line of credit | 382500 | 20220302 | 3.875 | 360 |
| 2-Not an open-end line of credit | 395250 | 20220523 | 5.375 | 360 |
| 2-Not an open-end line of credit | 472500 | 20220127 | 3.25 | 360 |
| 2-Not an open-end line of credit | 206250 | 20211105 | 3.75 | 180 |
| 2-Not an open-end line of credit | 164207 | 20220211 | 3.375 | 180 |
| 2-Not an open-end line of credit | 270000 | 20220803 | 5.625 | 360 |
| 2-Not an open-end line of credit | 191550 | 20210920 | 3.25 | 360 |
| 2-Not an open-end line of credit | 780000 | 20211119 | 3 | 360 |
| 2-Not an open-end line of credit | 615000 | 20220821 | 6.375 | 360 |
| 2-Not an open-end line of credit | 760000 | 20220623 | 4.875 | 360 |
| 2-Not an open-end line of credit | 186671 | 20220104 | 2.875 | 180 |
| 2-Not an open-end line of credit | 135800 | 20220829 | 6.125 | 360 |
| 2-Not an open-end line of credit | 160000 | 20220115 | 3.375 | 180 |
| 2-Not an open-end line of credit | 297488 | 20220725 | 6.625 | 360 |
| 2-Not an open-end line of credit | 585000 | 20211209 | 2.875 | 360 |
| 2-Not an open-end line of credit | 1000000 | 20220223 | 3 | 360 |
| 2-Not an open-end line of credit | 650250 | 20220321 | 3.875 | 360 |
| 2-Not an open-end line of credit | 468000 | 20220614 | 5.875 | 360 |
| 2-Not an open-end line of credit | 294280 | 20220208 | 4.5 | 360 |
| 2-Not an open-end line of credit | 1277500 | 20220212 | 3.75 | 360 |
| 2-Not an open-end line of credit | 655200 | 20220627 | 4.875 | 360 |
| 2-Not an open-end line of credit | 164250 | 20220418 | 5.5 | 360 |
| 2-Not an open-end line of credit | 510860 | 20211124 | 2.375 | 360 |
| 2-Not an open-end line of credit | 370405 | 20220301 | 4.375 | 360 |
| 2-Not an open-end line of credit | 215000 | 20220419 | 5.5 | 360 |
| 2-Not an open-end line of credit | 609875 | 20220426 | 5.125 | 360 |
| 2-Not an open-end line of credit | 411864.88 | NA | 3.625 | 360 |
| 2-Not an open-end line of credit | 337500 | 20220628 | 5.625 | 360 |
| 2-Not an open-end line of credit | 324950 | 20220627 | 5.74 | 360 |
| 2-Not an open-end line of credit | 650000 | 20220202 | 3.250 | 360 |
| 2-Not an open-end line of credit | 505200 | 20220222 | 3.49 | 360 |
| 2-Not an open-end line of credit | 187000 | 20220201 | 3.375 | 360 |
| 2-Not an open-end line of credit | 850000 | NA | 4.625 | 360 |


| NA | 1-Secured by a first lien | 725000 | NA |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 853000 | 64 |
| NA | 1-Secured by a first lien | 660000 | 45 |
| NA | 1-Secured by a first lien | 1900000 | 95.78 |
| NA | 1-Secured by a first lien | 750000 | 41 |
| NA | 1-Secured by a first lien | 589900 | 80 |
| NA | 1-Secured by a first lien | 147000 | 95 |
| NA | 1-Secured by a first lien | 102000 | 107 |
| NA | 1-Secured by a first lien | 135000 | 62 |
| NA | 1-Secured by a first lien | 250500 | NA |
| NA | 1-Secured by a first lien | 155000 | 88 |
| NA | 1-Secured by a first lien | 649000 | 95 |
| NA | 1-Secured by a first lien | 875000 | 75 |
| NA | 1-Secured by a first lien | 335000 | 80 |
| NA | 1-Secured by a first lien | 320000 | 95 |
| NA | 1-Secured by a first lien | 420000 | 51 |
| NA | 1-Secured by a first lien | 510000 | NA |
| NA | 1-Secured by a first lien | 584000 | NA |
| NA | 1-Secured by a first lien | 1250000 | 80 |
| NA | 1-Secured by a first lien | 306000 | 74 |
| NA | 1-Secured by a first lien | 915000 | 80 |
| NA | 1-Secured by a first lien | 900000 | 85 |
| NA | 1-Secured by a first lien | 247000 | 80 |
| NA | 1-Secured by a first lien | 570000 | 25 |
| NA | 1-Secured by a first lien | 1100000 | NA |
| NA | 1-Secured by a first lien | 188500 | NA |
| NA | 1-Secured by a first lien | 425000 | 90 |
| NA | 1-Secured by a first lien | 465000 | 85 |
| NA | 1-Secured by a first lien | 525000 | 90 |
| NA | 1-Secured by a first lien | 275000 | 75 |
| NA | 1-Secured by a first lien | 250000 | 66 |
| NA | 1-Secured by a first lien | 643000 | 42 |
| NA | 1-Secured by a first lien | 290000 | 67 |
| NA | 1-Secured by a first lien | 1040000 | 75 |
| NA | 1-Secured by a first lien | 650000 | 95 |
| NA | 1-Secured by a first lien | 950000 | 80 |
| NA | 1-Secured by a first lien | 470000 | 40 |
| NA | 1-Secured by a first lien | 140000 | 97 |
| NA | 1-Secured by a first lien | 226000 | 71 |
| NA | 1-Secured by a first lien | 455000 | 66 |
| NA | 1-Secured by a first lien | 650000 | 90 |
| NA | 1-Secured by a first lien | 1800000 | 55.55 |
| NA | 1-Secured by a first lien | 765000 | 85 |
| NA | 1-Secured by a first lien | 585000 | 80 |
| NA | 1-Secured by a first lien | 431000 | 69 |
| NA | 1-Secured by a first lien | 1825000 | 70 |
| NA | 1-Secured by a first lien | 819000 | 80 |
| NA | 1-Secured by a first lien | 219000 | 75 |
| NA | 1-Secured by a first lien | 900000 | 57 |
| NA | 1-Secured by a first lien | 389900 | 95 |
| NA | 1-Secured by a first lien | 480000 | 45 |
| NA | 1-Secured by a first lien | 717500 | 85 |
| NA | 1-Secured by a first lien | 550000 | NA |
| NA | 1-Secured by a first lien | 450000 | 75 |
| NA | 1-Secured by a first lien | 335000 | 97 |
| NA | 1-Secured by a first lien | 1325000 | 49.057 |
| NA | 1-Secured by a first lien | 631500 | 80 |
| NA | 1-Secured by a first lien | 285000 | 66 |
| NA | 1-Secured by a first lien | 1000000 | NA |


|  | 10-Not applicable |
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|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 9-Other |
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|  | 4-Collateral |
|  | 10-Not applicable |
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|  | 10-Not applicable |
|  | 9-Other |
|  | 1-Debt-to-income ratio |
|  | 1-Debt-to-income ratio |
|  | 4-Collateral |
|  | 4-Collateral |
|  | 10-Not applicable |
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| 4-Collateral | 1-Debt-to-income ratio |
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| 14-Other Hispanic or Latino |
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| 14-Other Hispanic or Latino |
| 14-Other Hispanic or Latino |
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| 11-Mexican |
| 2-Not Hispanic or Latino |
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| 11-Mexican |
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| 12-Puerto Rican |
| 11-Mexican |
| 2-Not Hispanic or Latino |
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| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 11-Mexican |
| 2-Not Hispanic or Latino |
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| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
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| 2-Not Hispanic or Latino |




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|  | 14-Other Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
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|  | 14-Other Hispanic or Latino |
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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
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| 7505.00 | 6-Purchased Ioan | 1 |
| :---: | :---: | :---: |
| 8422.00 | 1-Loan originated | 1 |
| 620.00 | 1-Loan originated | 1 |
| 1507.00 | 1-Loan originated | 1 |
| 715.00 | 1-Loan originated | 1 |
| 2426.00 | 1-Loan originated | 1 |
| 315.02 | 1-Loan originated | 1 |
| 8324.00 | 1-Loan originated | 1 |
| 7201.00 | 6-Purchased loan | 1 |
| 1007.00 | 1-Loan originated | 1 |
| 1001.00 | 1-Loan originated | 1 |
| 8429.00 | 1-Loan originated | 1 |
| 3201.02 | 1-Loan originated | 1 |
| 7201.00 | 1-Loan originated | 1 |
| 2108.00 | 1-Loan originated | 1 |
| 310.00 | 6-Purchased loan | 1 |
| 8422.00 | 1-Loan originated | 1 |
| 1502.00 | 1-Loan originated | 2 |
| 2422.00 | 1-Loan originated | 1 |
| 8431.00 | 1-Loan originated | 1 |
| 701.03 | 1-Loan originated | 1 |
| 7403.00 | 1-Loan originated | 1 |
| 1203.00 | 1-Loan originated | 1 |
| 2421.00 | 1-Loan originated | 1 |
| 3301.02 | 1-Loan originated | 1 |
| 706.00 | 1-Loan originated | 1 |
| 2414.00 | 1-Loan originated | 1 |
| 2206.02 | 1-Loan originated | 1 |
| 2423.00 | 6-Purchased loan | 3 |
| 633.03 | 1-Loan originated | 1 |
| 7709.02 | 1-Loan originated | 1 |
| 604.00 | 6-Purchased loan | 1 |
| 2801.00 | 1-Loan originated | 1 |
| 310.00 | 6-Purchased loan | 1 |
| 403.00 | 6-Purchased loan | 1 |
| 8310.00 | 1-Loan originated | 1 |
| 1611.00 | 1-Loan originated | 1 |
| 2414.00 | 1-Loan originated | 1 |
| 2432.00 | 1-Loan originated | 3 |
| 106.00 | 1-Loan originated | 1 |
| 8422.00 | 1-Loan originated | 1 |
| 8403.00 | 1-Loan originated | 1 |
| 612.00 | 1-Loan originated | 1 |
| 623.00 | 1-Loan originated | 1 |
| 409.00 | 1-Loan originated | 1 |
| 205.00 | 3-Application denied | 1 |
| 1505.01 | 1-Loan originated | 1 |
| 1303.00 | 1-Loan originated | 2 |
| 1101.00 | 1-Loan originated | 1 |
| 5801.00 | 1-Loan originated | 1 |
| 105.01 | 1-Loan originated | 1 |
| 1203.00 | 1-Loan originated | 1 |
| 1403.01 | 6-Purchased loan | 2 |
| 2431.00 | 1-Loan originated | 2 |
| 3201.01 | 1-Loan originated | 1 |
| 619.02 | 1-Loan originated | 1 |
| 2226.00 | 1-Loan originated | 1 |
| 4207.00 | 3-Application denied | 2 |
| 7112.00 | 3-Application denied | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 3-Veterans Affairs guaranteed (VA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purch |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
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| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improvement |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |


| 2-Not an open-end line of credit | 301500 | NA | 4.75 | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 440000 | 20220510 | 5.5 | 360 |
| 2-Not an open-end line of credit | 840000 | 20221112 | 5.74 | 360 |
| 2-Not an open-end line of credit | 305000 | 20221024 | 7 | 360 |
| 2-Not an open-end line of credit | 525000 | 20220319 | 4.125 | 360 |
| 2-Not an open-end line of credit | 468000 | 20220228 | 4.375 | 360 |
| 2-Not an open-end line of credit | 191200 | 20220120 | 3.875 | 360 |
| 2-Not an open-end line of credit | 540000 | 20220110 | 3.875 | 360 |
| 2-Not an open-end line of credit | 311920 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 100000 | 20220504 | 5.5 | 180 |
| 2-Not an open-end line of credit | 339000 | 20221012 | 5.5 | 180 |
| 2-Not an open-end line of credit | 395000 | 20211206 | 2.49 | 360 |
| 2-Not an open-end line of credit | 245430 | 20211102 | 2.125 | 180 |
| 2-Not an open-end line of credit | 318000 | 20220526 | 5.625 | 240 |
| 2-Not an open-end line of credit | 166250 | 20220907 | 5.875 | 360 |
| 2-Not an open-end line of credit | 456593.82 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 738750 | 20220314 | 3.875 | 360 |
| 2-Not an open-end line of credit | 87000 | 20220323 | 3.875 | 120 |
| 2-Not an open-end line of credit | 679150 | 20220301 | 3.5 | 360 |
| 2-Not an open-end line of credit | 155400 | 20220214 | 3.75 | 180 |
| 2-Not an open-end line of credit | 2207000 | 20211007 | 2.5 | 360 |
| 2-Not an open-end line of credit | 206400 | 20221010 | 6.99 | 360 |
| 2-Not an open-end line of credit | 397500 | 20220504 | 5.125 | 360 |
| 2-Not an open-end line of credit | 676000 | 20220420 | 5 | 360 |
| 2-Not an open-end line of credit | 570000 | 20220319 | 4.375 | 360 |
| 2-Not an open-end line of credit | 1000000 | 20220505 | 4.625 | 360 |
| 2-Not an open-end line of credit | 980000 | 20220413 | 4.375 | 360 |
| 2-Not an open-end line of credit | 308000 | 20220422 | 5.5 | 360 |
| 2-Not an open-end line of credit | 645750 | NA | 4.625 | 360 |
| 2-Not an open-end line of credit | 210000 | 20220527 | 4.25 | 360 |
| 2-Not an open-end line of credit | 286400 | 20221001 | 6.375 | 360 |
| 2-Not an open-end line of credit | 562500 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 322000 | 20211101 | 3 | 360 |
| 2-Not an open-end line of credit | 382375 | NA | 3.625 | 360 |
| 2-Not an open-end line of credit | 185000 | NA | 4.375 | 360 |
| 2-Not an open-end line of credit | 462000 | 20220106 | 3.49 | 360 |
| 2-Not an open-end line of credit | 416000 | 20220826 | 6.375 | 360 |
| 2-Not an open-end line of credit | 1000000 | 20221021 | 5.99 | 360 |
| 2-Not an open-end line of credit | 712500 | 20220223 | 3.5 | 360 |
| 2-Not an open-end line of credit | 153715 | 20220107 | 2.75 | 180 |
| 2-Not an open-end line of credit | 300000 | 20221005 | 6.25 | 360 |
| 2-Not an open-end line of credit | 156500 | 20211014 | 2.5 | 180 |
| 2-Not an open-end line of credit | 1912500 | 20220627 | 4.5 | 360 |
| 2-Not an open-end line of credit | 3017000 | 20211101 | 2.250 | 360 |
| 2-Not an open-end line of credit | 509000 | 20211130 | 2.625 | 240 |
| 2-Not an open-end line of credit | 96358 | 20210918 | NA | 180 |
| 2-Not an open-end line of credit | 504000 | 20221003 | 6.125 | 360 |
| 2-Not an open-end line of credit | 210400 | 20211030 | 3.25 | 360 |
| 2-Not an open-end line of credit | 460000 | 20220516 | 4.375 | 180 |
| 2-Not an open-end line of credit | 297050 | 20220207 | 3.99 | 360 |
| 2-Not an open-end line of credit | 76500 | 20221109 | 5.99 | 180 |
| 2-Not an open-end line of credit | 200000 | 20220114 | 3.99 | 360 |
| 2-Not an open-end line of credit | 473640.53 | NA | 4.625 | 360 |
| 2-Not an open-end line of credit | 400000 | 20220316 | 4.625 | 240 |
| 2-Not an open-end line of credit | 435000 | 20220627 | 4.99 | 360 |
| 2-Not an open-end line of credit | 211650 | 20220126 | 3.75 | 360 |
| 2-Not an open-end line of credit | 553375 | 20220906 | 5.75 | 360 |
| 2-Not an open-end line of credit | 227500 | 20210805 | NA | 240 |
| 2-Not an open-end line of credit | 55700 | 20211209 | NA | 180 |


| NA | 1-Secured by a first lien | 335000 | NA |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 550000 | 80 |
| NA | 1-Secured by a first lien | 1820000 | 46.15 |
| NA | 1-Secured by a first lien | 305000 | 100 |
| NA | 1-Secured by a first lien | 700000 | 75 |
| NA | 1-Secured by a first lien | 520000 | 90 |
| NA | 1-Secured by a first lien | 265000 | 73 |
| NA | 1-Secured by a first lien | 600000 | 90 |
| NA | 1-Secured by a first lien | 389900 | NA |
| NA | 1-Secured by a first lien | 385000 | 26 |
| NA | 1-Secured by a first lien | 469900 | 73 |
| NA | 1-Secured by a first lien | 700000 | 57 |
| NA | 1-Secured by a first lien | 500000 | 50 |
| NA | 1-Secured by a first lien | 520000 | 62 |
| NA | 1-Secured by a first lien | 175000 | 95 |
| NA | 1-Secured by a first lien | 600000 | NA |
| NA | 1-Secured by a first lien | 985000 | 75 |
| NA | 1-Secured by a first lien | 525000 | 17 |
| NA | 1-Secured by a first lien | 799000 | 85 |
| NA | 1-Secured by a first lien | 260000 | 60 |
| NA | 1-Secured by a first lien | 2600000 | 84.88 |
| NA | 1-Secured by a first lien | 258000 | 80 |
| NA | 1-Secured by a first lien | 530000 | 75 |
| NA | 1-Secured by a first lien | 845000 | 80 |
| NA | 1-Secured by a first lien | 850000 | 68 |
| NA | 1-Secured by a first lien | 1425000 | 71 |
| NA | 1-Secured by a first lien | 1225000 | 80 |
| NA | 1-Secured by a first lien | 385000 | 80 |
| NA | 1-Secured by a first lien | 861000 | NA |
| NA | 1-Secured by a first lien | 280000 | 75 |
| NA | 1-Secured by a first lien | 358000 | 80 |
| NA | 1-Secured by a first lien | 750000 | NA |
| NA | 1-Secured by a first lien | 460000 | 70 |
| NA | 1-Secured by a first lien | 402500 | NA |
| NA | 1-Secured by a first lien | 737000 | NA |
| NA | 1-Secured by a first lien | 577500 | 80 |
| NA | 1-Secured by a first lien | 520000 | 80 |
| NA | 1-Secured by a first lien | 1250000 | 80 |
| NA | 1-Secured by a first lien | 950000 | 75 |
| NA | 1-Secured by a first lien | 260000 | 60 |
| NA | 1-Secured by a first lien | 540000 | 56 |
| NA | 1-Secured by a first lien | 250000 | 63 |
| NA | 1-Secured by a first lien | 2550000 | 75 |
| NA | 1-Secured by a first lien | 3550000 | 84.986 |
| NA | 1-Secured by a first lien | 850000 | 60 |
| NA | 1-Secured by a first lien | 150000 | 65 |
| NA | 1-Secured by a first lien | 630000 | 80 |
| NA | 1-Secured by a first lien | 553000 | 39 |
| NA | 1-Secured by a first lien | 575000 | 80 |
| NA | 1-Secured by a first lien | 400000 | 75 |
| NA | 1-Secured by a first lien | 85000 | 90 |
| NA | 1-Secured by a first lien | 395000 | 51 |
| NA | 1-Secured by a first lien | 483000 | NA |
| NA | 1-Secured by a first lien | 770000 | 52 |
| NA | 1-Secured by a first lien | 580000 | 75 |
| NA | 1-Secured by a first lien | 249000 | 85 |
| NA | 1-Secured by a first lien | 582500 | 95 |
| NA | 1-Secured by a first lien | 215000 | 106 |
| NA | 1-Secured by a first lien | 230000 | 25 |


|  | 10-Not applicable |
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|  | 1-Debt-to-income ratio |
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|  | 9-Other |
|  | 1-Debt-to-income ratio |




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| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
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| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 21-Asian Indian |
| 21-Asian Indian |
| 21-Asian Indian |
| 21-Asian Indian |
| 2--Chinese |
| 23-Filipino |
| 23-Filipino |
| 1-American Indian or Alaska Native |
| 2-Asian |
| 2-Asian |
| 2-Asian |
| 2-Asian |
| 3-Black or African American |
| 3-Black or African American |


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| 21-Asian Indian |
| 22-Chinese |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
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| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 21-Asian Indian |
| 21-Asian Indian |
| 21-Asian Indian |
| 21-Asian Indian |
| 2--Chinese |
| 23-Filipino |
| 23-Filipino |
| 8-No co-applicant |
| 8-No co-applicant |
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|  | 2-Not Hispanic or Latino |
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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
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|  | 2-Not Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 11-Mexican |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
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|  | 2-Not Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
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|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 11-Mexican |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
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|  | 2-Not Hispanic or Latino |
|  | 5-No co-applicant |
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| 2424.00 | 3-Application denied | 1 |
| :---: | :---: | :---: |
| 105.02 | 3-Application denied | 1 |
| 2838.00 | 1-Loan originated | 1 |
| 4401.01 | 1-Loan originated | 1 |
| 4601.00 | 1-Loan originated | 1 |
| 8330.00 | 6-Purchased loan | 1 |
| 4313.02 | 1-Loan originated | 4 |
| 626.00 | 1-Loan originated | 1 |
| 4401.02 | 1-Loan originated | 1 |
| 106.00 | 1-Loan originated | 1 |
| 6909.00 | 1-Loan originated | 3 |
| 7114.00 | 1-Loan originated | 2 |
| 8421.00 | 1-Loan originated | 1 |
| 8360.00 | 6-Purchased loan | 1 |
| 8380.00 | 1-Loan originated | 1 |
| 7004.02 | 1-Loan originated | 1 |
| 7005.02 | 1-Loan originated | 1 |
| 4605.00 | 1-Loan originated | 1 |
| 3901.00 | 1-Loan originated | 1 |
| 902.00 | 1-Loan originated | 1 |
| 7401.00 | 3-Application denied | 1 |
| 5201.00 | 3-Application denied | 1 |
| 801.00 | 3-Application denied | 1 |
| 8233.04 | 3-Application denied | 1 |
| 1913.02 | 3-Application denied | 1 |
| 204.00 | 3-Application denied | 1 |
| 8434.00 | 3-Application denied | 1 |
| 506.00 | 3-Application denied | 1 |
| 2434.00 | 3-Application denied | 1 |
| 4109.00 | 3-Application denied | 1 |
| 301.02 | 3-Application denied | 1 |
| 6603.02 | 3-Application denied | 3 |
| 1510.02 | 6-Purchased loan | 1 |
| 2207.01 | 6-Purchased loan | 1 |
| 6303.00 | 1-Loan originated | 1 |
| 6504.00 | 1-Loan originated | 1 |
| 6611.00 | 6-Purchased loan | 1 |
| 2517.00 | 6-Purchased loan | 1 |
| 6407.00 | 1-Loan originated | 1 |
| 5804.00 | 6-Purchased loan | 1 |
| 5302.00 | 1-Loan originated | 1 |
| 8317.00 | 1-Loan originated | 1 |
| 1913.01 | 6-Purchased loan | 1 |
| 2819.00 | 1-Loan originated | 1 |
| 1603.00 | 1-Loan originated | 1 |
| 103.00 | 1-Loan originated | 1 |
| 632.00 | 1-Loan originated | 1 |
| 1504.02 | 1-Loan originated | 1 |
| 6504.00 | 1-Loan originated | 1 |
| 1704.00 | 1-Loan originated | 1 |
| 1608.00 | 1-Loan originated | 1 |
| 8306.00 | 1-Loan originated | 1 |
| 7608.02 | 1-Loan originated | 1 |
| 2222.00 | 1-Loan originated | 1 |
| 622.00 | 6-Purchased loan | 1 |
| 2107.00 | 6-Purchased loan | 2 |
| 1907.01 | 6-Purchased loan | 1 |
| 2426.00 | 1-Loan originated | 1 |
| 2426.00 | 1-Loan originated | 1 |


| onventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improvement |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improvement |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | -Refin |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
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| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
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| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |


| 2-Not an open-end line of credit | 277142 | 20220827 | NA | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 140650 | 20220713 | NA | 360 |
| 2-Not an open-end line of credit | 251322 | 20220216 | 4.625 | 360 |
| 2-Not an open-end line of credit | 70000 | 20211005 | 3.75 | 180 |
| 2-Not an open-end line of credit | 100500 | 20211215 | 2.49 | 180 |
| 2-Not an open-end line of credit | 604425 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 261000 | 20211203 | 4.25 | 360 |
| 2-Not an open-end line of credit | 341905 | 20221115 | 5.99 | 360 |
| 2-Not an open-end line of credit | 57900 | 20220221 | 4.25 | 360 |
| 2-Not an open-end line of credit | 253500 | 20220504 | 6.99 | 360 |
| 2-Not an open-end line of credit | 226393 | 20211016 | 2.625 | 360 |
| 2-Not an open-end line of credit | 176000 | 20220314 | 4.49 | 360 |
| 2-Not an open-end line of credit | 210000 | 20220214 | 4.625 | 360 |
| 2-Not an open-end line of credit | 308749 | NA | 3.75 | 360 |
| 2-Not an open-end line of credit | 394250 | 20221115 | 6.375 | 360 |
| 2-Not an open-end line of credit | 261250 | 20220524 | 4.625 | 360 |
| 2-Not an open-end line of credit | 104500 | 20220329 | 4.99 | 360 |
| 2-Not an open-end line of credit | 146000 | 20211124 | 4.25 | 360 |
| 2-Not an open-end line of credit | 311184 | 20220523 | 5.25 | 360 |
| 2-Not an open-end line of credit | 225600 | 20220730 | 5.375 | 360 |
| 2-Not an open-end line of credit | 232000 | 20220701 | NA | 360 |
| 2-Not an open-end line of credit | 92297 | 20220727 | NA | 360 |
| 2-Not an open-end line of credit | 2664480 | 20211103 | NA | 360 |
| 2-Not an open-end line of credit | 227950 | 20220124 | NA | 360 |
| 2-Not an open-end line of credit | 107591 | 20221010 | NA | 360 |
| 2-Not an open-end line of credit | 97500 | 20220314 | NA | 360 |
| 2-Not an open-end line of credit | 276451 | 20220130 | NA | 360 |
| 2-Not an open-end line of credit | 959000 | 20211207 | NA | 360 |
| 2-Not an open-end line of credit | 270631 | 20220511 | NA | 360 |
| 2-Not an open-end line of credit | 208585 | 20211213 | NA | 360 |
| 2-Not an open-end line of credit | 86175 | 20220614 | NA | 360 |
| 2-Not an open-end line of credit | 323275 | 20220314 | NA | 360 |
| 2-Not an open-end line of credit | 276000 | NA | 3.5 | 360 |
| 2-Not an open-end line of credit | 580000 | NA | 3.475 | 360 |
| 2-Not an open-end line of credit | 149150 | 20220808 | 5.5 | 360 |
| 2-Not an open-end line of credit | 157800 | 20220601 | 5.875 | 180 |
| 2-Not an open-end line of credit | 242500 | NA | 4.375 | 360 |
| 2-Not an open-end line of credit | 160455 | NA | 5.575 | 360 |
| 2-Not an open-end line of credit | 220922 | 20220827 | 5.25 | 360 |
| 2-Not an open-end line of credit | 256405 | NA | 4.925 | 360 |
| 2-Not an open-end line of credit | 67900 | 20220622 | 5.875 | 360 |
| 2-Not an open-end line of credit | 378100 | 20220525 | 4.5 | 360 |
| 2-Not an open-end line of credit | 378200 | NA | 3.625 | 360 |
| 2-Not an open-end line of credit | 300000 | 20221129 | 6.49 | 360 |
| 2-Not an open-end line of credit | 60000 | 20211223 | 3.375 | 360 |
| 2-Not an open-end line of credit | 175000 | 20220503 | 5.375 | 360 |
| 2-Not an open-end line of credit | 232750 | 20220922 | 6.5 | 360 |
| 2-Not an open-end line of credit | 342000 | 20220222 | 4.375 | 360 |
| 2-Not an open-end line of credit | 150000 | 20220330 | 5.625 | 360 |
| 2-Not an open-end line of credit | 321300 | 20220426 | 5.49 | 360 |
| 2-Not an open-end line of credit | 647300 | 20221019 | 6.25 | 360 |
| 2-Not an open-end line of credit | 223250 | 20220127 | 3.625 | 360 |
| 2-Not an open-end line of credit | 84850 | 20220210 | 4.125 | 360 |
| 2-Not an open-end line of credit | 1399504 | 20220301 | 3.625 | 360 |
| 2-Not an open-end line of credit | 471500 | NA | 3.75 | 360 |
| 2-Not an open-end line of credit | 501000 | NA | 3.375 | 360 |
| 2-Not an open-end line of credit | 337250 | NA | 5 | 360 |
| 2-Not an open-end line of credit | 319200 | 20220120 | 4.99 | 360 |
| 2-Not an open-end line of credit | 208550 | 20220302 | 3.99 | 360 |


| NA | 1-Secured by a first lien | 280000 | 99 |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 145000 | 97 |
| NA | 1-Secured by a first lien | 260000 | 95 |
| NA | 1-Secured by a first lien | 140000 | 50 |
| NA | 1-Secured by a first lien | 177000 | 57 |
| NA | 1-Secured by a first lien | 805900 | NA |
| NA | 1-Secured by a first lien | 360000 | 73 |
| NA | 1-Secured by a first lien | 359900 | 95 |
| NA | 1-Secured by a first lien | 60000 | 97 |
| NA | 1-Secured by a first lien | 283000 | 90 |
| NA | 1-Secured by a first lien | 280000 | 79.46 |
| NA | 1-Secured by a first lien | 220000 | 80 |
| NA | 1-Secured by a first lien | 280000 | 75 |
| NA | 1-Secured by a first lien | 324999 | NA |
| NA | 1-Secured by a first lien | 415000 | 95 |
| NA | 1-Secured by a first lien | 275000 | 95 |
| NA | 1-Secured by a first lien | 110000 | 95 |
| NA | 1-Secured by a first lien | 205000 | 72 |
| NA | 1-Secured by a first lien | 580000 | 54 |
| NA | 1-Secured by a first lien | 282000 | 80 |
| NA | 1-Secured by a first lien | 262000 | 89 |
| NA | 1-Secured by a first lien | 94000 | 96.5 |
| NA | 1-Secured by a first lien | 6000000 | 68.2 |
| NA | 1-Secured by a first lien | 235000 | 97 |
| NA | 1-Secured by a first lien | 345000 | 32 |
| NA | 1-Secured by a first lien | 130000 | 75 |
| NA | 1-Secured by a first lien | 550000 | 51 |
| NA | 1-Secured by a first lien | 1370000 | 70 |
| NA | 1-Secured by a first lien | 405000 | 67 |
| NA | 1-Secured by a first lien | 350000 | 60 |
| NA | 1-Secured by a first lien | 114900 | 75 |
| NA | 1-Secured by a first lien | 335000 | 96.5 |
| NA | 1-Secured by a first lien | 345000 | NA |
| NA | 1-Secured by a first lien | 725000 | NA |
| NA | 1-Secured by a first lien | 157000 | 95 |
| NA | 1-Secured by a first lien | 250000 | 64 |
| NA | 1-Secured by a first lien | 250000 | NA |
| NA | 1-Secured by a first lien | 168900 | NA |
| NA | 1-Secured by a first lien | 225000 | 96.5 |
| NA | 1-Secured by a first lien | 269900 | NA |
| NA | 1-Secured by a first lien | 70000 | 97 |
| NA | 1-Secured by a first lien | 398000 | 95 |
| NA | 1-Secured by a first lien | 389900 | NA |
| NA | 1-Secured by a first lien | 335000 | 90 |
| NA | 1-Secured by a first lien | 170000 | 36 |
| NA | 1-Secured by a first lien | 205000 | 86 |
| NA | 1-Secured by a first lien | 245000 | 95 |
| NA | 1-Secured by a first lien | 405000 | 85 |
| NA | 1-Secured by a first lien | 230000 | 66 |
| NA | 1-Secured by a first lien | 357000 | 90 |
| NA | 1-Secured by a first lien | 720000 | 89.9 |
| NA | 1-Secured by a first lien | 235000 | 95 |
| NA | 1-Secured by a first lien | 117000 | 73 |
| NA | 1-Secured by a first lien | 1780000 | 78.62 |
| NA | 1-Secured by a first lien | 545000 | NA |
| NA | 1-Secured by a first lien | 640000 | NA |
| NA | 1-Secured by a first lien | 355000 | NA |
| NA | 1-Secured by a first lien | 399000 | 80 |
| NA | 1-Secured by a first lien | 215000 | 97 |


|  | 4-Collateral |
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|  | 4-Collateral |
|  | 10-Not applicable |
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|  | 10-Not applicable |
|  | 6-Unverifiable information |
|  | 1-Debt-to-income ratio |
|  | 1-Debt-to-income ratio |
|  | 9-Other |
|  | 1-Debt-to-income ratio |
|  | 1-Debt-to-income ratio |
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|  | 1-Debt-to-income ratio |
|  | 1-Debt-to-income ratio |
|  | 4-Collateral |
|  | 9-Other |
|  | 10-Not applicable |
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| 5-Insufficient cash (downpayment, closing costs) | - |
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| 3302.00 | 1-Loan originated | 1 |
| :---: | :---: | :---: |
| 102.02 | 6-Purchased loan | 1 |
| 1406.01 | 6-Purchased loan | 1 |
| 609.00 | 6-Purchased loan | 1 |
| 609.00 | 1-Loan originated | 1 |
| 2505.00 | 1-Loan originated | 1 |
| 7003.01 | 1-Loan originated | 1 |
| 306.01 | 1-Loan originated | 1 |
| 8307.00 | 6-Purchased loan | 1 |
| 902.00 | 1-Loan originated | 1 |
| 714.00 | 6-Purchased loan | 1 |
| 203.01 | 1-Loan originated | 1 |
| 7401.00 | 1-Loan originated | 1 |
| 8420.00 | 1-Loan originated | 1 |
| 1503.00 | 1-Loan originated | 1 |
| 815.00 | 1-Loan originated | 1 |
| 2104.00 | 6-Purchased loan | 1 |
| 311.00 | 1-Loan originated | 1 |
| 2426.00 | 6-Purchased loan | 1 |
| 5610.00 | 1-Loan originated | 1 |
| 814.02 | 1-Loan originated | 1 |
| 1105.01 | 1-Loan originated | 1 |
| 6404.00 | 6-Purchased loan | 1 |
| 402.01 | 1-Loan originated | 1 |
| 1002.00 | 6-Purchased loan | 1 |
| 803.00 | 1-Loan originated | 1 |
| 701.01 | 1-Loan originated | 1 |
| 1604.00 | 1-Loan originated | 1 |
| 202.00 | 6-Purchased loan | 1 |
| 4108.00 | 1-Loan originated | 1 |
| 8422.00 | 1-Loan originated | 1 |
| 633.02 | 1-Loan originated | 1 |
| 8312.00 | 1-Loan originated | 1 |
| 7002.00 | 1-Loan originated | 1 |
| 2801.00 | 6-Purchased loan | 1 |
| 802.02 | 1-Loan originated | 1 |
| 804.00 | 1-Loan originated | 1 |
| 8323.00 | 1-Loan originated | 2 |
| 8306.00 | 6-Purchased loan | 1 |
| 8321.00 | 6-Purchased loan | 1 |
| 8310.00 | 6-Purchased loan | 1 |
| 2402.00 | 1-Loan originated | 1 |
| 1104.00 | 1-Loan originated | 1 |
| 2801.00 | 1-Loan originated | 1 |
| 707.00 | 1-Loan originated | 1 |
| 604.00 | 1-Loan originated | 1 |
| 601.00 | 1-Loan originated | 1 |
| 609.00 | 6-Purchased loan | 1 |
| 1103.00 | 1-Loan originated | 1 |
| 706.00 | 6-Purchased loan | 1 |
| 8434.00 | 1-Loan originated | 1 |
| 8437.00 | 6-Purchased loan | 1 |
| 8390.00 | 6-Purchased loan | 1 |
| 3201.02 | 1-Loan originated | 1 |
| 1510.02 | 1-Loan originated | 1 |
| 803.00 | 1-Loan originated | 1 |
| 5604.00 | 1-Loan originated | 1 |
| 307.06 | 6-Purchased loan | 1 |
| 315.01 | 6-Purchased loan | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improvement |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |


| 2-Not an open-end line of credit | 360000 | 20220203 | 4.625 | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 120150 | NA | 5.625 | 360 |
| 2-Not an open-end line of credit | 250000 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 311137.33 | NA | 3.875 | 240 |
| 2-Not an open-end line of credit | 100000 | 20220329 | 4.5 | 120 |
| 2-Not an open-end line of credit | 226500 | 20210922 | 2.25 | 180 |
| 2-Not an open-end line of credit | 230850 | 20220117 | 3.49 | 360 |
| 2-Not an open-end line of credit | 167920 | 20220607 | 5.75 | 360 |
| 2-Not an open-end line of credit | 159000 | NA | 3.375 | 180 |
| 2-Not an open-end line of credit | 300000 | 20221101 | 6.25 | 360 |
| 2-Not an open-end line of credit | 475000 | NA | 2.875 | 360 |
| 2-Not an open-end line of credit | 120000 | 20221109 | 6.625 | 360 |
| 2-Not an open-end line of credit | 381954 | 20220411 | 4.75 | 360 |
| 2-Not an open-end line of credit | 316000 | 20221108 | 8.125 | 360 |
| 2-Not an open-end line of credit | 137750 | 20220608 | 5.375 | 360 |
| 2-Not an open-end line of credit | 280250 | 20220315 | 5.25 | 360 |
| 2-Not an open-end line of credit | 213416.53 | NA | 3.55 | 360 |
| 2-Not an open-end line of credit | 135000 | 20220610 | 5.125 | 360 |
| 2-Not an open-end line of credit | 300000 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 250300 | 20220318 | 4.75 | 360 |
| 2-Not an open-end line of credit | 949999 | 20220601 | 4.75 | 240 |
| 2-Not an open-end line of credit | 107951 | 20220604 | 5.125 | 360 |
| 2-Not an open-end line of credit | 238500 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 92000 | 20220812 | 7 | 360 |
| 2-Not an open-end line of credit | 104000 | NA | 3.5 | 360 |
| 2-Not an open-end line of credit | 382500 | 20220126 | 3.99 | 360 |
| 2-Not an open-end line of credit | 126000 | 20220207 | 3.99 | 360 |
| 2-Not an open-end line of credit | 266265 | 20211007 | 3.375 | 360 |
| 2-Not an open-end line of credit | 358000 | NA | 2.99 | 360 |
| 2-Not an open-end line of credit | 147200 | 20220803 | 6.125 | 360 |
| 2-Not an open-end line of credit | 291750 | 20220412 | 4.875 | 360 |
| 2-Not an open-end line of credit | 1020000 | 20220322 | 3.75 | 360 |
| 2-Not an open-end line of credit | 305000 | 20220105 | 4.625 | 360 |
| 2-Not an open-end line of credit | 192000 | 20220714 | 5.875 | 180 |
| 2-Not an open-end line of credit | 262500 | NA | 5.125 | 360 |
| 2-Not an open-end line of credit | 391500 | 20220112 | 3.75 | 360 |
| 2-Not an open-end line of credit | 674924 | 20220125 | 3.625 | 360 |
| 2-Not an open-end line of credit | 410000 | 20211014 | 2.125 | 180 |
| 2-Not an open-end line of credit | 148021.6 | NA | 4.99 | 360 |
| 2-Not an open-end line of credit | 202500 | NA | 5.075 | 360 |
| 2-Not an open-end line of credit | 396000 | NA | 4 | 360 |
| 2-Not an open-end line of credit | 1000229 | 20220407 | 3.75 | 360 |
| 2-Not an open-end line of credit | 150000 | 20211213 | 2.75 | 360 |
| 2-Not an open-end line of credit | 396000 | 20211216 | 2.99 | 360 |
| 2-Not an open-end line of credit | 321500 | 20220802 | 4.99 | 360 |
| 2-Not an open-end line of credit | 382000 | 20220505 | 4.5 | 360 |
| 2-Not an open-end line of credit | 207500 | 20220106 | 3.375 | 360 |
| 2-Not an open-end line of credit | 104500 | NA | 3.5 | 240 |
| 2-Not an open-end line of credit | 227800 | 20220106 | 3.125 | 360 |
| 2-Not an open-end line of credit | 601350 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 136000 | 20210804 | 2.49 | 180 |
| 2-Not an open-end line of credit | 182845 | NA | 5.875 | 360 |
| 2-Not an open-end line of credit | 240000 | NA | 3.375 | 360 |
| 2-Not an open-end line of credit | 200000 | 20220627 | 4.75 | 360 |
| 2-Not an open-end line of credit | 262600 | 20220305 | 3.625 | 360 |
| 2-Not an open-end line of credit | 1800000 | 20211223 | 2.625 | 360 |
| 2-Not an open-end line of credit | 232400 | 20220115 | 2.875 | 180 |
| 2-Not an open-end line of credit | 207200 | NA | 7.125 | 360 |
| 2-Not an open-end line of credit | 422750 | NA | 3.55 | 360 |


| NA | 1-Secured by a first lien | 480000 | 75 |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 133500 | NA |
| NA | 1-Secured by a first lien | 400000 | NA |
| NA | 1-Secured by a first lien | 520000 | NA |
| NA | 1-Secured by a first lien | 220000 | 46 |
| NA | 1-Secured by a first lien | 350000 | 65 |
| NA | 1-Secured by a first lien | 243000 | 95 |
| NA | 1-Secured by a first lien | 209900 | 80 |
| NA | 1-Secured by a first lien | 350000 | NA |
| NA | 1-Secured by a first lien | 400000 | 75 |
| NA | 1-Secured by a first lien | 635000 | NA |
| NA | 1-Secured by a first lien | 150000 | 80 |
| NA | 1-Secured by a first lien | 389000 | 96.5 |
| NA | 1-Secured by a first lien | 395000 | 80 |
| NA | 1-Secured by a first lien | 145000 | 95 |
| NA | 1-Secured by a first lien | 295000 | 95 |
| NA | 1-Secured by a first lien | 225000 | NA |
| NA | 1-Secured by a first lien | 235000 | 58 |
| NA | 1-Secured by a first lien | 500000 | NA |
| NA | 1-Secured by a first lien | 379000 | 67 |
| NA | 1-Secured by a first lien | 1315000 | 72.24 |
| NA | 1-Secured by a first lien | 440000 | 25 |
| NA | 1-Secured by a first lien | 265000 | NA |
| NA | 1-Secured by a first lien | 115000 | 80 |
| NA | 1-Secured by a first lien | 130000 | NA |
| NA | 1-Secured by a first lien | 425000 | 90 |
| NA | 1-Secured by a first lien | 180000 | 70 |
| NA | 1-Secured by a first lien | 350000 | 77 |
| NA | 1-Secured by a first lien | 500000 | NA |
| NA | 1-Secured by a first lien | 184000 | 80 |
| NA | 1-Secured by a first lien | 389000 | 75 |
| NA | 1-Secured by a first lien | 1275000 | 80 |
| NA | 1-Secured by a first lien | 365000 | 84 |
| NA | 1-Secured by a first lien | 240000 | 80 |
| NA | 1-Secured by a first lien | 350000 | NA |
| NA | 1-Secured by a first lien | 435000 | 90 |
| NA | 1-Secured by a first lien | 750000 | 89.98 |
| NA | 1-Secured by a first lien | 705000 | 59 |
| NA | 1-Secured by a first lien | 156000 | NA |
| NA | 1-Secured by a first lien | 270000 | NA |
| NA | 1-Secured by a first lien | 495000 | NA |
| NA | 1-Secured by a first lien | 1935000 | 51.69 |
| NA | 1-Secured by a first lien | 358000 | 42 |
| NA | 1-Secured by a first lien | 495000 | 80 |
| NA | 1-Secured by a first lien | 357500 | 90 |
| NA | 1-Secured by a first lien | 700000 | 55 |
| NA | 1-Secured by a first lien | 400000 | 52 |
| NA | 1-Secured by a first lien | 175000 | NA |
| NA | 1-Secured by a first lien | 375000 | 61 |
| NA | 1-Secured by a first lien | 633000 | NA |
| NA | 1-Secured by a first lien | 270000 | 51 |
| NA | 1-Secured by a first lien | 188500 | NA |
| NA | 1-Secured by a first lien | 305000 | NA |
| NA | 1-Secured by a first lien | 280000 | 72 |
| NA | 1-Secured by a first lien | 329000 | 80 |
| NA | 1-Secured by a first lien | 2400000 | 75 |
| NA | 1-Secured by a first lien | 300000 | 78 |
| NA | 1-Secured by a first lien | 296000 | NA |
| NA | 1-Secured by a first lien | 445000 | NA |


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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
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|  | 12-Puerto Rican |
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| 107.02 | 1-Loan originated | 1 |
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| 106.00 | 1-Loan originated | 1 |
| 6603.02 | 1-Loan originated | 1 |
| 5101.00 | 1-Loan originated | 1 |
| 8331.00 | 1-Loan originated | 1 |
| 8322.00 | 1-Loan originated | 1 |
| 8345.00 | 1-Loan originated | 1 |
| 406.00 | 6-Purchased loan | 1 |
| 307.03 | 1-Loan originated | 1 |
| 306.04 | 1-Loan originated | 1 |
| 627.00 | 1-Loan originated | 1 |
| 2101.00 | 1-Loan originated | 1 |
| 310.00 | 1-Loan originated | 1 |
| 622.00 | 6-Purchased loan | 1 |
| 2105.02 | 6-Purchased loan | 1 |
| 1704.00 | 6-Purchased loan | 1 |
| 2505.00 | 1-Loan originated | 1 |
| 628.00 | 3-Application denied | 1 |
| 1403.02 | 6-Purchased loan | 3 |
| 3301.03 | 6-Purchased loan | 1 |
| 2422.00 | 6-Purchased loan | 3 |
| 6505.00 | 1-Loan originated | 1 |
| 8331.00 | 6-Purchased loan | 1 |
| 2216.00 | 1-Loan originated | 1 |
| 814.03 | 6-Purchased loan | 1 |
| 815.00 | 6-Purchased loan | 1 |
| 303.00 | 1-Loan originated | 1 |
| 814.01 | 6-Purchased loan | 1 |
| 7109.00 | 1-Loan originated | 1 |
| 633.02 | 1-Loan originated | 1 |
| 8331.00 | 1-Loan originated | 1 |
| 205.00 | 1-Loan originated | 1 |
| 803.00 | 1-Loan originated | 1 |
| 627.00 | 1-Loan originated | 1 |
| 201.00 | 1-Loan originated | 1 |
| 402.02 | 1-Loan originated | 1 |
| 2402.00 | 1-Loan originated | 1 |
| 703.00 | 6-Purchased loan | 1 |
| 201.00 | 3-Application denied | 1 |
| 1504.01 | 1-Loan originated | 1 |
| 321.00 | 1-Loan originated | 1 |
| 3201.01 | 6-Purchased loan | 1 |
| 505.00 | 3-Application denied | 1 |
| 2411.00 | 1-Loan originated | 1 |
| 4701.00 | 3-Application denied | 1 |
| 5001.00 | 3-Application denied | 1 |
| 7105.00 | 3-Application denied | 2 |
| 4302.00 | 1-Loan originated | 1 |
| 3814.00 | 1-Loan originated | 1 |
| 4204.00 | 6-Purchased loan | 1 |
| 4302.00 | 1-Loan originated | 1 |
| 7207.00 | 1-Loan originated | 1 |
| 8343.00 | 6-Purchased loan | 1 |
| 2521.02 | 6-Purchased loan | 2 |
| 402.01 | 1-Loan originated | 1 |
| 1703.00 | 3-Application denied | 1 |
| 207.02 | 3-Application denied | 1 |
| 632.00 | 1-Loan originated | 1 |
| 7001.00 | 1-Loan originated | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | me Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
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| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 32-Cash Out |
| 2-Federal Housing Administration insured (FHA) | 2-Home Improvement |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |


| 2-Not an open-end line of credit | 113700 | 20220107 | 2.99 | 180 |
| :---: | :---: | :---: | :---: | :---: |
| 2 -Not an open-end line of credit | 120000 | 20220623 | 6.125 | 360 |
| $2-$ Not an open-end line of credit | 65500 | 20220211 | 3.75 | 180 |
| $2-$ Not an open-end line of credit | 38800 | 20220627 | 5.875 | 180 |
| 2 -Not an open-end line of credit | 744000 | 20220209 | 3.75 | 360 |
| $2-$ Not an open-end line of credit | 1540000 | 20220411 | 3.875 | 360 |
| 2-Not an open-end line of credit | 116100 | 20211123 | 2.625 | 180 |
| $2-$ Not an open-end line of credit | 157800 | NA | 2.5 | 180 |
| $2-$ Not an open-end line of credit | 171000 | 20220310 | 4 | 360 |
| $2-$ Not an open-end line of credit | 135200 | 20221005 | 8 | 360 |
| $2-$ Not an open-end line of credit | 321000 | 20220131 | 2.875 | 360 |
| $2-$ Not an open-end line of credit | 335000 | 20220721 | 6.375 | 360 |
| 2-Not an open-end line of credit | 531000 | 20220104 | 3.125 | 360 |
| $2-$ Not an open-end line of credit | 376485.7 | NA | 3.75 | 360 |
| 2-Not an open-end line of credit | 137437 | NA | 7 | 360 |
| 2-Not an open-end line of credit | 313405 | NA | 4.625 | 360 |
| 2-Not an open-end line of credit | 261747 | 20211019 | 2.99 | 240 |
| 2-Not an open-end line of credit | 1201000 | 20211130 | NA | 360 |
| 2-Not an open-end line of credit | 397000 | NA | 5.375 | 360 |
| 2-Not an open-end line of credit | 209000 | NA | 5.5 | 360 |
| 2-Not an open-end line of credit | 1101301.73 | NA | 3.625 | 360 |
| 2-Not an open-end line of credit | 108915 | 20220304 | 3.5 | 180 |
| 2-Not an open-end line of credit | 202400 | NA | 3.375 | 360 |
| 2-Not an open-end line of credit | 680000 | 20220118 | 3.125 | 360 |
| 2-Not an open-end line of credit | 168750 | NA | 4.875 | 360 |
| 2-Not an open-end line of credit | 196000 | NA | 4.99 | 360 |
| 2-Not an open-end line of credit | 600800 | 20220328 | 4.75 | 360 |
| 2-Not an open-end line of credit | 181125 | NA | 4.99 | 360 |
| 2-Not an open-end line of credit | 135743 | 20220207 | 3.75 | 360 |
| 2-Not an open-end line of credit | 222500 | 20211213 | 3.125 | 360 |
| 2-Not an open-end line of credit | 252000 | 20210726 | 5.125 | 360 |
| 2-Not an open-end line of credit | 159000 | 20221129 | 5.99 | 360 |
| 2-Not an open-end line of credit | 639200 | 20220621 | 6.125 | 360 |
| 2-Not an open-end line of credit | 363750 | 20220214 | 3.75 | 360 |
| 2-Not an open-end line of credit | 203000 | 20220223 | 3.375 | 180 |
| 2-Not an open-end line of credit | 542500 | 20220517 | 5.375 | 360 |
| 2-Not an open-end line of credit | 324375 | 20220102 | 2.875 | 360 |
| 2-Not an open-end line of credit | 580000 | NA | 3.575 | 360 |
| 2-Not an open-end line of credit | 112600 | 20211213 | NA | 360 |
| 2-Not an open-end line of credit | 271575 | 20220220 | 3.25 | 180 |
| 2-Not an open-end line of credit | 420000 | 20220326 | 5.25 | 360 |
| 2-Not an open-end line of credit | 228000 | NA | 4.75 | 360 |
| 2-Not an open-end line of credit | 365000 | 20210930 | NA | 180 |
| 2-Not an open-end line of credit | 468750 | 20220126 | 3.49 | 360 |
| 2-Not an open-end line of credit | 110457 | 20220316 | NA | 360 |
| 2-Not an open-end line of credit | 55611 | 20210914 | NA | 240 |
| 2-Not an open-end line of credit | 172500 | 20220607 | NA | 360 |
| 2-Not an open-end line of credit | 612000 | 20220215 | 4 | 360 |
| 2-Not an open-end line of credit | 235000 | 20220510 | 5.125 | 360 |
| 2-Not an open-end line of credit | 262704.47 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 497000 | 20211110 | 2.875 | 360 |
| 2-Not an open-end line of credit | 255550 | 20220901 | 5.625 | 360 |
| 2-Not an open-end line of credit | 227732.32 | NA | 5.125 | 360 |
| 2-Not an open-end line of credit | 365332.46 | NA | 5.25 | 360 |
| 2-Not an open-end line of credit | 552000 | 20220502 | 5.75 | 360 |
| 2-Not an open-end line of credit | 294500 | 20220106 | NA | 360 |
| 2-Not an open-end line of credit | 265100 | 20211217 | NA | 180 |
| 2-Not an open-end line of credit | 324000 | 20220303 | 3.99 | 360 |
| 2-Not an open-end line of credit | 68538 | 20220126 | 3.49 | 180 |


| NA | 1-Secured by a first lien | 160000 | 72 |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 150000 | 80 |
| NA | 1-Secured by a first lien | 180000 | 37 |
| NA | 1-Secured by a first lien | 40000 | 97 |
| NA | 1-Secured by a first lien | 930000 | 80 |
| NA | 1-Secured by a first lien | 1925000 | 80 |
| NA | 1-Secured by a first lien | 129000 | 90 |
| NA | 1-Secured by a first lien | 200000 | NA |
| NA | 1-Secured by a first lien | 180000 | 95 |
| NA | 1-Secured by a first lien | 169000 | 80 |
| NA | 1-Secured by a first lien | 635000 | 51 |
| NA | 1-Secured by a first lien | 360860 | 93 |
| NA | 1-Secured by a first lien | 720000 | 74 |
| NA | 1-Secured by a first lien | 397500 | NA |
| NA | 1-Secured by a first lien | 183250 | NA |
| NA | 1-Secured by a first lien | 329900 | NA |
| NA | 1-Secured by a first lien | 380000 | 69 |
| NA | 1-Secured by a first lien | 1820000 | 65.98 |
| NA | 1-Secured by a first lien | 572000 | NA |
| NA | 1-Secured by a first lien | 220000 | NA |
| NA | 1-Secured by a first lien | 1530000 | NA |
| NA | 1-Secured by a first lien | 250000 | 48 |
| NA | 1-Secured by a first lien | 253000 | NA |
| NA | 1-Secured by a first lien | 850000 | 80 |
| NA | 1-Secured by a first lien | 225000 | NA |
| NA | 1-Secured by a first lien | 245000 | NA |
| NA | 1-Secured by a first lien | 751000 | 80 |
| NA | 1-Secured by a first lien | 241500 | NA |
| NA | 1-Secured by a first lien | 275000 | 50 |
| NA | 1-Secured by a first lien | 327500 | 68 |
| NA | 1-Secured by a first lien | 280000 | 90 |
| NA | 1-Secured by a first lien | 212000 | 75 |
| NA | 1-Secured by a first lien | 799000 | 80 |
| NA | 1-Secured by a first lien | 485000 | 75 |
| NA | 1-Secured by a first lien | 433000 | 47 |
| NA | 1-Secured by a first lien | 775000 | 70 |
| NA | 1-Secured by a first lien | 432500 | 75 |
| NA | 1-Secured by a first lien | 630000 | NA |
| NA | 1-Secured by a first lien | 120000 | 94 |
| NA | 1-Secured by a first lien | 319500 | 85 |
| NA | 1-Secured by a first lien | 525000 | 80 |
| NA | 1-Secured by a first lien | 285000 | NA |
| NA | 1-Secured by a first lien | 1350000 | 28 |
| NA | 1-Secured by a first lien | 625000 | 75 |
| NA | 1-Secured by a first lien | 150000 | 72.37 |
| NA | 1-Secured by a first lien | 150000 | 36.44 |
| NA | 1-Secured by a first lien | 230000 | 75 |
| NA | 1-Secured by a first lien | 765000 | 80 |
| NA | 1-Secured by a first lien | 250000 | 94 |
| NA | 1-Secured by a first lien | 335000 | NA |
| NA | 1-Secured by a first lien | 580000 | 86 |
| NA | 1-Secured by a first lien | 269000 | 95 |
| NA | 1-Secured by a first lien | 285000 | NA |
| NA | 1-Secured by a first lien | 372500 | NA |
| NA | 1-Secured by a first lien | 690000 | 80 |
| NA | 1-Secured by a first lien | 310000 | 95 |
| NA | 1-Secured by a first lien | 440000 | 61 |
| NA | 1-Secured by a first lien | 360000 | 90 |
| NA | 1-Secured by a first lien | 76153 | 90 |


|  | 10-Not applicable |
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|  | 1-Debt-to-income ratio |
|  | 10-Not applicable |
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|  | 4-Collateral |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 1-Debt-to-income ratio |
|  | 10-Not applicable |
|  | 3-Credit history |
|  | 3-Credit history |
|  | 4-Collateral |
|  | 10-Not applicable |
|  | 10-Not applicable |
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|  | 10-Not applicable |
|  | 10-Not applicable |
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|  | 1-Debt-to-income ratio |
|  | 6-Unverifiable information |
|  | 10-Not applicable |
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| 6-Information not provided by applicant in mail, internet, or telephone application |  |
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| 21-Asian Indian |  |
| 21-Asian Indian |  |
| 21-Asian Indian |  |
| 21-Asian Indian |  |
| 21-Asian Indian |  |
| 22-Chinese |  |
| 26-Vietnamese |  |
| 2-Asian |  |
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| 3-Black or African American |  |
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| 8-No co-applicant |
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| 5-White |
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| 3-Black or African American |
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| 2-Not Hispanic or Latino |
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| 2-Not Hispanic or Latino |
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| 1204.00 | 1-Loan originated | 1 |
| :---: | :---: | :---: |
| 8331.00 | 1-Loan originated | 1 |
| 8307.00 | 6-Purchased loan | 1 |
| 1201.00 | 6-Purchased loan | 1 |
| 802.02 | 1-Loan originated | 1 |
| 1007.00 | 1-Loan originated | 1 |
| 1202.00 | 6-Purchased loan | 1 |
| 510.00 | 1-Loan originated | 1 |
| 201.00 | 6-Purchased loan | 1 |
| 8363.00 | 1-Loan originated | 1 |
| 603.00 | 6-Purchased loan | 1 |
| 1605.01 | 1-Loan originated | 2 |
| 603.00 | 1-Loan originated | 1 |
| 8424.00 | 1-Loan originated | 1 |
| 818.00 | 1-Loan originated | 1 |
| 8333.00 | 1-Loan originated | 3 |
| 622.00 | 1-Loan originated | 1 |
| 6306.00 | 1-Loan originated | 1 |
| 1105.02 | 1-Loan originated | 2 |
| 814.02 | 1-Loan originated | 1 |
| 8310.00 | 1-Loan originated | 3 |
| 7709.02 | 6-Purchased loan | 1 |
| 2424.00 | 6-Purchased loan | 1 |
| 5611.00 | 1-Loan originated | 1 |
| 103.00 | 1-Loan originated | 1 |
| 508.00 | 1-Loan originated | 1 |
| 802.01 | 6-Purchased loan | 1 |
| 1105.02 | 1-Loan originated | 1 |
| 706.00 | 1-Loan originated | 1 |
| 6113.00 | 1-Loan originated | 2 |
| 2801.00 | 1-Loan originated | 1 |
| 1504.01 | 6-Purchased loan | 1 |
| 404.02 | 1-Loan originated | 1 |
| 2421.00 | 1-Loan originated | 1 |
| 4111.00 | 6-Purchased loan | 1 |
| 307.03 | 1-Loan originated | 1 |
| 3201.02 | 1-Loan originated | 1 |
| 1104.00 | 1-Loan originated | 1 |
| 2422.00 | 1-Loan originated | 1 |
| 7503.00 | 1-Loan originated | 1 |
| 8422.00 | 1-Loan originated | 1 |
| 304.00 | 3-Application denied | 1 |
| 3204.00 | 1-Loan originated | 1 |
| 4801.00 | 3-Application denied | 1 |
| 4801.00 | 1-Loan originated | 1 |
| 3812.00 | 1-Loan originated | 1 |
| 8340.00 | 1-Loan originated | 1 |
| 1707.00 | 1-Loan originated | 1 |
| 6103.00 | 3-Application denied | 1 |
| 2605.00 | 1-Loan originated | 2 |
| 8420.00 | 1-Loan originated | 1 |
| 308.00 | 1-Loan originated | 1 |
| 2222.00 | 1-Loan originated | 2 |
| 3206.00 | 3-Application denied | 1 |
| 816.00 | 3-Application denied | 1 |
| 8319.00 | 1-Loan originated | 1 |
| 813.00 | 1-Loan originated | 1 |
| 814.02 | 1-Loan originated | 1 |
| 206.01 | 1-Loan originated | 2 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improvement |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |


| 2-Not an open-end line of credit | 479000 | 20220610 | 4.75 | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 377600 | 20220307 | 5.375 | 360 |
| 2-Not an open-end line of credit | 315000 | NA | 5.25 | 360 |
| 2-Not an open-end line of credit | 898583.6 | NA | 3.5 | 360 |
| 2-Not an open-end line of credit | 399200 | 20220413 | 4.99 | 360 |
| 2-Not an open-end line of credit | 202000 | 20220126 | 3.125 | 120 |
| 2-Not an open-end line of credit | 456000 | NA | 3 | 360 |
| 2-Not an open-end line of credit | 364000 | 20220221 | 4.125 | 360 |
| 2-Not an open-end line of credit | 265500 | NA | 3.5 | 360 |
| 2-Not an open-end line of credit | 177400 | 20211230 | 3.25 | 360 |
| 2-Not an open-end line of credit | 423500 | NA | 4.375 | 360 |
| 2-Not an open-end line of credit | 266500 | 20210810 | 3.25 | 360 |
| 2-Not an open-end line of credit | 489000 | 20220324 | 4.365 | 360 |
| 2-Not an open-end line of credit | 416000 | 20220725 | 5 | 360 |
| 2-Not an open-end line of credit | 624250 | 20220228 | 4.75 | 360 |
| 2-Not an open-end line of credit | 392018 | 20220124 | 3.375 | 180 |
| 2-Not an open-end line of credit | 419920 | 20220208 | 4.5 | 360 |
| 2-Not an open-end line of credit | 152000 | 20220412 | 4.75 | 180 |
| 2-Not an open-end line of credit | 416500 | 20220527 | 5.49 | 360 |
| 2-Not an open-end line of credit | 2320000 | 20211221 | 2.750 | 360 |
| 2-Not an open-end line of credit | 952000 | 20220516 | 5.49 | 360 |
| 2-Not an open-end line of credit | 349000 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 400000 | NA | 3 | 360 |
| 2-Not an open-end line of credit | 202000 | 20220201 | 3.125 | 180 |
| 2-Not an open-end line of credit | 181000 | 20220111 | 3.5 | 240 |
| 2-Not an open-end line of credit | 800000 | 20220708 | 4.5 | 360 |
| 2-Not an open-end line of credit | 133600 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 364000 | 20220330 | 4.875 | 240 |
| 2-Not an open-end line of credit | 856000 | 20220818 | 6.25 | 360 |
| 2-Not an open-end line of credit | 178500 | 20221102 | 7.375 | 360 |
| 2-Not an open-end line of credit | 328000 | 20221017 | 6.75 | 360 |
| 2-Not an open-end line of credit | 342000 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 208183 | 20220222 | 4.25 | 360 |
| 2-Not an open-end line of credit | 296250 | 20220510 | 4.75 | 360 |
| 2-Not an open-end line of credit | 150000 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 236000 | 20211203 | 3.49 | 360 |
| 2-Not an open-end line of credit | 176000 | 20211108 | 2.25 | 120 |
| 2-Not an open-end line of credit | 255000 | 20220106 | 2.875 | 120 |
| 2-Not an open-end line of credit | 558750 | 20220413 | 4.5 | 240 |
| 2-Not an open-end line of credit | 134400 | 20220725 | 4.875 | 360 |
| 2-Not an open-end line of credit | 159500 | 20211202 | 2.625 | 180 |
| 2-Not an open-end line of credit | 647200 | 20220214 | NA | 180 |
| 2-Not an open-end line of credit | 329921 | 20211210 | 3 | 180 |
| 2-Not an open-end line of credit | 168000 | 20220207 | NA | 360 |
| 2-Not an open-end line of credit | 72050 | 20220330 | 4.99 | 360 |
| 2-Not an open-end line of credit | 80000 | 20220328 | 4.875 | 360 |
| 2-Not an open-end line of credit | 216600 | 20220428 | 5.49 | 360 |
| 2-Not an open-end line of credit | 512000 | 20220512 | 4.99 | 360 |
| 2-Not an open-end line of credit | 159493 | 20220810 | NA | 360 |
| 2-Not an open-end line of credit | 245471 | 20220706 | 5.75 | 360 |
| 2-Not an open-end line of credit | 213873 | 20220127 | 3.25 | 300 |
| 2-Not an open-end line of credit | 840000 | 20220118 | 3.5 | 360 |
| 2-Not an open-end line of credit | 557500 | 20221021 | 7.875 | 360 |
| 2-Not an open-end line of credit | 620552 | 20211027 | NA | 360 |
| 2-Not an open-end line of credit | 250000 | 20220531 | NA | 180 |
| 2-Not an open-end line of credit | 339000 | 20221026 | 6.5 | 360 |
| 2-Not an open-end line of credit | 268000 | 20211206 | 3.125 | 360 |
| 2-Not an open-end line of credit | 192000 | 20220413 | 3.375 | 180 |
| 2-Not an open-end line of credit | 293000 | 20220205 | 2.875 | 180 |


| NA | 1-Secured by a first lien | 505000 | 95 |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 472000 | 80 |
| NA | 1-Secured by a first lien | 350000 | NA |
| NA | 1-Secured by a first lien | 1125000 | NA |
| NA | 1-Secured by a first lien | 499000 | 80 |
| NA | 1-Secured by a first lien | 450000 | 45 |
| NA | 1-Secured by a first lien | 480000 | NA |
| NA | 1-Secured by a first lien | 455000 | 80 |
| NA | 1-Secured by a first lien | 295000 | NA |
| NA | 1-Secured by a first lien | 320000 | 56 |
| NA | 1-Secured by a first lien | 605000 | NA |
| NA | 1-Secured by a first lien | 380000 | 71 |
| NA | 1-Secured by a first lien | 699900 | 70 |
| NA | 1-Secured by a first lien | 520000 | 80 |
| NA | 1-Secured by a first lien | 735000 | 85 |
| NA | 1-Secured by a first lien | 710000 | 56 |
| NA | 1-Secured by a first lien | 524900 | 80 |
| NA | 1-Secured by a first lien | 190000 | 80 |
| NA | 1-Secured by a first lien | 490000 | 85 |
| NA | 1-Secured by a first lien | 2900000 | 80.000 |
| NA | 1-Secured by a first lien | 1190000 | 80 |
| NA | 1-Secured by a first lien | 600000 | NA |
| NA | 1-Secured by a first lien | 440000 | NA |
| NA | 1-Secured by a first lien | 295000 | 69 |
| NA | 1-Secured by a first lien | 300000 | 61 |
| NA | 1-Secured by a first lien | 1414000 | 56.57 |
| NA | 1-Secured by a first lien | 167000 | NA |
| NA | 1-Secured by a first lien | 455000 | 80 |
| NA | 1-Secured by a first lien | 1070000 | 80 |
| NA | 1-Secured by a first lien | 210000 | 85 |
| NA | 1-Secured by a first lien | 410000 | 80 |
| NA | 1-Secured by a first lien | 360000 | NA |
| NA | 1-Secured by a first lien | 690000 | 31 |
| NA | 1-Secured by a first lien | 395000 | 75 |
| NA | 1-Secured by a first lien | 353000 | NA |
| NA | 1-Secured by a first lien | 295000 | 80 |
| NA | 1-Secured by a first lien | 325000 | 55 |
| NA | 1-Secured by a first lien | 425000 | 60 |
| NA | 1-Secured by a first lien | 745000 | 75 |
| NA | 1-Secured by a first lien | 168000 | 80 |
| NA | 1-Secured by a first lien | 340000 | 47 |
| NA | 1-Secured by a first lien | 809000 | 80 |
| NA | 1-Secured by a first lien | 687500 | 47.98 |
| NA | 1-Secured by a first lien | 142000 | 119 |
| NA | 1-Secured by a first lien | 142000 | 51 |
| NA | 1-Secured by a first lien | 210000 | 39 |
| NA | 1-Secured by a first lien | 228000 | 95 |
| NA | 1-Secured by a first lien | 640000 | 80 |
| NA | 1-Secured by a first lien | 153000 | 102.45 |
| NA | 1-Secured by a first lien | 250000 | 96.5 |
| NA | 1-Secured by a first lien | 562000 | 39 |
| NA | 1-Secured by a first lien | 1235000 | 68.01 |
| NA | 1-Secured by a first lien | 750000 | 75 |
| NA | 1-Secured by a first lien | 1107000 | 56.05 |
| NA | 1-Secured by a first lien | 420000 | 60 |
| NA | 1-Secured by a first lien | 452000 | 75 |
| NA | 1-Secured by a first lien | 335000 | 80 |
| NA | 1-Secured by a first lien | 263000 | 73 |
| NA | 1-Secured by a first lien | 514000 | 57 |


|  | 10-Not applicable |
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|  | 1-Debt-to-income ratio |
|  | 4-Collateral |
|  | 10-Not applicable |
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| 6-Information not provided by applicant in mail, internet, or telephone application |
| 22-Chinese |
| 3-Black or African American |
| 3-Black or African American |
| 3-Black or African American |
| 3-Black or African American |
| 5-White |
| 5-White |
| 5-White |
| 5-White |
| 5-White |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 2-Asian |
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| 5-White |
| 5-White |
| 5-White |
| 5-White |
| 25-Korean |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 22-Chinese |
| 3-Black or African American |
| 3-Black or African American |
| 3-Black or African American |
| 3-Black or African American |
| 2-Asian |
| 5-White |
| 5-White |
| 5-White |
| 5-White |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 8-No co-applicant |
| 8-No co-applicant |
| 8-No co-applicant |
| 8-No co-applicant |
| 8-No co-applicant |
| 8-No co-applicant |









| 2-Not Hispanic or Latino |
| :---: |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 11-Mexican |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 14-Other Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
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| 2-Not Hispanic or Latino |
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| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 5-No co-applicant |
| 5-No co-applicant |
| 5-No co-applicant |
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| 1407.01 | 1-Loan originated | 1 |
| :---: | :---: | :---: |
| 814.03 | 1-Loan originated | 1 |
| 3301.02 | 1-Loan originated | 1 |
| 7101.00 | 3-Application denied | 1 |
| 3201.01 | 3-Application denied | 1 |
| 3301.03 | 3-Application denied | 1 |
| 8360.00 | 3-Application denied | 1 |
| 2712.00 | 3-Application denied | 1 |
| 4603.02 | 1-Loan originated | 1 |
| 8390.00 | 1-Loan originated | 1 |
| 3301.02 | 6-Purchased loan | 1 |
| 4804.00 | 6-Purchased loan | 1 |
| 7505.00 | 1-Loan originated | 1 |
| 4603.02 | 6-Purchased loan | 2 |
| 102.01 | 1-Loan originated | 1 |
| 8343.00 | 1-Loan originated | 1 |
| 8419.00 | 1-Loan originated | 1 |
| 8307.00 | 6-Purchased loan | 1 |
| 7113.00 | 1-Loan originated | 1 |
| 4301.01 | 6-Purchased loan | 1 |
| 7207.00 | 6-Purchased loan | 1 |
| 8436.00 | 1-Loan originated | 1 |
| 4804.00 | 1-Loan originated | 1 |
| 4203.00 | 1-Loan originated | 1 |
| 8355.00 | 1-Loan originated | 1 |
| 5304.00 | 1-Loan originated | 1 |
| 4408.00 | 1-Loan originated | 1 |
| 8358.00 | 1-Loan originated | 1 |
| 5303.00 | 1-Loan originated | 1 |
| 4909.01 | 1-Loan originated | 1 |
| 2405.00 | 3-Application denied | 1 |
| 1301.00 | 3-Application denied | 1 |
| 1507.00 | 3-Application denied | 3 |
| 7001.00 | 3-Application denied | 1 |
| 102.01 | 3-Application denied | 1 |
| 1702.00 | 3-Application denied | 1 |
| 403.00 | 1-Loan originated | 2 |
| 6605.00 | 6-Purchased loan | 1 |
| 1701.00 | 6-Purchased loan | 1 |
| 6505.00 | 1-Loan originated | 3 |
| 5205.00 | 6-Purchased loan | 1 |
| 818.00 | 6-Purchased loan | 1 |
| 107.01 | 6-Purchased loan | 1 |
| 312.00 | 1-Loan originated | 1 |
| 301.03 | 1-Loan originated | 1 |
| 8420.00 | 1-Loan originated | 1 |
| 506.00 | 1-Loan originated | 1 |
| 902.00 | 1-Loan originated | 1 |
| 632.00 | 1-Loan originated | 1 |
| 403.00 | 1-Loan originated | 1 |
| 404.01 | 1-Loan originated | 1 |
| 1612.00 | 1-Loan originated | 1 |
| 8429.00 | 1-Loan originated | 1 |
| 2405.00 | 1-Loan originated | 1 |
| 317.00 | 1-Loan originated | 1 |
| 6204.00 | 6-Purchased loan | 1 |
| 205.00 | 1-Loan originated | 1 |
| 6112.00 | 1-Loan originated | 1 |
| 318.00 | 1-Loan originated | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 2-Federal Housing Administration insured (FHA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
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| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |


| 2-Not an open-end line of credit | 228000 | 20220922 | 6.625 | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 132000 | 20220712 | 4.75 | 180 |
| 2-Not an open-end line of credit | 315250 | 20211231 | 3.25 | 360 |
| 2-Not an open-end line of credit | 203500 | 20220301 | NA | 360 |
| 2-Not an open-end line of credit | 111470 | 20211210 | NA | 360 |
| 2-Not an open-end line of credit | 194000 | 20220502 | NA | 360 |
| 2-Not an open-end line of credit | 283490 | 20220806 | NA | 180 |
| 2-Not an open-end line of credit | 46000 | 20220810 | NA | 120 |
| 2-Not an open-end line of credit | 203700 | 20220623 | 5.5 | 360 |
| 2-Not an open-end line of credit | 152000 | 20220329 | 5.125 | 360 |
| 2-Not an open-end line of credit | 403750 | NA | 4.49 | 360 |
| 2-Not an open-end line of credit | 198850 | NA | 3.75 | 360 |
| 2-Not an open-end line of credit | 91900 | 20220123 | 3.25 | 180 |
| 2-Not an open-end line of credit | 132000 | NA | 5.375 | 360 |
| 2-Not an open-end line of credit | 223250 | 20220322 | 5.625 | 360 |
| 2-Not an open-end line of credit | 32250 | 20220304 | 6.125 | 360 |
| 2-Not an open-end line of credit | 1120000 | 20220503 | 4.25 | 360 |
| 2-Not an open-end line of credit | 202827 | NA | 4.125 | 360 |
| 2-Not an open-end line of credit | 101500 | 20211002 | 2.375 | 180 |
| 2-Not an open-end line of credit | 155200 | NA | 5.875 | 360 |
| 2-Not an open-end line of credit | 237405 | NA | 4.49 | 360 |
| 2-Not an open-end line of credit | 225000 | 20220408 | 4.99 | 360 |
| 2-Not an open-end line of credit | 121500 | 20220621 | 5.75 | 360 |
| 2-Not an open-end line of credit | 114500 | 20221021 | 7 | 180 |
| 2-Not an open-end line of credit | 60140 | 20220712 | 5.125 | 360 |
| 2-Not an open-end line of credit | 73000 | 20220504 | 5.375 | 180 |
| 2-Not an open-end line of credit | 56000 | 20220801 | 4.99 | 360 |
| 2-Not an open-end line of credit | 145300 | 20211018 | 3.25 | 360 |
| 2-Not an open-end line of credit | 128500 | 20220608 | 5.5 | 360 |
| 2-Not an open-end line of credit | 100350 | 20220326 | 4.875 | 360 |
| 2-Not an open-end line of credit | 508500 | 20220825 | NA | 360 |
| 2-Not an open-end line of credit | 333830 | 20220613 | NA | 180 |
| 2-Not an open-end line of credit | 155000 | 20220215 | NA | 360 |
| 2-Not an open-end line of credit | 255550 | 20220407 | NA | 360 |
| 2-Not an open-end line of credit | 161000 | 20221026 | NA | 360 |
| 2-Not an open-end line of credit | 230670 | 20211108 | NA | 360 |
| 2-Not an open-end line of credit | 280000 | 20220206 | 4.25 | 360 |
| 2-Not an open-end line of credit | 149380 | NA | 5.4 | 360 |
| 2-Not an open-end line of credit | 113000 | NA | 5.125 | 360 |
| 2-Not an open-end line of credit | 88236 | 20211118 | 3 | 180 |
| 2-Not an open-end line of credit | 252000 | NA | 7 | 360 |
| 2-Not an open-end line of credit | 375000 | NA | 3.99 | 360 |
| 2-Not an open-end line of credit | 110250 | NA | 5.5 | 360 |
| 2-Not an open-end line of credit | 361000 | 20220216 | 4.875 | 360 |
| 2-Not an open-end line of credit | 115200 | 20220404 | 5.5 | 360 |
| 2-Not an open-end line of credit | 180000 | 20220103 | 2.99 | 360 |
| 2-Not an open-end line of credit | 632000 | 20220523 | 4.99 | 360 |
| 2-Not an open-end line of credit | 248000 | 20220203 | 4.25 | 360 |
| 2-Not an open-end line of credit | 145000 | 20220511 | 5.75 | 360 |
| 2-Not an open-end line of credit | 468000 | 20220517 | 5.625 | 360 |
| 2-Not an open-end line of credit | 142500 | 20221025 | 7.49 | 360 |
| 2-Not an open-end line of credit | 247000 | 20221028 | 5.75 | 360 |
| 2-Not an open-end line of credit | 350000 | 20220228 | 4.25 | 360 |
| 2-Not an open-end line of credit | 400000 | 20220315 | 4.625 | 360 |
| 2-Not an open-end line of credit | 405000 | 20220723 | 5.125 | 360 |
| 2-Not an open-end line of credit | 155000 | NA | 3.75 | 360 |
| 2-Not an open-end line of credit | 141668 | 20220329 | 4.25 | 180 |
| 2-Not an open-end line of credit | 143600 | 20220701 | 5.375 | 360 |
| 2-Not an open-end line of credit | 431000 | 20220223 | 3.875 | 360 |


| NA | 1-Secured by a first lien | 285000 | 80 |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 165000 | 80 |
| NA | 1-Secured by a first lien | 325000 | 97 |
| NA | 1-Secured by a first lien | 235000 | 85.11 |
| NA | 1-Secured by a first lien | 275000 | 41 |
| NA | 1-Secured by a first lien | 800000 | 25 |
| NA | 1-Secured by a first lien | 375000 | 74.3 |
| NA | 1-Secured by a first lien | 250000 | 19 |
| NA | 1-Secured by a first lien | 210000 | 97 |
| NA | 1-Secured by a first lien | 190000 | 80 |
| NA | 1-Secured by a first lien | 425000 | NA |
| NA | 1-Secured by a first lien | 205000 | NA |
| NA | 1-Secured by a first lien | 325000 | 29 |
| NA | 1-Secured by a first lien | 176000 | NA |
| NA | 1-Secured by a first lien | 235000 | 95 |
| NA | 1-Secured by a first lien | 139000 | 24 |
| NA | 1-Secured by a first lien | 1400000 | 80 |
| NA | 1-Secured by a first lien | 209100 | NA |
| NA | 1-Secured by a first lien | 173000 | 59 |
| NA | 1-Secured by a first lien | 160000 | NA |
| NA | 1-Secured by a first lien | 249900 | NA |
| NA | 1-Secured by a first lien | 249900 | 91 |
| NA | 1-Secured by a first lien | 135000 | 90 |
| NA | 1-Secured by a first lien | 215000 | 54 |
| NA | 1-Secured by a first lien | 62000 | 97 |
| NA | 1-Secured by a first lien | 180000 | 41 |
| NA | 1-Secured by a first lien | 70000 | 80 |
| NA | 1-Secured by a first lien | 230000 | 64 |
| NA | 1-Secured by a first lien | 143000 | 90 |
| NA | 1-Secured by a first lien | 180000 | 56 |
| NA | 1-Secured by a first lien | 550000 | 93 |
| NA | 1-Secured by a first lien | 700000 | 47.69 |
| NA | 1-Secured by a first lien | 610000 | 25.4 |
| NA | 1-Secured by a first lien | 241000 | 107 |
| NA | 1-Secured by a first lien | 170000 | 95 |
| NA | 1-Secured by a first lien | 340000 | 68 |
| NA | 1-Secured by a first lien | 550000 | 51 |
| NA | 1-Secured by a first lien | 154000 | NA |
| NA | 1-Secured by a first lien | 233000 | NA |
| NA | 1-Secured by a first lien | 350000 | 26 |
| NA | 1-Secured by a first lien | 280000 | NA |
| NA | 1-Secured by a first lien | 500000 | NA |
| NA | 1-Secured by a first lien | 147000 | NA |
| NA | 1-Secured by a first lien | 380000 | 95 |
| NA | 1-Secured by a first lien | 128000 | 90 |
| NA | 1-Secured by a first lien | 225000 | 80 |
| NA | 1-Secured by a first lien | 790000 | 80 |
| NA | 1-Secured by a first lien | 360000 | 69 |
| NA | 1-Secured by a first lien | 195000 | 75 |
| NA | 1-Secured by a first lien | 590000 | 80 |
| NA | 1-Secured by a first lien | 150000 | 95 |
| NA | 1-Secured by a first lien | 365000 | 68 |
| NA | 1-Secured by a first lien | 545000 | 65 |
| NA | 1-Secured by a first lien | 443000 | 91 |
| NA | 1-Secured by a first lien | 540000 | 75 |
| NA | 1-Secured by a first lien | 230000 | NA |
| NA | 1-Secured by a first lien | 162000 | 88 |
| NA | 1-Secured by a first lien | 170000 | 85 |
| NA | 1-Secured by a first lien | 539000 | 80 |


|  | 10-Not applicable |
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|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 4-Collateral |
|  | 9-Other |
|  | 1-Debt-to-income ratio |
|  | 6-Unverifiable information |
|  | 9-Other |
|  | 10-Not applicable |
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|  | 4-Collateral |
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|  | 9-Other |
|  | 9-Other |
|  | 1-Debt-to-income ratio |
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| 2435.00 | 1-Loan originated | 1 |
| :---: | :---: | :---: |
| 402.02 | 6-Purchased loan | 1 |
| 402.02 | 1-Loan originated | 1 |
| 7708.00 | 1-Loan originated | 1 |
| 1303.00 | 1-Loan originated | 1 |
| 601.00 | 6-Purchased loan | 1 |
| 6501.00 | 6-Purchased loan | 1 |
| 1801.00 | 1-Loan originated | 1 |
| 707.00 | 1-Loan originated | 1 |
| 818.00 | 6-Purchased loan | 1 |
| 6309.00 | 1-Loan originated | 1 |
| 801.00 | 1-Loan originated | 1 |
| 715.00 | 6-Purchased loan | 1 |
| 301.01 | 1-Loan originated | 1 |
| 307.02 | 1-Loan originated | 1 |
| 2505.00 | 1-Loan originated | 1 |
| 8309.00 | 1-Loan originated | 1 |
| 312.00 | 6-Purchased loan | 1 |
| 3201.01 | 1-Loan originated | 1 |
| 101.00 | 1-Loan originated | 1 |
| 102.01 | 1-Loan originated | 1 |
| 8423.00 | 6-Purchased loan | 1 |
| 314.00 | 1-Loan originated | 1 |
| 104.00 | 1-Loan originated | 1 |
| 8104.00 | 1-Loan originated | 1 |
| 8324.00 | 1-Loan originated | 1 |
| 8312.00 | 1-Loan originated | 1 |
| 7709.02 | 1-Loan originated | 1 |
| 205.00 | 1-Loan originated | 1 |
| 813.00 | 1-Loan originated | 1 |
| 2004.01 | 6-Purchased loan | 1 |
| 604.00 | 1-Loan originated | 2 |
| 5608.00 | 1-Loan originated | 1 |
| 818.00 | 1-Loan originated | 1 |
| 313.00 | 1-Loan originated | 1 |
| 2109.00 | 1-Loan originated | 1 |
| 3301.01 | 1-Loan originated | 1 |
| 403.00 | 1-Loan originated | 1 |
| 1408.00 | 1-Loan originated | 1 |
| 1503.00 | 6-Purchased loan | 1 |
| 8432.00 | 6-Purchased loan | 1 |
| 402.02 | 6-Purchased loan | 1 |
| 603.00 | 6-Purchased loan | 1 |
| 1902.00 | 1-Loan originated | 2 |
| 301.03 | 1-Loan originated | 1 |
| 307.03 | 1-Loan originated | 1 |
| 630.00 | 1-Loan originated | 1 |
| 714.00 | 6-Purchased loan | 1 |
| 812.01 | 1-Loan originated | 1 |
| 1203.00 | 1-Loan originated | 1 |
| 2211.00 | 1-Loan originated | 1 |
| 2435.00 | 1-Loan originated | 1 |
| 6606.00 | 3-Application denied | 1 |
| 1704.00 | 6-Purchased loan | 1 |
| 5611.00 | 1-Loan originated | 1 |
| 2003.00 | 6-Purchased loan | 1 |
| 6201.00 | 6-Purchased loan | 1 |
| 1006.00 | 1-Loan originated | 1 |
| 6604.00 | 6-Purchased loan | 1 |


| Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improvement |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchas |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purch |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash O |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | ome Purchas |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
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| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |


| 2-Not an open-end line of credit | 616500 | 20220606 | 5.625 | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 163500 | NA | 5.375 | 360 |
| 2-Not an open-end line of credit | 100000 | 20220210 | 3.875 | 360 |
| 2-Not an open-end line of credit | 121500 | 20221107 | 6.75 | 360 |
| 2-Not an open-end line of credit | 293700 | 20220224 | 3.99 | 360 |
| 2-Not an open-end line of credit | 174000 | NA | 4.375 | 360 |
| 2-Not an open-end line of credit | 259960 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 156750 | 20221118 | 6.375 | 360 |
| 2-Not an open-end line of credit | 288750 | 20220208 | 3.49 | 240 |
| 2-Not an open-end line of credit | 602000 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 53000 | 20220214 | 4.25 | 360 |
| 2-Not an open-end line of credit | 351600 | 20220310 | 3.875 | 240 |
| 2-Not an open-end line of credit | 198000 | NA | 5.125 | 360 |
| 2-Not an open-end line of credit | 199755 | 20220209 | 3.375 | 180 |
| 2-Not an open-end line of credit | 75000 | 20220215 | 3.875 | 120 |
| 2-Not an open-end line of credit | 100000 | 20220510 | 5.49 | 360 |
| 2-Not an open-end line of credit | 280700 | 20211028 | 2.75 | 240 |
| 2-Not an open-end line of credit | 100000 | NA | 4 | 360 |
| 2-Not an open-end line of credit | 400000 | 20220719 | 5.375 | 360 |
| 2-Not an open-end line of credit | 45100 | 20220218 | 4.125 | 360 |
| 2-Not an open-end line of credit | 56900 | 20220208 | 3.75 | 180 |
| 2-Not an open-end line of credit | 441750 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 181100 | 20220112 | 3.25 | 360 |
| 2-Not an open-end line of credit | 181597 | 20211230 | 3.49 | 360 |
| 2-Not an open-end line of credit | 245500 | 20220411 | 4.875 | 360 |
| 2-Not an open-end line of credit | 176330 | 20220118 | 3.25 | 360 |
| 2-Not an open-end line of credit | 266400 | 20220504 | 4.5 | 360 |
| 2-Not an open-end line of credit | 255000 | 20220715 | 5.875 | 360 |
| 2-Not an open-end line of credit | 149400 | 20220627 | 5.125 | 360 |
| 2-Not an open-end line of credit | 84500 | 20221201 | 7 | 120 |
| 2-Not an open-end line of credit | 293250 | NA | 3 | 360 |
| 2-Not an open-end line of credit | 472500 | 20220126 | 3.875 | 360 |
| 2-Not an open-end line of credit | 349200 | 20220521 | 5.375 | 360 |
| 2-Not an open-end line of credit | 508250 | 20220328 | 4.75 | 360 |
| 2-Not an open-end line of credit | 266250 | 20221012 | 6.625 | 360 |
| 2-Not an open-end line of credit | 283200 | 20221114 | 6.5 | 360 |
| 2-Not an open-end line of credit | 486000 | 20220115 | 3.5 | 360 |
| 2-Not an open-end line of credit | 593750 | 20211130 | 2.75 | 360 |
| 2-Not an open-end line of credit | 166250 | 20220124 | 3.99 | 360 |
| 2-Not an open-end line of credit | 143869.82 | NA | 6.5 | 360 |
| 2-Not an open-end line of credit | 284580.13 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 308000 | NA | 5.175 | 360 |
| 2-Not an open-end line of credit | 629850 | NA | 3.625 | 360 |
| 2-Not an open-end line of credit | 324000 | 20210806 | 3.25 | 360 |
| 2-Not an open-end line of credit | 161500 | 20220912 | 5.625 | 360 |
| 2-Not an open-end line of credit | 136500 | 20220426 | 5 | 360 |
| 2-Not an open-end line of credit | 288000 | 20220209 | 3.75 | 180 |
| 2-Not an open-end line of credit | 84904.75 | NA | 5.375 | 360 |
| 2-Not an open-end line of credit | 184300 | 20220218 | 4.25 | 360 |
| 2-Not an open-end line of credit | 226300 | 20211118 | 3.25 | 300 |
| 2-Not an open-end line of credit | 169400 | 20211109 | 3.125 | 360 |
| 2-Not an open-end line of credit | 250000 | 20220111 | 3 | 180 |
| 2-Not an open-end line of credit | 139000 | 20221118 | NA | 360 |
| 2-Not an open-end line of credit | 334650 | NA | 3.75 | 360 |
| 2-Not an open-end line of credit | 250320 | 20220121 | 3.375 | 360 |
| 2-Not an open-end line of credit | 364875 | NA | 4.375 | 360 |
| 2-Not an open-end line of credit | 203700 | NA | 4.775 | 360 |
| 2-Not an open-end line of credit | 280250 | 20220126 | 3.625 | 360 |
| 2-Not an open-end line of credit | 116800 | NA | 7.125 | 360 |


| NA | 1-Secured by a first lien | 685000 | 90 |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 218000 | NA |
| NA | 1-Secured by a first lien | 200000 | 50 |
| NA | 1-Secured by a first lien | 135000 | 90 |
| NA | 1-Secured by a first lien | 399000 | 74 |
| NA | 1-Secured by a first lien | 232000 | NA |
| NA | 1-Secured by a first lien | 268000 | NA |
| NA | 1-Secured by a first lien | 165000 | 95 |
| NA | 1-Secured by a first lien | 412500 | 70 |
| NA | 1-Secured by a first lien | 752500 | NA |
| NA | 1-Secured by a first lien | 222000 | 24 |
| NA | 1-Secured by a first lien | 1260000 | 28 |
| NA | 1-Secured by a first lien | 220000 | NA |
| NA | 1-Secured by a first lien | 250000 | 80 |
| NA | 1-Secured by a first lien | 170000 | 45 |
| NA | 1-Secured by a first lien | 159000 | 63 |
| NA | 1-Secured by a first lien | 490000 | 58 |
| NA | 1-Secured by a first lien | 360000 | NA |
| NA | 1-Secured by a first lien | 514000 | 78 |
| NA | 1-Secured by a first lien | 255000 | 18 |
| NA | 1-Secured by a first lien | 216000 | 27 |
| NA | 1-Secured by a first lien | 465000 | NA |
| NA | 1-Secured by a first lien | 190850 | 95 |
| NA | 1-Secured by a first lien | 305000 | 60 |
| NA | 1-Secured by a first lien | 515500 | 48 |
| NA | 1-Secured by a first lien | 344000 | 52 |
| NA | 1-Secured by a first lien | 296000 | 90 |
| NA | 1-Secured by a first lien | 375000 | 68 |
| NA | 1-Secured by a first lien | 166000 | 90 |
| NA | 1-Secured by a first lien | 157000 | 54 |
| NA | 1-Secured by a first lien | 345000 | NA |
| NA | 1-Secured by a first lien | 825000 | 58 |
| NA | 1-Secured by a first lien | 360000 | 97 |
| NA | 1-Secured by a first lien | 535000 | 95 |
| NA | 1-Secured by a first lien | 355000 | 75 |
| NA | 1-Secured by a first lien | 354000 | 80 |
| NA | 1-Secured by a first lien | 540000 | 90 |
| NA | 1-Secured by a first lien | 625000 | 95 |
| NA | 1-Secured by a first lien | 175000 | 95 |
| NA | 1-Secured by a first lien | 160000 | NA |
| NA | 1-Secured by a first lien | 380000 | NA |
| NA | 1-Secured by a first lien | 385000 | NA |
| NA | 1-Secured by a first lien | 663000 | NA |
| NA | 1-Secured by a first lien | 405000 | 80 |
| NA | 1-Secured by a first lien | 190000 | 85 |
| NA | 1-Secured by a first lien | 182000 | 75 |
| NA | 1-Secured by a first lien | 360000 | 80 |
| NA | 1-Secured by a first lien | 170000 | NA |
| NA | 1-Secured by a first lien | 190000 | 97 |
| NA | 1-Secured by a first lien | 400000 | 57 |
| NA | 1-Secured by a first lien | 230000 | 74 |
| NA | 1-Secured by a first lien | 610000 | 41 |
| NA | 1-Secured by a first lien | 178200 | 78 |
| NA | 1-Secured by a first lien | 345000 | NA |
| NA | 1-Secured by a first lien | 312900 | 80 |
| NA | 1-Secured by a first lien | 486500 | NA |
| NA | 1-Secured by a first lien | 210000 | NA |
| NA | 1-Secured by a first lien | 295000 | 95 |
| NA | 1 -Secured by a first lien | 270000 | NA |


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|  | 4-Collateral |
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|  | 6-Information not provided by applicant in mail, internet, or telephone application |
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|  | 6 -Information not provided by applicant in mail, internet, or telephone application |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6 -Information not provided by applicant in mail, internet, or telephone application |


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| 3-Information not provided by applicant in mail, internet, or telephone application |
| 1-Hispanic or Latino |




| 5-No co-applicant |
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| 3301.02 | 1-Loan originated | 1 |
| :---: | :---: | :---: |
| 8424.00 | 6-Purchased loan | 1 |
| 8434.00 | 1-Loan originated | 1 |
| 8325.00 | 1-Loan originated | 1 |
| 1105.02 | 6-Purchased loan | 1 |
| 6401.00 | 1-Loan originated | 1 |
| 2216.00 | 1-Loan originated | 1 |
| 8364.00 | 1-Loan originated | 1 |
| 7401.00 | 6-Purchased loan | 1 |
| 1909.00 | 1-Loan originated | 1 |
| 707.00 | 1-Loan originated | 1 |
| 202.00 | 1-Loan originated | 1 |
| 8325.00 | 1-Loan originated | 1 |
| 6004.00 | 1-Loan originated | 1 |
| 1003.00 | 1-Loan originated | 1 |
| 301.01 | 1-Loan originated | 1 |
| 1103.00 | 1-Loan originated | 1 |
| 201.00 | 6-Purchased loan | 1 |
| 2512.00 | 1-Loan originated | 1 |
| 706.00 | 6-Purchased loan | 1 |
| 1604.00 | 6-Purchased loan | 1 |
| 5502.00 | 6-Purchased loan | 1 |
| 301.01 | 6-Purchased loan | 1 |
| 2505.00 | 6-Purchased loan | 1 |
| 817.00 | 6-Purchased loan | 1 |
| 3106.00 | 6-Purchased loan | 1 |
| 404.01 | 1-Loan originated | 1 |
| 6910.00 | 1-Loan originated | 1 |
| 202.00 | 1-Loan originated | 1 |
| 1801.00 | 6-Purchased loan | 2 |
| 8322.00 | 1-Loan originated | 4 |
| 713.00 | 1-Loan originated | 1 |
| 8437.00 | 1-Loan originated | 1 |
| 2215.00 | 6-Purchased loan | 3 |
| 8324.00 | 1-Loan originated | 1 |
| 2430.00 | 6-Purchased loan | 1 |
| 2222.00 | 6-Purchased loan | 1 |
| 2403.00 | 3-Application denied | 1 |
| 4108.00 | 1-Loan originated | 1 |
| 2428.00 | 1-Loan originated | 1 |
| 313.00 | 6-Purchased loan | 1 |
| 2801.00 | 6-Purchased loan | 1 |
| 1703.00 | 1-Loan originated | 1 |
| 1105.02 | 1-Loan originated | 1 |
| 814.01 | 1-Loan originated | 1 |
| 2106.01 | 1-Loan originated | 1 |
| 717.00 | 1-Loan originated | 1 |
| 6502.00 | 1-Loan originated | 2 |
| 610.00 | 1-Loan originated | 1 |
| 1101.00 | 1-Loan originated | 1 |
| 304.00 | 6-Purchased loan | 1 |
| 8310.00 | 1-Loan originated | 1 |
| 8422.00 | 1-Loan originated | 1 |
| 8325.00 | 6-Purchased loan | 1 |
| 505.00 | 1-Loan originated | 1 |
| 4403.00 | 1-Loan originated | 1 |
| 4804.00 | 1-Loan originated | 2 |
| 4805.00 | 1-Loan originated | 1 |
| 5303.00 | 1-Loan originated | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
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| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purch |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improvement |


| 2-Not an open-end line of credit | 320100 | 20220302 | 3.75 | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 237203.92 | NA | 4.8 | 360 |
| 2-Not an open-end line of credit | 323910 | 20220824 | 5.875 | 360 |
| 2-Not an open-end line of credit | 492000 | 20220317 | 4.5 | 360 |
| 2-Not an open-end line of credit | 150100 | NA | 6.5 | 360 |
| 2-Not an open-end line of credit | 334650 | 20220526 | 5.375 | 360 |
| 2-Not an open-end line of credit | 522700 | 20220113 | 2.875 | 240 |
| 2-Not an open-end line of credit | 115600 | 20211110 | 2.625 | 180 |
| 2-Not an open-end line of credit | 173600 | NA | 5.75 | 360 |
| 2-Not an open-end line of credit | 248000 | 20220621 | 6.75 | 360 |
| 2-Not an open-end line of credit | 145000 | 20220404 | 4.75 | 180 |
| 2-Not an open-end line of credit | 395000 | 20211210 | 3.25 | 360 |
| 2-Not an open-end line of credit | 657000 | 20220919 | 5.49 | 360 |
| 2-Not an open-end line of credit | 170000 | 20211118 | 2.99 | 360 |
| 2-Not an open-end line of credit | 408000 | 20220203 | 3.24 | 360 |
| 2-Not an open-end line of credit | 95200 | 20220326 | 4.125 | 180 |
| 2-Not an open-end line of credit | 331000 | 20220627 | 5.75 | 360 |
| 2-Not an open-end line of credit | 271700 | NA | 3.625 | 360 |
| 2-Not an open-end line of credit | 195000 | 20220705 | 5.49 | 360 |
| 2-Not an open-end line of credit | 558500 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 349200 | NA | 5.25 | 360 |
| 2-Not an open-end line of credit | 173900 | NA | 5.25 | 360 |
| 2-Not an open-end line of credit | 300000 | NA | 3.125 | 360 |
| 2-Not an open-end line of credit | 206100 | NA | 4.625 | 360 |
| 2-Not an open-end line of credit | 1018429.53 | NA | 3.625 | 360 |
| 2-Not an open-end line of credit | 316000 | NA | 5.125 | 360 |
| 2-Not an open-end line of credit | 164000 | 20220816 | 5.25 | 360 |
| 2-Not an open-end line of credit | 223000 | 20211109 | 2 | 120 |
| 2-Not an open-end line of credit | 228000 | 20220405 | 5.25 | 360 |
| 2-Not an open-end line of credit | 240000 | NA | 3.625 | 360 |
| 2-Not an open-end line of credit | 800000 | 20211216 | 3.250 | 360 |
| 2-Not an open-end line of credit | 1875000 | 20220215 | 3.375 | 360 |
| 2-Not an open-end line of credit | 217900 | 20220603 | 5.75 | 360 |
| 2-Not an open-end line of credit | 540000 | NA | 6 | 360 |
| 2-Not an open-end line of credit | 527600 | 20211116 | 2 | 180 |
| 2-Not an open-end line of credit | 548000 | NA | 3.5 | 360 |
| 2-Not an open-end line of credit | 605700 | NA | 3.5 | 360 |
| 2-Not an open-end line of credit | 975000 | 20220510 | NA | 360 |
| 2-Not an open-end line of credit | 84020 | 20220309 | 3.5 | 360 |
| 2-Not an open-end line of credit | 650000 | 20221109 | 5.75 | 360 |
| 2-Not an open-end line of credit | 388000 | NA | 4.25 | 180 |
| 2-Not an open-end line of credit | 377500 | NA | 4.75 | 360 |
| 2-Not an open-end line of credit | 141000 | 20220301 | 3.75 | 360 |
| 2-Not an open-end line of credit | 375000 | 20211209 | 3.125 | 360 |
| 2-Not an open-end line of credit | 341250 | 20220425 | 4.49 | 360 |
| 2-Not an open-end line of credit | 180000 | 20220322 | 4.49 | 360 |
| 2-Not an open-end line of credit | 283000 | 20211206 | 2.125 | 360 |
| 2-Not an open-end line of credit | 407483 | 20220519 | 5.25 | 360 |
| 2-Not an open-end line of credit | 650165 | 20220831 | 6.25 | 360 |
| 2-Not an open-end line of credit | 305600 | 20210928 | 3.125 | 360 |
| 2-Not an open-end line of credit | 175500 | NA | 5.125 | 360 |
| 2-Not an open-end line of credit | 520000 | 20211104 | 2.75 | 240 |
| 2-Not an open-end line of credit | 264000 | 20220309 | 4.5 | 360 |
| 2-Not an open-end line of credit | 802988.74 | NA | 3.75 | 360 |
| 2-Not an open-end line of credit | 1084000 | 20220314 | 3.625 | 360 |
| 2-Not an open-end line of credit | 160108 | 20220323 | 3.25 | 180 |
| 2-Not an open-end line of credit | 200500 | 20220609 | 6.125 | 360 |
| 2-Not an open-end line of credit | 108000 | 20220330 | 4.75 | 360 |
| 2-Not an open-end line of credit | 109500 | 20220406 | 6.125 | 360 |


| NA | 1-Secured by a first lien | 330000 | 97 |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 250000 | NA |
| NA | 1-Secured by a first lien | 359900 | 90 |
| NA | 1-Secured by a first lien | 615000 | 80 |
| NA | 1-Secured by a first lien | 158000 | NA |
| NA | 1-Secured by a first lien | 345000 | 97 |
| NA | 1-Secured by a first lien | 1600000 | 33 |
| NA | 1-Secured by a first lien | 160000 | 73 |
| NA | 1-Secured by a first lien | 217000 | NA |
| NA | 1-Secured by a first lien | 315000 | 79 |
| NA | 1-Secured by a first lien | 498000 | 30 |
| NA | 1-Secured by a first lien | 424000 | 94 |
| NA | 1-Secured by a first lien | 876000 | 75 |
| NA | 1-Secured by a first lien | 320000 | 54 |
| NA | 1-Secured by a first lien | 510000 | 80 |
| NA | 1-Secured by a first lien | 119000 | 80 |
| NA | 1-Secured by a first lien | 381000 | 87 |
| NA | 1-Secured by a first lien | 286000 | NA |
| NA | 1-Secured by a first lien | 249000 | 79 |
| NA | 1-Secured by a first lien | 950000 | NA |
| NA | 1-Secured by a first lien | 360000 | NA |
| NA | 1-Secured by a first lien | 185000 | NA |
| NA | 1-Secured by a first lien | 715000 | NA |
| NA | 1-Secured by a first lien | 370000 | NA |
| NA | 1-Secured by a first lien | 1275000 | NA |
| NA | 1-Secured by a first lien | 395000 | NA |
| NA | 1-Secured by a first lien | 205000 | 80 |
| NA | 1-Secured by a first lien | 260000 | 86 |
| NA | 1-Secured by a first lien | 380000 | 60 |
| NA | 1-Secured by a first lien | 300000 | NA |
| NA | 1-Secured by a first lien | 1282000 | 62.402 |
| NA | 1-Secured by a first lien | 12500000 | 75.000 |
| NA | 1-Secured by a first lien | 417900 | 53 |
| NA | 1-Secured by a first lien | 720000 | NA |
| NA | 1-Secured by a first lien | 925000 | 58 |
| NA | 1-Secured by a first lien | 715000 | NA |
| NA | 1-Secured by a first lien | 673000 | NA |
| NA | 1-Secured by a first lien | 1950000 | 50 |
| NA | 1-Secured by a first lien | 105000 | 81 |
| NA | 1-Secured by a first lien | 1205000 | 53.94 |
| NA | 1-Secured by a first lien | 485000 | NA |
| NA | 1-Secured by a first lien | 755000 | NA |
| NA | 1-Secured by a first lien | 300000 | 47 |
| NA | 1-Secured by a first lien | 475000 | 79 |
| NA | 1-Secured by a first lien | 455000 | 75 |
| NA | 1-Secured by a first lien | 310000 | 59 |
| NA | 1-Secured by a first lien | 950000 | 30 |
| NA | 1-Secured by a first lien | 415000 | 96.5 |
| NA | 1-Secured by a first lien | 764900 | 85 |
| NA | 1-Secured by a first lien | 382000 | 80 |
| NA | 1-Secured by a first lien | 195000 | NA |
| NA | 1-Secured by a first lien | 710000 | 74 |
| NA | 1-Secured by a first lien | 397000 | 67 |
| NA | 1-Secured by a first lien | 1005250 | NA |
| NA | 1-Secured by a first lien | 1355000 | 80 |
| NA | 1-Secured by a first lien | 300000 | 54 |
| NA | 1-Secured by a first lien | 274000 | 74 |
| NA | 1-Secured by a first lien | 120000 | 90 |
| NA | 1-Secured by a first lien | 146000 | 75 |


|  | 10-Not applicable |
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6-Information not provided by applicant in mail, internet, or telephone application 6-Information not provided by applicant in mail, internet, or telephone application 6-Information not provided by applicant in mail, internet, or telephone application 6-Information not provided by applicant in mail, internet, or telephone application 6-Information not provided by applicant in mail, internet, or telephone application 6-Information not provided by applicant in mail, internet, or telephone application 6-Information not provided by applicant in mail, internet, or telephone application 6-Information not provided by applicant in mail, internet, or telephone application 6-Information not provided by applicant in mail, internet, or telephone application 6-Information not provided by applicant in mail, internet, or telephone application
21-Asian Indian
21-Asian Indian
21-Asian Indian
22-Chinese
24-Japanese
25-Korean
5-White
6-Information not provided by applicant in mail, internet, or telephone application
6-Information not provided by applicant in mail, internet, or telephone application
6-Information not provided by applicant in mail, internet, or telephone application
5-White
5-White
6-Information not provided by applicant in mail, internet, or telephone application
6-Information not provided by applicant in mail, internet, or telephone application
6-Information not provided by applicant in mail, internet, or telephone application
6-Information not provided by applicant in mail, internet, or telephone application
6-Information not provided by applicant in mail, internet, or telephone application
6-Information not provided by applicant in mail, internet, or telephone application
6-Information not provided by applicant in mail, internet, or telephone application
6-Information not provided by applicant in mail, internet, or telephone application
7-Not applicable
7-Not applicable
2-Asian
2-Asian
2-Asian
2-Asian
2-Asian
2-Asian
2-Asian
3-Black or African American
5-White
5-White
5-White
5-White
5-White
5-White
5-White
5-White
5-White
6-Information not provided by applicant in mail, internet, or telephone application
6-Information not provided by applicant in mail, internet, or telephone application
1-American Indian or Alaska Native
2-Asian
2-Asian
2-Asian
3-Black or African American
3-Black or African American
3-Black or African American
3-Black or African American

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| 8-No co-applicant |
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| 8-No co-applicant |
| 5-White |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 8-No co-applicant |
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| 2-Asian |
| 2-Asian |
| 8-No co-applicant |
| 8-No co-applicant |
| 2-Asian |
| 8-No co-applicant |
| 3-Black or African American |
| 2-Asian |
| 5-White |
| 5-White |
| 5-White |
| 5-White |
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| 5-White |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 25-Korean |
| 5-White |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 5-White |
| 2-Asian |
| 2-Asian |
| 5-White |
| 3-Black or African American |
| 3-Black or African American |
| 3-Black or African American |
| 3-Black or African American |




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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 4-Not applicable |
|  | 4-Not applicable |
|  | 1-Male |
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| 5-No co-applicant |  |
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| 1-Male |  |
| 3-Information not provided by applicant in mail, internet, or telephone application |  |
| 3-Information not provided by applicant in mail, internet, or telephone application |  |
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| 2-Female |  |
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1-Hispanic or Latino
3-Information not provided by applicant in mail, internet, or telephone application
3-Information not provided by applicant in mail, internet, or telephone application
3-Information not provided by applicant in mail, internet, or telephone application
12-Puerto Rican
11-Mexican
3-Information not provided by applicant in mail, internet, or telephone application
3-Information not provided by applicant in mail, internet, or telephone application
3-Information not provided by applicant in mail, internet, or telephone application
2-Not Hispanic or Latino
2-Not Hispanic or Latino
2-Not Hispanic or Latino
2-Not Hispanic or Latino
2-Not Hispanic or Latino
2-Not Hispanic or Latino
3-Information not provided by applicant in mail, internet, or telephone application
2-Not Hispanic or Latino
3-Information not provided by applicant in mail, internet, or telephone application
3-Information not provided by applicant in mail, internet, or telephone application
3-Information not provided by applicant in mail, internet, or telephone application
2-Not Hispanic or Latino
2-Not Hispanic or Latino
3-Information not provided by applicant in mail, internet, or telephone application
3-Information not provided by applicant in mail, internet, or telephone application
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3-Information not provided by applicant in mail, internet, or telephone application
3-Information not provided by applicant in mail, internet, or telephone application
3-Information not provided by applicant in mail, internet, or telephone application
4-Not applicable
4-Not applicable
2-Not Hispanic or Latino
2-Not Hispanic or Latino
2-Not Hispanic or Latino
2-Not Hispanic or Latino
2-Not Hispanic or Latino
2-Not Hispanic or Latino
2-Not Hispanic or Latino
2-Not Hispanic or Latino
2-Not Hispanic or Latino
2-Not Hispanic or Latino
2-Not Hispanic or Latino
1-Hispanic or Latino
2-Not Hispanic or Latino
1-Hispanic or Latino
2-Not Hispanic or Latino
1-Hispanic or Latino
2-Not Hispanic or Latino
3-Information not provided by applicant in mail, internet, or telephone application
3-Information not provided by applicant in mail, internet, or telephone application
14-Other Hispanic or Latino
2-Not Hispanic or Latino
2-Not Hispanic or Latino
2-Not Hispanic or Latino
2-Not Hispanic or Latino
2-Not Hispanic or Latino
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2-Not Hispanic or Latino



| 5-No co-applicant |
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| 2-Not Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 5-No co-applicant |
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| 2-Not Hispanic or Latino |
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| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
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| 105.01 | 6-Purchased loan | 1 |
| :---: | :---: | :---: |
| 628.00 | 1-Loan originated | 1 |
| 302.00 | 6-Purchased loan | 1 |
| 6404.00 | 1-Loan originated | 1 |
| 1203.00 | 1-Loan originated | 1 |
| 2426.00 | 6-Purchased loan | 1 |
| 1503.00 | 1-Loan originated | 1 |
| 1005.00 | 1-Loan originated | 1 |
| 105.01 | 1-Loan originated | 1 |
| 8422.00 | 6-Purchased loan | 1 |
| 8429.00 | 3-Application denied | 1 |
| 8104.00 | 3-Application denied | 1 |
| 8330.00 | 3-Application denied | 1 |
| 1602.00 | 3-Application denied | 1 |
| 1911.00 | 6-Purchased loan | 1 |
| 2504.00 | 1-Loan originated | 1 |
| 704.00 | 1-Loan originated | 1 |
| 2425.00 | 1-Loan originated | 1 |
| 2213.00 | 1-Loan originated | 1 |
| 633.01 | 6-Purchased loan | 1 |
| 501.00 | 6-Purchased loan | 4 |
| 8425.00 | 1-Loan originated | 1 |
| 626.00 | 1-Loan originated | 1 |
| 2214.00 | 1-Loan originated | 1 |
| 8422.00 | 6-Purchased loan | 1 |
| 2306.00 | 1-Loan originated | 3 |
| 3206.00 | 1-Loan originated | 1 |
| 1606.02 | 1-Loan originated | 1 |
| 810.00 | 1-Loan originated | 1 |
| 8439.00 | 1-Loan originated | 1 |
| 706.00 | 1-Loan originated | 1 |
| 2415.00 | 6-Purchased loan | 3 |
| 301.01 | 6-Purchased loan | 1 |
| 803.00 | 1-Loan originated | 1 |
| 814.03 | 1-Loan originated | 1 |
| 8439.00 | 1-Loan originated | 1 |
| 704.00 | 1-Loan originated | 1 |
| 609.00 | 1-Loan originated | 1 |
| 6502.00 | 1-Loan originated | 1 |
| 8325.00 | 1-Loan originated | 1 |
| 622.00 | 6-Purchased loan | 1 |
| 604.00 | 1-Loan originated | 1 |
| 2423.00 | 1-Loan originated | 3 |
| 2435.00 | 1-Loan originated | 1 |
| 308.00 | 1-Loan originated | 1 |
| 2408.00 | 1-Loan originated | 1 |
| 621.00 | 1-Loan originated | 1 |
| 513.00 | 6-Purchased loan | 1 |
| 1407.02 | 6-Purchased loan | 1 |
| 2107.00 | 1-Loan originated | 3 |
| 509.00 | 1-Loan originated | 2 |
| 2414.00 | 6-Purchased loan | 3 |
| 104.00 | 6-Purchased loan | 1 |
| 706.00 | 1-Loan originated | 1 |
| 402.02 | 1-Loan originated | 1 |
| 506.00 | 1-Loan originated | 1 |
| 6404.00 | 1-Loan originated | 1 |
| 1101.00 | 6-Purchased loan | 2 |
| 2405.00 | 1-Loan originated | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purcha |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Re |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
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| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
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| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improvement |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |


| 2-Not an open-end line of credit | 142500 | NA | 6.5 | 360 |
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| 2-Not an open-end line of credit | 2120000 | 20220408 | 4.5 | 360 |
| 2-Not an open-end line of credit | 320000 | NA | 3.99 | 360 |
| 2-Not an open-end line of credit | 184000 | 20220411 | 4.99 | 360 |
| 2-Not an open-end line of credit | 265000 | 20220525 | 5.875 | 360 |
| 2-Not an open-end line of credit | 514250 | NA | 7.125 | 360 |
| 2-Not an open-end line of credit | 288000 | 20220507 | 4.875 | 180 |
| 2-Not an open-end line of credit | 389500 | 20211118 | 3.99 | 360 |
| 2-Not an open-end line of credit | 451250 | 20220831 | 6.625 | 360 |
| 2-Not an open-end line of credit | 330000 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 980800 | 20220527 | NA | 360 |
| 2-Not an open-end line of credit | 363710 | 20211126 | NA | 300 |
| 2-Not an open-end line of credit | 636000 | 20220630 | NA | 360 |
| 2-Not an open-end line of credit | 480000 | 20221026 | NA | 360 |
| 2-Not an open-end line of credit | 251636.91 | NA | 4 | 360 |
| 2-Not an open-end line of credit | 285000 | 20220909 | 5.625 | 360 |
| 2-Not an open-end line of credit | 512250 | 20220802 | 6.25 | 360 |
| 2-Not an open-end line of credit | 285000 | 20220208 | 4.375 | 360 |
| 2-Not an open-end line of credit | 708750 | 20220531 | 4.5 | 360 |
| 2-Not an open-end line of credit | 400000 | NA | 4.49 | 360 |
| 2-Not an open-end line of credit | 616094.08 | NA | 3.625 | 360 |
| 2-Not an open-end line of credit | 671250 | 20220504 | 4.99 | 360 |
| 2-Not an open-end line of credit | 784000 | 20220425 | 4.625 | 360 |
| 2-Not an open-end line of credit | 940000 | 20220222 | 4 | 360 |
| 2-Not an open-end line of credit | 200000 | NA | 2.5 | 180 |
| 2-Not an open-end line of credit | 144722 | 20220720 | 7 | 360 |
| 2-Not an open-end line of credit | 242250 | 20220412 | 4 | 360 |
| 2-Not an open-end line of credit | 769250 | 20220627 | 4.75 | 360 |
| 2-Not an open-end line of credit | 230159 | 20220302 | 2.75 | 120 |
| 2-Not an open-end line of credit | 647200 | 20211223 | 2.875 | 360 |
| 2-Not an open-end line of credit | 667000 | 20211005 | 3 | 360 |
| 2-Not an open-end line of credit | 597119.02 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 442500 | NA | 4.875 | 360 |
| 2-Not an open-end line of credit | 325500 | 20220406 | 4.5 | 360 |
| 2-Not an open-end line of credit | 417000 | 20220111 | 2.75 | 240 |
| 2-Not an open-end line of credit | 637500 | 20220308 | 3.625 | 360 |
| 2-Not an open-end line of credit | 555750 | 20221114 | 6.49 | 360 |
| 2-Not an open-end line of credit | 243750 | 20220510 | 5.125 | 360 |
| 2-Not an open-end line of credit | 100500 | 20220718 | 5.875 | 180 |
| 2-Not an open-end line of credit | 652800 | 20210722 | 2.875 | 240 |
| 2-Not an open-end line of credit | 761250 | NA | 4.75 | 360 |
| 2-Not an open-end line of credit | 680000 | 20220414 | 4.5 | 360 |
| 2-Not an open-end line of credit | 457000 | 20220207 | 3.875 | 360 |
| 2-Not an open-end line of credit | 467000 | 20211027 | 2.875 | 360 |
| 2-Not an open-end line of credit | 1264000 | 20220526 | 4.25 | 360 |
| 2-Not an open-end line of credit | 768000 | 20220518 | 4.75 | 360 |
| 2-Not an open-end line of credit | 275000 | 20211207 | 3.375 | 360 |
| 2-Not an open-end line of credit | 1220625 | NA | 4.875 | 360 |
| 2-Not an open-end line of credit | 192800 | NA | 4.5 | 180 |
| 2-Not an open-end line of credit | 331500 | 20211019 | 3.99 | 360 |
| 2-Not an open-end line of credit | 577500 | 20220525 | 5.375 | 360 |
| 2-Not an open-end line of credit | 1110000 | NA | 3.375 | 360 |
| 2-Not an open-end line of credit | 279678.83 | NA | 5.25 | 360 |
| 2-Not an open-end line of credit | 590750 | 20211019 | 5.375 | 360 |
| 2-Not an open-end line of credit | 400000 | 20220201 | 3.625 | 360 |
| 2-Not an open-end line of credit | 1785000 | 20220429 | 4.000 | 360 |
| 2-Not an open-end line of credit | 253466 | 20220516 | 6 | 360 |
| 2-Not an open-end line of credit | 392000 | NA | 2.75 | 180 |
| 2-Not an open-end line of credit | 312000 | 20220503 | 4.75 | 360 |


| NA | 1-Secured by a first lien | 150000 | NA |
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| NA | 1-Secured by a first lien | 2650000 | 80 |
| NA | 1-Secured by a first lien | 400000 | NA |
| NA | 1-Secured by a first lien | 230000 | 80 |
| NA | 1-Secured by a first lien | 495000 | 54 |
| NA | 1-Secured by a first lien | 605000 | NA |
| NA | 1-Secured by a first lien | 385000 | 75 |
| NA | 1-Secured by a first lien | 410000 | 95 |
| NA | 1-Secured by a first lien | 475000 | 95 |
| NA | 1-Secured by a first lien | 380000 | NA |
| NA | 1-Secured by a first lien | 1030000 | 95.22 |
| NA | 1-Secured by a first lien | 545000 | 67 |
| NA | 1-Secured by a first lien | 700000 | 91 |
| NA | 1-Secured by a first lien | 460000 | 105 |
| NA | 1-Secured by a first lien | 315000 | NA |
| NA | 1-Secured by a first lien | 300000 | 95 |
| NA | 1-Secured by a first lien | 683000 | 75 |
| NA | 1-Secured by a first lien | 445000 | 65 |
| NA | 1-Secured by a first lien | 945000 | 75 |
| NA | 1-Secured by a first lien | 500000 | NA |
| NA | 1-Secured by a first lien | 1025000 | NA |
| NA | 1-Secured by a first lien | 895000 | 75 |
| NA | 1-Secured by a first lien | 980000 | 80 |
| NA | 1-Secured by a first lien | 1175000 | 80 |
| NA | 1-Secured by a first lien | 335000 | NA |
| NA | 1-Secured by a first lien | 400000 | 37 |
| NA | 1-Secured by a first lien | 323000 | 75 |
| NA | 1-Secured by a first lien | 905000 | 85 |
| NA | 1-Secured by a first lien | 1050000 | 22 |
| NA | 1-Secured by a first lien | 1700000 | 39 |
| NA | 1-Secured by a first lien | 1121000 | 68.44 |
| NA | 1-Secured by a first lien | 1050000 | NA |
| NA | 1-Secured by a first lien | 590000 | NA |
| NA | 1-Secured by a first lien | 465000 | 70 |
| NA | 1-Secured by a first lien | 540000 | 78 |
| NA | 1-Secured by a first lien | 750000 | 85 |
| NA | 1-Secured by a first lien | 585000 | 95 |
| NA | 1-Secured by a first lien | 325000 | 75 |
| NA | 1-Secured by a first lien | 214500 | 47 |
| NA | 1-Secured by a first lien | 1480000 | 44.1 |
| NA | 1-Secured by a first lien | 1015000 | NA |
| NA | 1-Secured by a first lien | 850000 | 80 |
| NA | 1-Secured by a first lien | 610000 | 75 |
| NA | 1-Secured by a first lien | 545000 | 86 |
| NA | 1-Secured by a first lien | 1580000 | 80 |
| NA | 1-Secured by a first lien | 960000 | 80 |
| NA | 1-Secured by a first lien | 390000 | 71 |
| NA | 1-Secured by a first lien | 1627500 | NA |
| NA | 1-Secured by a first lien | 241000 | NA |
| NA | 1-Secured by a first lien | 525000 | 64 |
| NA | 1-Secured by a first lien | 770000 | 75 |
| NA | 1-Secured by a first lien | 1480000 | NA |
| NA | 1-Secured by a first lien | 318250 | NA |
| NA | 1-Secured by a first lien | 695000 | 85 |
| NA | 1-Secured by a first lien | 526500 | 76 |
| NA | 1-Secured by a first lien | 2100000 | 85.000 |
| NA | 1-Secured by a first lien | 325000 | 78 |
| NA | 1-Secured by a first lien | 500000 | NA |
| NA | 1-Secured by a first lien | 512000 | 61 |


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| 705.00 | 1-Loan originated | 1 |
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| 631.00 | 6-Purchased loan | 1 |
| 625.00 | 1-Loan originated | 1 |
| 8352.00 | 1-Loan originated | 1 |
| 7403.00 | 1-Loan originated | 1 |
| 1202.00 | 1-Loan originated | 1 |
| 1510.02 | 6-Purchased loan | 1 |
| 632.00 | 1-Loan originated | 1 |
| 812.01 | 1-Loan originated | 1 |
| 3301.02 | 1-Loan originated | 1 |
| 1904.01 | 1-Loan originated | 1 |
| 801.00 | 1-Loan originated | 1 |
| 5204.00 | 1-Loan originated | 1 |
| 2105.01 | 1-Loan originated | 1 |
| 8422.00 | 6-Purchased loan | 1 |
| 407.00 | 6-Purchased loan | 1 |
| 601.00 | 1-Loan originated | 1 |
| 812.02 | 1-Loan originated | 1 |
| 902.00 | 1-Loan originated | 1 |
| 8321.00 | 1-Loan originated | 1 |
| 502.00 | 6-Purchased loan | 1 |
| 310.00 | 6-Purchased loan | 1 |
| 8429.00 | 6-Purchased loan | 1 |
| 1404.00 | 1-Loan originated | 1 |
| 2305.00 | 3-Application denied | 2 |
| 1511.00 | 6-Purchased loan | 1 |
| 624.00 | 6-Purchased loan | 1 |
| 604.00 | 6-Purchased loan | 1 |
| 1103.00 | 1-Loan originated | 1 |
| 3102.00 | 1-Loan originated | 1 |
| 706.00 | 1-Loan originated | 1 |
| 2429.00 | 1-Loan originated | 1 |
| 1609.00 | 1-Loan originated | 1 |
| 1607.00 | 1-Loan originated | 2 |
| 4306.00 | 6-Purchased loan | 1 |
| 814.03 | 1-Loan originated | 1 |
| 704.00 | 1-Loan originated | 1 |
| 8326.00 | 1-Loan originated | 1 |
| 814.03 | 1-Loan originated | 1 |
| 1403.02 | 6-Purchased loan | 1 |
| 609.00 | 1-Loan originated | 1 |
| 6914.00 | 3-Application denied | 1 |
| 4306.00 | 3-Application denied | 1 |
| 8418.00 | 3-Application denied | 1 |
| 8447.00 | 3-Application denied | 3 |
| 8371.00 | 3-Application denied | 1 |
| 8233.04 | 3-Application denied | 1 |
| 4503.00 | 6-Purchased loan | 1 |
| 8345.00 | 6-Purchased loan | 3 |
| 6909.00 | 6-Purchased loan | 2 |
| 4305.00 | 1-Loan originated | 1 |
| 6607.00 | 1-Loan originated | 1 |
| 8396.00 | 1-Loan originated | 1 |
| 2507.00 | 1-Loan originated | 1 |
| 4403.00 | 1-Loan originated | 1 |
| 6716.00 | 1-Loan originated | 2 |
| 8419.00 | 1-Loan originated | 1 |
| 7003.02 | 1-Loan originated | 1 |
| 7201.00 | 1-Loan originated | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improvement |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improvement |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |


| 2-Not an open-end line of credit | 903000 | 20211028 | 3.125 | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 798767.46 | NA | 4 | 360 |
| 2-Not an open-end line of credit | 890000 | 20220318 | 3.75 | 360 |
| 2-Not an open-end line of credit | 108950 | 20211222 | 3.25 | 360 |
| 2-Not an open-end line of credit | 250500 | 20220119 | 3.375 | 360 |
| 2-Not an open-end line of credit | 394250 | 20220227 | 3.625 | 360 |
| 2-Not an open-end line of credit | 397365.76 | NA | 2.99 | 360 |
| 2-Not an open-end line of credit | 250000 | 20220721 | 5.375 | 360 |
| 2-Not an open-end line of credit | 984000 | 20220816 | 4.625 | 360 |
| 2-Not an open-end line of credit | 298000 | 20220206 | 3.875 | 360 |
| 2-Not an open-end line of credit | 266750 | 20220902 | 6.875 | 360 |
| 2-Not an open-end line of credit | 627000 | 20220105 | 3.125 | 360 |
| 2-Not an open-end line of credit | 130000 | 20221010 | 6.5 | 180 |
| 2-Not an open-end line of credit | 238500 | 20220511 | 5.125 | 360 |
| 2-Not an open-end line of credit | 203046.13 | NA | 2.25 | 180 |
| 2-Not an open-end line of credit | 1120000 | NA | 3.625 | 360 |
| 2-Not an open-end line of credit | 647000 | 20220127 | 3.75 | 360 |
| 2-Not an open-end line of credit | 442500 | 20220915 | 7.625 | 360 |
| 2-Not an open-end line of credit | 484000 | 20220911 | 5.875 | 360 |
| 2-Not an open-end line of credit | 787500 | 20221109 | 6.375 | 360 |
| 2-Not an open-end line of credit | 1358327.77 | NA | 4.875 | 360 |
| 2-Not an open-end line of credit | 472500 | NA | 2.99 | 360 |
| 2-Not an open-end line of credit | 992000 | NA | 4 | 360 |
| 2-Not an open-end line of credit | 284050 | 20220228 | 3.99 | 360 |
| 2-Not an open-end line of credit | 102900 | 20211104 | NA | 120 |
| 2-Not an open-end line of credit | 381425 | NA | 4.99 | 360 |
| 2-Not an open-end line of credit | 1500000 | NA | 3.5 | 360 |
| 2-Not an open-end line of credit | 549042.77 | NA | 3.475 | 360 |
| 2-Not an open-end line of credit | 318500 | 20211231 | 3.375 | 360 |
| 2-Not an open-end line of credit | 467875 | 20220408 | 4.49 | 360 |
| 2-Not an open-end line of credit | 835000 | 20220316 | 2.875 | 360 |
| 2-Not an open-end line of credit | 492000 | 20220414 | 4.25 | 360 |
| 2-Not an open-end line of credit | 706400 | 20220713 | 4.875 | 360 |
| 2-Not an open-end line of credit | 348000 | 20220825 | 5.375 | 360 |
| 2-Not an open-end line of credit | 160000 | NA | 4.875 | 360 |
| 2-Not an open-end line of credit | 3000000 | 20220504 | 4.375 | 360 |
| 2-Not an open-end line of credit | 2248250 | 20211216 | 2.375 | 360 |
| 2-Not an open-end line of credit | 2500000 | 20220131 | 2.625 | 360 |
| 2-Not an open-end line of credit | 186000 | 20220920 | 6.125 | 120 |
| 2-Not an open-end line of credit | 245125 | NA | 4.375 | 360 |
| 2-Not an open-end line of credit | 117450 | 20211202 | 3.125 | 360 |
| 2-Not an open-end line of credit | 93000 | 20211108 | NA | 360 |
| 2-Not an open-end line of credit | 235653 | 20211208 | NA | 180 |
| 2-Not an open-end line of credit | 168750 | 20210806 | NA | 240 |
| 2-Not an open-end line of credit | 338317 | 20221020 | NA | 360 |
| 2-Not an open-end line of credit | 148863 | 20210920 | NA | 360 |
| 2-Not an open-end line of credit | 105730 | 20220216 | NA | 360 |
| 2-Not an open-end line of credit | 251250 | NA | 4.625 | 360 |
| 2-Not an open-end line of credit | 407411.1 | NA | 3.99 | 360 |
| 2-Not an open-end line of credit | 225834 | NA | 5.75 | 360 |
| 2-Not an open-end line of credit | 135673 | 20220221 | 4.25 | 360 |
| 2-Not an open-end line of credit | 54000 | 20220317 | 5 | 180 |
| 2-Not an open-end line of credit | 125162 | 20220504 | 6.125 | 360 |
| 2-Not an open-end line of credit | 97700 | 20220210 | 4.625 | 360 |
| 2-Not an open-end line of credit | 276000 | 20211108 | 3.125 | 360 |
| 2-Not an open-end line of credit | 127500 | 20220322 | 4.875 | 360 |
| 2-Not an open-end line of credit | 194750 | 20220301 | 4.49 | 360 |
| 2-Not an open-end line of credit | 87000 | 20220219 | 3.75 | 180 |
| 2-Not an open-end line of credit | 196300 | 20220908 | 6.49 | 360 |


| NA | 1-Secured by a first lien | 1820000 | 49.61 |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 999900 | NA |
| NA | 1-Secured by a first lien | 1790000 | 49.72 |
| NA | 1-Secured by a first lien | 300000 | 37 |
| NA | 1-Secured by a first lien | 275000 | 92 |
| NA | 1-Secured by a first lien | 415000 | 95 |
| NA | 1-Secured by a first lien | 419000 | NA |
| NA | 1-Secured by a first lien | 472500 | 53 |
| NA | 1-Secured by a first lien | 1230000 | 80 |
| NA | 1-Secured by a first lien | 700000 | 43 |
| NA | 1-Secured by a first lien | 275000 | 97 |
| NA | 1-Secured by a first lien | 836000 | 75 |
| NA | 1-Secured by a first lien | 175000 | 75 |
| NA | 1-Secured by a first lien | 265000 | 90 |
| NA | 1-Secured by a first lien | 397000 | NA |
| NA | 1-Secured by a first lien | 1400000 | NA |
| NA | 1-Secured by a first lien | 1170000 | 56 |
| NA | 1-Secured by a first lien | 590000 | 75 |
| NA | 1-Secured by a first lien | 605000 | 80 |
| NA | 1-Secured by a first lien | 1050000 | 75 |
| NA | 1-Secured by a first lien | 1700000 | NA |
| NA | 1-Secured by a first lien | 525000 | NA |
| NA | 1-Secured by a first lien | 1240000 | NA |
| NA | 1-Secured by a first lien | 299900 | 95 |
| NA | 1-Secured by a first lien | 350000 | 30 |
| NA | 1-Secured by a first lien | 401500 | NA |
| NA | 1-Secured by a first lien | 1875000 | NA |
| NA | 1-Secured by a first lien | 624900 | NA |
| NA | 1-Secured by a first lien | 435000 | 74 |
| NA | 1-Secured by a first lien | 492500 | 95 |
| NA | 1-Secured by a first lien | 1160000 | 75.000 |
| NA | 1-Secured by a first lien | 615000 | 80 |
| NA | 1-Secured by a first lien | 883000 | 80 |
| NA | 1-Secured by a first lien | 465000 | 75 |
| NA | 1-Secured by a first lien | 300000 | NA |
| NA | 1-Secured by a first lien | 3787000 | 79.218 |
| NA | 1-Secured by a first lien | 2645000 | 85.000 |
| NA | 1-Secured by a first lien | 3612500 | 69.2 |
| NA | 1-Secured by a first lien | 232500 | 80 |
| NA | 1-Secured by a first lien | 265000 | NA |
| NA | 1-Secured by a first lien | 182900 | 65 |
| NA | 1-Secured by a first lien | 130000 | 72 |
| NA | 1-Secured by a first lien | 207000 | 111.88 |
| NA | 1-Secured by a first lien | 140000 | 121 |
| NA | 1-Secured by a first lien | 350000 | 95 |
| NA | 1-Secured by a first lien | 295000 | 51 |
| NA | 1-Secured by a first lien | 90000 | 118 |
| NA | 1-Secured by a first lien | 335000 | NA |
| NA | 1-Secured by a first lien | 510000 | NA |
| NA | 1-Secured by a first lien | 230000 | NA |
| NA | 1-Secured by a first lien | 260000 | 53 |
| NA | 1-Secured by a first lien | 72000 | 75 |
| NA | 1-Secured by a first lien | 275000 | 46 |
| NA | 1-Secured by a first lien | 195000 | 51 |
| NA | 1-Secured by a first lien | 345000 | 80 |
| NA | 1-Secured by a first lien | 150000 | 85 |
| NA | 1-Secured by a first lien | 205000 | 95 |
| NA | 1-Secured by a first lien | 250000 | 35 |
| NA | 1-Secured by a first lien | 285000 | 69 |


|  | 10-Not applicable |
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|  | 4-Collateral |
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|  | 3-Credit history |
|  | 4-Collateral |
|  | 9-Other |
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|  | 4-Collateral |
|  | 10-Not applicable |
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| 1-Debt-to-income ratio | - |
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| 3-Credit history | 4-Collateral |
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|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 23-Filipino |
|  | 3-Black or African American |
|  | 5-White |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 24-Japanese |
|  | 23-Filipino |
|  | 3-Black or African American |
|  | 7-Not applicable |
|  | 7-Not applicable |
|  | 8-No co-applicant |
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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 4-Not applicable |
|  | 4-Not applicable |
|  | 5-No co-applicant |
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|  | 2-Not Hispanic or Latino |
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|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 11-Mexican |
|  | 1-Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 11-Mexican |
|  | 2-Not Hispanic or Latino |
|  | 1-Hispanic or Latino |
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|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 1-Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 1-Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 2-Not Hispanic or Latino |
|  | 4-Not applicable |
|  | 4-Not applicable |
|  | 5-No co-applicant |
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| 13-Cuban | 14-Other Hispanic or Latino |
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| 11-Mexican | - |
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| 7306.00 | 1-Loan originated | 1 |
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| 4403.00 | 1-Loan originated | 1 |
| 4409.00 | 1-Loan originated | 1 |
| 8343.00 | 1-Loan originated | 1 |
| 619.02 | 1-Loan originated | 1 |
| 8392.00 | 1-Loan originated | 1 |
| 8432.00 | 3-Application denied | 1 |
| 2101.00 | 3-Application denied | 2 |
| 1911.00 | 3-Application denied | 1 |
| 609.00 | 3-Application denied | 1 |
| 1611.00 | 3-Application denied | 1 |
| 5805.02 | 3-Application denied | 3 |
| 5401.02 | 3-Application denied | 1 |
| 1902.00 | 3-Application denied | 1 |
| 8419.00 | 6-Purchased loan | 1 |
| 1603.00 | 6-Purchased loan | 1 |
| 5204.00 | 6-Purchased loan | 1 |
| 1505.01 | 1-Loan originated | 1 |
| 6203.00 | 1-Loan originated | 1 |
| 5703.00 | 1-Loan originated | 2 |
| 301.01 | 6-Purchased loan | 1 |
| 6704.00 | 1-Loan originated | 1 |
| 3602.00 | 1-Loan originated | 1 |
| 704.00 | 1-Loan originated | 1 |
| 8308.00 | 6-Purchased loan | 1 |
| 813.00 | 1-Loan originated | 1 |
| 621.00 | 1-Loan originated | 1 |
| 6405.00 | 1-Loan originated | 1 |
| 7403.00 | 1-Loan originated | 1 |
| 8426.00 | 6-Purchased loan | 1 |
| 402.02 | 6-Purchased loan | 1 |
| 301.01 | 1-Loan originated | 1 |
| 8439.00 | 1-Loan originated | 1 |
| 105.01 | 1-Loan originated | 1 |
| 1902.00 | 1-Loan originated | 1 |
| 8410.00 | 1-Loan originated | 1 |
| 2922.00 | 1-Loan originated | 2 |
| 402.01 | 6-Purchased loan | 1 |
| 8331.00 | 1-Loan originated | 1 |
| 8408.01 | 1-Loan originated | 2 |
| 8324.00 | 1-Loan originated | 1 |
| 301.03 | 1-Loan originated | 1 |
| 8404.00 | 1-Loan originated | 1 |
| 317.00 | 1-Loan originated | 1 |
| 3814.00 | 1-Loan originated | 1 |
| 810.00 | 1-Loan originated | 1 |
| 7202.00 | 6-Purchased loan | 1 |
| 502.00 | 1-Loan originated | 1 |
| 818.00 | 1-Loan originated | 1 |
| 1910.00 | 1-Loan originated | 1 |
| 2435.00 | 1-Loan originated | 1 |
| 2510.00 | 1-Loan originated | 1 |
| 4805.00 | 1-Loan originated | 1 |
| 8311.00 | 1-Loan originated | 1 |
| 1507.00 | 1-Loan originated | 2 |
| 1607.00 | 1-Loan originated | 1 |
| 2801.00 | 1-Loan originated | 1 |
| 8326.00 | 1-Loan originated | 4 |
| 711.00 | 1-Loan originated | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purch |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 3-Veterans Affairs guaranteed (VA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improvement |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |


| 2-Not an open-end line of credit | 103000 | 20220404 | 4.25 | 120 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 105000 | 20220125 | 4 | 360 |
| 2-Not an open-end line of credit | 162011 | 20220713 | 5.75 | 360 |
| 2-Not an open-end line of credit | 83000 | 20220819 | 5.25 | 240 |
| 2-Not an open-end line of credit | 72260 | 20220218 | 4.49 | 360 |
| 2-Not an open-end line of credit | 122835 | 20211227 | 3.99 | 360 |
| 2-Not an open-end line of credit | 127000 | 20220824 | NA | 360 |
| 2-Not an open-end line of credit | 170000 | 20220622 | NA | 360 |
| 2-Not an open-end line of credit | 81952 | 20220922 | NA | 360 |
| 2-Not an open-end line of credit | 104000 | 20211221 | NA | 360 |
| 2-Not an open-end line of credit | 152501 | 20220222 | NA | 360 |
| 2-Not an open-end line of credit | 363298 | 20220222 | NA | 360 |
| 2-Not an open-end line of credit | 104500 | 20220407 | NA | 360 |
| 2-Not an open-end line of credit | 320000 | 20220430 | NA | 360 |
| 2-Not an open-end line of credit | 203200 | NA | 2.99 | 360 |
| 2-Not an open-end line of credit | 223100 | NA | 4 | 360 |
| 2-Not an open-end line of credit | 118000 | NA | 3.5 | 240 |
| 2-Not an open-end line of credit | 218396 | 20220131 | 3.875 | 360 |
| 2-Not an open-end line of credit | 109000 | 20211223 | 2.875 | 120 |
| 2-Not an open-end line of credit | 331500 | 20220830 | 6.75 | 360 |
| 2-Not an open-end line of credit | 131920 | NA | 5.75 | 360 |
| 2-Not an open-end line of credit | 128250 | 20220712 | 5.5 | 360 |
| 2-Not an open-end line of credit | 172000 | 20220421 | 5.125 | 360 |
| 2-Not an open-end line of credit | 490500 | 20220822 | 5.5 | 360 |
| 2-Not an open-end line of credit | 132308.75 | NA | 3.99 | 360 |
| 2-Not an open-end line of credit | 707000 | 20211013 | 2.125 | 360 |
| 2-Not an open-end line of credit | 268000 | 20211118 | 2.375 | 120 |
| 2-Not an open-end line of credit | 58125 | 20220210 | 4.99 | 360 |
| 2-Not an open-end line of credit | 263920 | 20211130 | 3.625 | 360 |
| 2-Not an open-end line of credit | 204250 | NA | 4.575 | 360 |
| 2-Not an open-end line of credit | 324900 | NA | 4.25 | 360 |
| 2-Not an open-end line of credit | 145000 | 20220422 | 5.49 | 360 |
| 2-Not an open-end line of credit | 188754 | 20211231 | 3.125 | 360 |
| 2-Not an open-end line of credit | 60500 | 20211117 | 2.875 | 180 |
| 2-Not an open-end line of credit | 305000 | 20220916 | 5.75 | 360 |
| 2-Not an open-end line of credit | 175723 | 20220209 | 4.25 | 360 |
| 2-Not an open-end line of credit | 352816 | 20220722 | 5.75 | 360 |
| 2-Not an open-end line of credit | 576000 | NA | 3 | 360 |
| 2-Not an open-end line of credit | 425600 | 20220513 | 4.875 | 360 |
| 2-Not an open-end line of credit | 272000 | 20220813 | 5.875 | 360 |
| 2-Not an open-end line of credit | 315000 | 20211102 | 3.375 | 360 |
| 2-Not an open-end line of credit | 54000 | 20221025 | 8 | 360 |
| 2-Not an open-end line of credit | 65000 | 20220627 | 5.5 | 120 |
| 2-Not an open-end line of credit | 339625 | 20220121 | 3.75 | 360 |
| 2-Not an open-end line of credit | 202000 | 20220602 | 4.875 | 360 |
| 2-Not an open-end line of credit | 386250 | 20220414 | 5.5 | 360 |
| 2-Not an open-end line of credit | 225000 | NA | 5.75 | 360 |
| 2-Not an open-end line of credit | 892000 | 20211122 | 2.75 | 360 |
| 2-Not an open-end line of credit | 394200 | 20211231 | 2.625 | 180 |
| 2-Not an open-end line of credit | 96000 | 20220408 | 4.75 | 360 |
| 2-Not an open-end line of credit | 260000 | 20211130 | 3 | 360 |
| 2-Not an open-end line of credit | 266000 | 20220423 | 5.25 | 360 |
| 2-Not an open-end line of credit | 279845 | 20221108 | 6.625 | 360 |
| 2-Not an open-end line of credit | 348000 | 20220916 | 5.625 | 360 |
| 2-Not an open-end line of credit | 494700 | 20220503 | 5.375 | 360 |
| 2-Not an open-end line of credit | 151000 | 20211201 | 3.375 | 360 |
| 2-Not an open-end line of credit | 650000 | 20220722 | 4.625 | 360 |
| 2-Not an open-end line of credit | 289250 | 20211014 | 2.625 | 360 |
| 2-Not an open-end line of credit | 735000 | 20220201 | 2.750 | 360 |


| NA | 1-Secured by a first lien | 135000 | 77 |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 140000 | 75 |
| NA | 1-Secured by a first lien | 165000 | 96.5 |
| NA | 1-Secured by a first lien | 157000 | 53 |
| NA | 1-Secured by a first lien | 148000 | 49 |
| NA | 1-Secured by a first lien | 129300 | 95 |
| NA | 1-Secured by a first lien | 317000 | 41 |
| NA | 1-Secured by a first lien | 530000 | 33 |
| NA | 1-Secured by a first lien | 353000 | 24 |
| NA | 1-Secured by a first lien | 169000 | 62 |
| NA | 1-Secured by a first lien | 180000 | 85 |
| NA | 1-Secured by a first lien | 370000 | 96.5 |
| NA | 1-Secured by a first lien | 70000 | 150 |
| NA | 1-Secured by a first lien | 400000 | 80 |
| NA | 1-Secured by a first lien | 254000 | NA |
| NA | 1-Secured by a first lien | 230000 | NA |
| NA | 1-Secured by a first lien | 155000 | NA |
| NA | 1-Secured by a first lien | 280000 | 78 |
| NA | 1-Secured by a first lien | 240000 | 46 |
| NA | 1-Secured by a first lien | 390000 | 85 |
| NA | 1-Secured by a first lien | 136000 | NA |
| NA | 1-Secured by a first lien | 135000 | 95 |
| NA | 1-Secured by a first lien | 215000 | 80 |
| NA | 1-Secured by a first lien | 545000 | 90 |
| NA | 1-Secured by a first lien | 265000 | NA |
| NA | 1-Secured by a first lien | 1875000 | 37.7 |
| NA | 1-Secured by a first lien | 550000 | 49 |
| NA | 1-Secured by a first lien | 77500 | 75 |
| NA | 1-Secured by a first lien | 345000 | 77 |
| NA | 1-Secured by a first lien | 215000 | NA |
| NA | 1-Secured by a first lien | 342000 | NA |
| NA | 1-Secured by a first lien | 175000 | 83 |
| NA | 1-Secured by a first lien | 432000 | 44 |
| NA | 1-Secured by a first lien | 200000 | 31 |
| NA | 1-Secured by a first lien | 305000 | 100 |
| NA | 1-Secured by a first lien | 220000 | 80 |
| NA | 1-Secured by a first lien | 365000 | 95 |
| NA | 1-Secured by a first lien | 770000 | NA |
| NA | 1-Secured by a first lien | 608000 | 70 |
| NA | 1-Secured by a first lien | 320000 | 85 |
| NA | 1-Secured by a first lien | 400000 | 79 |
| NA | 1-Secured by a first lien | 90000 | 60 |
| NA | 1-Secured by a first lien | 330000 | 20 |
| NA | 1-Secured by a first lien | 357500 | 95 |
| NA | 1-Secured by a first lien | 255000 | 80 |
| NA | 1-Secured by a first lien | 515000 | 75 |
| NA | 1-Secured by a first lien | 250000 | NA |
| NA | 1-Secured by a first lien | 1230000 | 72.52 |
| NA | 1-Secured by a first lien | 438000 | 90 |
| NA | 1-Secured by a first lien | 348000 | 28 |
| NA | 1-Secured by a first lien | 325000 | 80 |
| NA | 1-Secured by a first lien | 280000 | 95 |
| NA | 1-Secured by a first lien | 288500 | 97 |
| NA | 1-Secured by a first lien | 435000 | 80 |
| NA | 1-Secured by a first lien | 582000 | 85 |
| NA | 1-Secured by a first lien | 410000 | 37 |
| NA | 1-Secured by a first lien | 1300000 | 80.000 |
| NA | 1-Secured by a first lien | 1100000 | 27 |
| NA | 1-Secured by a first lien | 735000 | 100.000 |


|  | 10-Not applicable |
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|  | 10-Not applicable |
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|  | 10-Not applicable |
|  | 4-Collateral |
|  | 4-Collateral |
|  | 6-Unverifiable information |
|  | 6-Unverifiable information |
|  | 9-Other |
|  | 9-Other |
|  | 4-Collateral |
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|  | 10-Not applicable |
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| 1-Debt-to-income ratio | 5-Insufficient cash (downpayment, closing costs) |
| 1-Debt-to-income ratio | - |
| 1-Debt-to-income ratio | - |
| 4-Collateral | - |
| 5-Insufficient cash (downpayment, closing costs) | - |
| 5-Insufficient cash (downpayment, closing costs) | - |
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| 8331.00 | 1-Loan originated | 1 |
| :---: | :---: | :---: |
| 629.00 | 1-Loan originated | 1 |
| 1103.00 | 1-Loan originated | 1 |
| 8438.00 | 1-Loan originated | 1 |
| 8374.00 | 1-Loan originated | 2 |
| 902.00 | 1-Loan originated | 1 |
| 304.00 | 1-Loan originated | 1 |
| 2428.00 | 1-Loan originated | 1 |
| 7204.00 | 1-Loan originated | 1 |
| 712.00 | 1-Loan originated | 1 |
| 702.00 | 1-Loan originated | 1 |
| 8330.00 | 6-Purchased loan | 1 |
| 8233.04 | 1-Loan originated | 1 |
| 818.00 | 1-Loan originated | 1 |
| 8306.00 | 1-Loan originated | 1 |
| 203.01 | 1-Loan originated | 1 |
| 902.00 | 1-Loan originated | 1 |
| 8439.00 | 1-Loan originated | 1 |
| 623.00 | 1-Loan originated | 1 |
| 812.01 | 1-Loan originated | 1 |
| 8233.04 | 1-Loan originated | 1 |
| 8437.00 | 1-Loan originated | 1 |
| 8419.00 | 1-Loan originated | 1 |
| 8104.00 | 6-Purchased loan | 1 |
| 1203.00 | 1-Loan originated | 1 |
| 7402.00 | 6-Purchased loan | 1 |
| 5802.00 | 1-Loan originated | 1 |
| 2216.00 | 1-Loan originated | 1 |
| 8344.00 | 6-Purchased loan | 3 |
| 815.00 | 1-Loan originated | 1 |
| 604.00 | 6-Purchased loan | 1 |
| 2422.00 | 1-Loan originated | 1 |
| 1613.00 | 6-Purchased loan | 3 |
| 5611.00 | 1-Loan originated | 1 |
| 625.00 | 1-Loan originated | 1 |
| 633.02 | 1-Loan originated | 1 |
| 310.00 | 1-Loan originated | 1 |
| 625.00 | 1-Loan originated | 1 |
| 631.00 | 1-Loan originated | 1 |
| 7401.00 | 1-Loan originated | 1 |
| 626.00 | 1-Loan originated | 1 |
| 814.02 | 1-Loan originated | 1 |
| 623.00 | 1-Loan originated | 1 |
| 629.00 | 1-Loan originated | 4 |
| 3201.01 | 1-Loan originated | 1 |
| 8437.00 | 1-Loan originated | 1 |
| 1605.01 | 1-Loan originated | 1 |
| 5204.00 | 3-Application denied | 1 |
| 810.00 | 3-Application denied | 1 |
| 8344.00 | 3-Application denied | 1 |
| 3602.00 | 6-Purchased loan | 1 |
| 1705.00 | 6-Purchased loan | 1 |
| 1407.02 | 1-Loan originated | 1 |
| 306.01 | 6-Purchased loan | 1 |
| 4201.00 | 1-Loan originated | 1 |
| 404.01 | 1-Loan originated | 1 |
| 4108.00 | 6-Purchased loan | 1 |
| 2403.00 | 1-Loan originated | 1 |
| 8344.00 | 1-Loan originated | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
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| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
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| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
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| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
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| 1 -Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1 -Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
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| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
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| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1 -Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |


| 2-Not an open-end line of credit | 1119000 | 20220106 | 2.75 | 360 |
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| 2 -Not an open-end line of credit | 177600 | 20211221 | 3.375 | 360 |
| $2-$ Not an open-end line of credit | 148500 | 20220128 | 3.75 | 360 |
| $2-$ Not an open-end line of credit | 204000 | 20220305 | 3.5 | 180 |
| 2 -Not an open-end line of credit | 360000 | 20220516 | 5.25 | 360 |
| 2-Not an open-end line of credit | 73706 | 20211112 | 4.25 | 360 |
| 2-Not an open-end line of credit | 175000 | 20220821 | 4.865 | 360 |
| $2-$ Not an open-end line of credit | 1173000 | 20220210 | 3.250 | 360 |
| $2-$ Not an open-end line of credit | 198000 | 20220202 | 4.75 | 360 |
| $2-$ Not an open-end line of credit | 196500 | 20220108 | 3.625 | 360 |
| $2-$ Not an open-end line of credit | 975300 | 20211222 | 1.875 | 360 |
| $2-$ Not an open-end line of credit | 844000 | NA | 5.375 | 360 |
| 2 -Not an open-end line of credit | 232750 | 20220403 | 5 | 360 |
| $2-$ Not an open-end line of credit | 1460000 | 20220317 | 3.25 | 360 |
| 2-Not an open-end line of credit | 209000 | 20220417 | 4.99 | 360 |
| 2-Not an open-end line of credit | 85500 | 20220318 | 4.75 | 180 |
| 2-Not an open-end line of credit | 321600 | 20220314 | 4.375 | 360 |
| 2-Not an open-end line of credit | 299250 | 20220517 | 6.5 | 360 |
| 2-Not an open-end line of credit | 230000 | 20211220 | 3.25 | 360 |
| 2-Not an open-end line of credit | 3985000 | 20211214 | 2.250 | 360 |
| 2-Not an open-end line of credit | 251750 | 20220712 | 5.125 | 360 |
| 2-Not an open-end line of credit | 260730 | 20220727 | 5.99 | 360 |
| 2-Not an open-end line of credit | 226100 | 20220114 | 3.875 | 360 |
| 2-Not an open-end line of credit | 159839.96 | NA | 5.975 | 360 |
| 2-Not an open-end line of credit | 230000 | 20211210 | 3.25 | 360 |
| 2-Not an open-end line of credit | 323000 | NA | 2.99 | 360 |
| 2-Not an open-end line of credit | 168000 | 20220401 | 4.375 | 360 |
| 2-Not an open-end line of credit | 580000 | 20220725 | 4.875 | 240 |
| 2-Not an open-end line of credit | 615000 | NA | 3.75 | 360 |
| 2-Not an open-end line of credit | 350000 | 20211216 | 3.25 | 360 |
| 2-Not an open-end line of credit | 488750 | NA | 3.575 | 360 |
| 2-Not an open-end line of credit | 238000 | 20220125 | 3.875 | 360 |
| 2-Not an open-end line of credit | 558750 | NA | 4.125 | 360 |
| 2-Not an open-end line of credit | 336800 | 20220628 | 5.99 | 360 |
| 2-Not an open-end line of credit | 255750 | 20220729 | 5.49 | 360 |
| 2-Not an open-end line of credit | 360000 | 20220311 | 4.865 | 360 |
| 2-Not an open-end line of credit | 161405 | 20221117 | 7.25 | 360 |
| 2-Not an open-end line of credit | 246400 | 20211020 | 3.375 | 300 |
| 2-Not an open-end line of credit | 235400 | 20211207 | 2.875 | 240 |
| 2-Not an open-end line of credit | 150000 | 20220709 | 5.5 | 120 |
| 2-Not an open-end line of credit | 500000 | 20220407 | 5.125 | 360 |
| 2-Not an open-end line of credit | 421700 | 20211115 | 2.625 | 360 |
| 2-Not an open-end line of credit | 1113500 | 20220405 | 4.625 | 360 |
| 2-Not an open-end line of credit | 862500 | 20220106 | 3.75 | 360 |
| 2-Not an open-end line of credit | 336000 | 20211206 | 2.25 | 180 |
| 2-Not an open-end line of credit | 316000 | 20220322 | 4.625 | 360 |
| 2-Not an open-end line of credit | 119900 | 20220831 | 4.5 | 360 |
| 2-Not an open-end line of credit | 149148 | 20220526 | NA | 180 |
| 2-Not an open-end line of credit | 881712 | 20220131 | NA | 360 |
| 2-Not an open-end line of credit | 248900 | 20220720 | NA | 360 |
| 2-Not an open-end line of credit | 358000 | NA | 4.99 | 360 |
| 2-Not an open-end line of credit | 368467.39 | NA | 3.99 | 360 |
| 2-Not an open-end line of credit | 183000 | 20211228 | 3.24 | 360 |
| 2-Not an open-end line of credit | 327250 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 283011 | 20220203 | 3.75 | 360 |
| 2-Not an open-end line of credit | 338000 | 20211130 | 2.5 | 180 |
| 2-Not an open-end line of credit | 270750 | NA | 3.75 | 360 |
| 2-Not an open-end line of credit | 1318500 | 20220223 | 3.75 | 360 |
| 2-Not an open-end line of credit | 199500 | 20220908 | 5.25 | 360 |


| NA | 1-Secured by a first lien | 1635000 | 68.44 |
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| NA | 1-Secured by a first lien | 222000 | 80 |
| NA | 1-Secured by a first lien | 165000 | 90 |
| NA | 1-Secured by a first lien | 255000 | 80 |
| NA | 1-Secured by a first lien | 480000 | 75 |
| NA | 1-Secured by a first lien | 76000 | 97 |
| NA | 1-Secured by a first lien | 225000 | 78 |
| NA | 1-Secured by a first lien | 1380000 | 85.000 |
| NA | 1-Secured by a first lien | 305000 | 65 |
| NA | 1-Secured by a first lien | 262000 | 75 |
| NA | 1-Secured by a first lien | 2000000 | 48.76 |
| NA | 1-Secured by a first lien | 1055000 | NA |
| NA | 1-Secured by a first lien | 245000 | 95 |
| NA | 1-Secured by a first lien | 1825000 | 80 |
| NA | 1-Secured by a first lien | 220000 | 95 |
| NA | 1-Secured by a first lien | 90000 | 95 |
| NA | 1-Secured by a first lien | 402000 | 80 |
| NA | 1-Secured by a first lien | 315000 | 95 |
| NA | 1-Secured by a first lien | 307000 | 75 |
| NA | 1-Secured by a first lien | 6200000 | 64.274 |
| NA | 1-Secured by a first lien | 265000 | 95 |
| NA | 1-Secured by a first lien | 289700 | 90 |
| NA | 1-Secured by a first lien | 238000 | 95 |
| NA | 1-Secured by a first lien | 200000 | NA |
| NA | 1-Secured by a first lien | 900000 | 26 |
| NA | 1-Secured by a first lien | 340000 | NA |
| NA | 1-Secured by a first lien | 210000 | 80 |
| NA | 1-Secured by a first lien | 995000 | 59 |
| NA | 1-Secured by a first lien | 820000 | NA |
| NA | 1-Secured by a first lien | 840000 | 42 |
| NA | 1-Secured by a first lien | 575000 | NA |
| NA | 1-Secured by a first lien | 400000 | 60 |
| NA | 1-Secured by a first lien | 745000 | NA |
| NA | 1-Secured by a first lien | 421000 | 80 |
| NA | 1-Secured by a first lien | 341000 | 75 |
| NA | 1-Secured by a first lien | 450000 | 80 |
| NA | 1-Secured by a first lien | 169900 | 95 |
| NA | 1-Secured by a first lien | 375000 | 74 |
| NA | 1-Secured by a first lien | 500000 | 48 |
| NA | 1-Secured by a first lien | 373000 | 41 |
| NA | 1-Secured by a first lien | 635000 | 79 |
| NA | 1-Secured by a first lien | 530000 | 80 |
| NA | 1-Secured by a first lien | 1310000 | 85 |
| NA | 1-Secured by a first lien | 1150000 | 75 |
| NA | 1-Secured by a first lien | 480000 | 70 |
| NA | 1-Secured by a first lien | 395000 | 80 |
| NA | 1-Secured by a first lien | 159900 | 75 |
| NA | 1-Secured by a first lien | 258000 | 58 |
| NA | 1-Secured by a first lien | 1175000 | 76 |
| NA | 1-Secured by a first lien | 262000 | 95 |
| NA | 1-Secured by a first lien | 390000 | NA |
| NA | 1-Secured by a first lien | 419000 | NA |
| NA | 1-Secured by a first lien | 209500 | 88 |
| NA | 1-Secured by a first lien | 385000 | NA |
| NA | 1-Secured by a first lien | 457000 | 62 |
| NA | 1-Secured by a first lien | 500000 | 68 |
| NA | 1-Secured by a first lien | 285000 | NA |
| NA | 1-Secured by a first lien | 2118000 | 63 |
| NA | 1 -Secured by a first lien | 210000 | 95 |


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|  | 3-Credit history |
|  | 1-Debt-to-income ratio |
|  | 4-Collateral |
|  | 10-Not applicable |
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| 3-Information not provided by applicant in mail, internet, or telephone application |
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| 8311.00 | 6-Purchased loan | 3 |
| :---: | :---: | :---: |
| 1606.01 | 1-Loan originated | 1 |
| 306.03 | 6-Purchased loan | 1 |
| 5205.00 | 1-Loan originated | 1 |
| 8331.00 | 1-Loan originated | 1 |
| 706.00 | 1-Loan originated | 1 |
| 8380.00 | 6-Purchased loan | 1 |
| 204.00 | 1-Loan originated | 1 |
| 8391.00 | 1-Loan originated | 1 |
| 315.01 | 1-Loan originated | 1 |
| 817.00 | 1-Loan originated | 1 |
| 1702.00 | 6-Purchased loan | 1 |
| 608.00 | 1-Loan originated | 1 |
| 8321.00 | 1-Loan originated | 1 |
| 2402.00 | 1-Loan originated | 2 |
| 8419.00 | 1-Loan originated | 1 |
| 1612.00 | 6-Purchased loan | 1 |
| 3301.03 | 6-Purchased loan | 1 |
| 7005.01 | 1-Loan originated | 1 |
| 814.03 | 1-Loan originated | 1 |
| 818.00 | 1-Loan originated | 1 |
| 3201.01 | 1-Loan originated | 1 |
| 8400.00 | 1-Loan originated | 1 |
| 2403.00 | 1-Loan originated | 1 |
| 103.00 | 3-Application denied | 1 |
| 8396.00 | 6-Purchased loan | 1 |
| 3801.00 | 1-Loan originated | 1 |
| 4106.00 | 6-Purchased loan | 1 |
| 3907.00 | 3-Application denied | 1 |
| 811.00 | 3-Application denied | 1 |
| 402.02 | 3-Application denied | 1 |
| 1204.00 | 1-Loan originated | 1 |
| 7608.02 | 6-Purchased loan | 1 |
| 2101.00 | 1-Loan originated | 1 |
| 8311.00 | 6-Purchased loan | 1 |
| 8423.00 | 1-Loan originated | 1 |
| 1607.00 | 6-Purchased loan | 1 |
| 1002.00 | 1-Loan originated | 1 |
| 8324.00 | 6-Purchased loan | 1 |
| 310.00 | 1-Loan originated | 1 |
| 701.02 | 1-Loan originated | 1 |
| 2801.00 | 1-Loan originated | 1 |
| 203.01 | 1-Loan originated | 1 |
| 5906.00 | 1-Loan originated | 1 |
| 306.04 | 6-Purchased loan | 1 |
| 701.03 | 6-Purchased loan | 1 |
| 2425.00 | 1-Loan originated | 1 |
| 707.00 | 1-Loan originated | 1 |
| 2206.02 | 1-Loan originated | 1 |
| 713.00 | 6-Purchased loan | 1 |
| 5805.01 | 1-Loan originated | 1 |
| 1301.00 | 1-Loan originated | 1 |
| 2309.00 | 6-Purchased loan | 1 |
| 2408.00 | 1-Loan originated | 1 |
| 8428.00 | 1-Loan originated | 1 |
| 509.00 | 6-Purchased loan | 1 |
| 505.00 | 1-Loan originated | 1 |
| 2819.00 | 1-Loan originated | 1 |
| 2109.00 | 1-Loan originated | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improvement |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchas |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purch |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | ome Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
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| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchas |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |


| 2-Not an open-end line of credit | 360000 | NA | 6.375 | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 217550 | 20220207 | 3.75 | 360 |
| 2-Not an open-end line of credit | 114460 | NA | 5.75 | 360 |
| 2-Not an open-end line of credit | 30000 | 20221111 | 6.125 | 120 |
| 2-Not an open-end line of credit | 376000 | 20220502 | 5.25 | 360 |
| 2-Not an open-end line of credit | 675000 | 20220113 | 3.375 | 360 |
| 2-Not an open-end line of credit | 390870.28 | NA | 3.375 | 360 |
| 2-Not an open-end line of credit | 117000 | 20220330 | 4.49 | 360 |
| 2-Not an open-end line of credit | 127000 | 20211215 | 3.75 | 180 |
| 2-Not an open-end line of credit | 224000 | 20220408 | 5.125 | 360 |
| 2-Not an open-end line of credit | 462000 | 20220302 | 4.5 | 360 |
| 2-Not an open-end line of credit | 248000 | NA | 5.75 | 360 |
| 2-Not an open-end line of credit | 136245 | 20220318 | 4.5 | 360 |
| 2-Not an open-end line of credit | 388000 | 20220110 | 3.5 | 360 |
| 2-Not an open-end line of credit | 373400 | 20210716 | 3.125 | 360 |
| 2-Not an open-end line of credit | 252000 | 20220606 | 5.5 | 360 |
| 2-Not an open-end line of credit | 306225 | NA | 4.75 | 360 |
| 2-Not an open-end line of credit | 166500 | NA | 3.75 | 240 |
| 2-Not an open-end line of credit | 264000 | 20220322 | 4.75 | 360 |
| 2-Not an open-end line of credit | 300000 | 20221110 | 5.25 | 180 |
| 2-Not an open-end line of credit | 508500 | 20211223 | 3 | 360 |
| 2-Not an open-end line of credit | 700000 | 20220919 | 5.125 | 360 |
| 2-Not an open-end line of credit | 591700 | 20220108 | 2.875 | 360 |
| 2-Not an open-end line of credit | 550000 | 20220407 | 4.625 | 360 |
| 2-Not an open-end line of credit | 304000 | 20220912 | NA | 360 |
| 2-Not an open-end line of credit | 479750 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 56600 | 20211102 | 2.875 | 180 |
| 2-Not an open-end line of credit | 230502.09 | NA | 5.75 | 360 |
| 2-Not an open-end line of credit | 188000 | 20221120 | NA | 360 |
| 2-Not an open-end line of credit | 48816 | 20220314 | NA | 120 |
| 2-Not an open-end line of credit | 86400 | 20220202 | NA | 180 |
| 2-Not an open-end line of credit | 70900 | 20221118 | 7.5 | 360 |
| 2-Not an open-end line of credit | 336000 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 381000 | 20220502 | 5.625 | 360 |
| 2-Not an open-end line of credit | 529200 | NA | 3.5 | 360 |
| 2-Not an open-end line of credit | 186000 | 20220310 | 4.625 | 360 |
| 2-Not an open-end line of credit | 562538.57 | NA | 2.99 | 360 |
| 2-Not an open-end line of credit | 500000 | 20220726 | 4.875 | 360 |
| 2-Not an open-end line of credit | 646000 | NA | 4.49 | 360 |
| 2-Not an open-end line of credit | 472000 | 20220308 | 3.75 | 360 |
| 2-Not an open-end line of credit | 90500 | 20220610 | 5.625 | 360 |
| 2-Not an open-end line of credit | 482670 | 20220511 | 5.5 | 360 |
| 2-Not an open-end line of credit | 128800 | 20220301 | 4.125 | 360 |
| 2-Not an open-end line of credit | 170859 | 20220721 | 6.125 | 300 |
| 2-Not an open-end line of credit | 356250 | NA | 2.75 | 180 |
| 2-Not an open-end line of credit | 1042356.97 | NA | 3.5 | 360 |
| 2-Not an open-end line of credit | 515200 | 20220410 | 4.875 | 360 |
| 2-Not an open-end line of credit | 231500 | 20211206 | 2.875 | 180 |
| 2-Not an open-end line of credit | 203500 | 20220302 | 4.125 | 360 |
| 2-Not an open-end line of credit | 374250 | NA | 4.625 | 360 |
| 2-Not an open-end line of credit | 120000 | 20211207 | 2.875 | 120 |
| 2-Not an open-end line of credit | 277500 | 20220801 | 5.125 | 360 |
| 2-Not an open-end line of credit | 452200 | NA | 3.975 | 360 |
| 2-Not an open-end line of credit | 688500 | 20220311 | 3.875 | 360 |
| 2-Not an open-end line of credit | 182300 | 20211117 | 2.625 | 180 |
| 2-Not an open-end line of credit | 1488000 | NA | 5.25 | 360 |
| 2-Not an open-end line of credit | 436875 | 20220523 | 4.49 | 180 |
| 2-Not an open-end line of credit | 292600 | 20211030 | 3.25 | 360 |
| 2-Not an open-end line of credit | 380000 | 20220103 | 2.5 | 180 |


| NA | 1-Secured by a first lien | 450000 | NA |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 229000 | 95 |
| NA | 1-Secured by a first lien | 118000 | NA |
| NA | 1-Secured by a first lien | 205000 | 15 |
| NA | 1-Secured by a first lien | 470000 | 80 |
| NA | 1-Secured by a first lien | 975000 | 69.23 |
| NA | 1-Secured by a first lien | 435000 | NA |
| NA | 1-Secured by a first lien | 130000 | 90 |
| NA | 1-Secured by a first lien | 265000 | 48 |
| NA | 1-Secured by a first lien | 280000 | 80 |
| NA | 1-Secured by a first lien | 660000 | 70 |
| NA | 1-Secured by a first lien | 310000 | NA |
| NA | 1-Secured by a first lien | 222000 | 62 |
| NA | 1-Secured by a first lien | 485000 | 80 |
| NA | 1-Secured by a first lien | 670000 | 56 |
| NA | 1-Secured by a first lien | 315000 | 80 |
| NA | 1-Secured by a first lien | 340250 | NA |
| NA | 1-Secured by a first lien | 235000 | NA |
| NA | 1-Secured by a first lien | 278000 | 95 |
| NA | 1-Secured by a first lien | 737500 | 41 |
| NA | 1-Secured by a first lien | 565000 | 90 |
| NA | 1-Secured by a first lien | 2300000 | 30.43 |
| NA | 1-Secured by a first lien | 697000 | 85 |
| NA | 1-Secured by a first lien | 2150000 | 26 |
| NA | 1-Secured by a first lien | 320000 | 95 |
| NA | 1-Secured by a first lien | 505000 | NA |
| NA | 1-Secured by a first lien | 350000 | 17 |
| NA | 1-Secured by a first lien | 235000 | NA |
| NA | 1-Secured by a first lien | 235000 | 80 |
| NA | 1-Secured by a first lien | 850000 | 6 |
| NA | 1-Secured by a first lien | 108000 | 80 |
| NA | 1-Secured by a first lien | 335000 | 22 |
| NA | 1-Secured by a first lien | 420000 | NA |
| NA | 1-Secured by a first lien | 635000 | 60 |
| NA | 1-Secured by a first lien | 575000 | NA |
| NA | 1-Secured by a first lien | 713300 | 27 |
| NA | 1-Secured by a first lien | 710000 | NA |
| NA | 1-Secured by a first lien | 625000 | 80 |
| NA | 1-Secured by a first lien | 680000 | NA |
| NA | 1-Secured by a first lien | 590000 | 80 |
| NA | 1-Secured by a first lien | 140500 | 65 |
| NA | 1-Secured by a first lien | 519000 | 93 |
| NA | 1-Secured by a first lien | 161000 | 80 |
| NA | 1-Secured by a first lien | 243000 | 71 |
| NA | 1-Secured by a first lien | 375000 | NA |
| NA | 1-Secured by a first lien | 1305000 | NA |
| NA | 1-Secured by a first lien | 644000 | 80 |
| NA | 1-Secured by a first lien | 395000 | 59 |
| NA | 1-Secured by a first lien | 845000 | 25 |
| NA | 1-Secured by a first lien | 499000 | NA |
| NA | 1-Secured by a first lien | 255000 | 48 |
| NA | 1-Secured by a first lien | 370000 | 75 |
| NA | 1-Secured by a first lien | 476000 | NA |
| NA | 1-Secured by a first lien | 810000 | 85 |
| NA | 1-Secured by a first lien | 350000 | 53 |
| NA | 1-Secured by a first lien | 1860000 | NA |
| NA | 1-Secured by a first lien | 582500 | 75 |
| NA | 1-Secured by a first lien | 410000 | 72 |
| NA | 1-Secured by a first lien | 475000 | 80 |


|  | 10-Not applicable |
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|  | 10-Not applicable |
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|  | 9-Other |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 6-Unverifiable information |
|  | 4-Collateral |
|  | 4-Collateral |
|  | 10-Not applicable |
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| 6-Information not provided by applicant in mail, internet, or telephone application |
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| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 6-Information not provided by applicant in mail, internet, or telephone application |
| 21-Asian Indian |
| 21-Asian Indian |
| 21-Asian Indian |
| 21-Asian Indian |
| 21-Asian Indian |
| 21-Asian Indian |
| 21-Asian Indian |
| 22-Chinese |
| 23-Filipino |
| 23-Filipino |
| 44-Other Pacific Islander |
| 2-Asian |
| 2-Asian |
| 4-Native Hawaiian or Other Pacific Islander |
| 1-American Indian or Alaska Native |
| 2-Asian |
| 2-Asian |
| 2-Asian |
| 2-Asian |
| 2-Asian |
| 3-Black or African American |
| 3-Black or African American |
| 3-Black or African American |
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| 8-No co-applicant |
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| 8-No co-applicant |
| 8-No co-applicant |
| 8-No co-applicant |
| 8-No co-applicant |
| 2-Asian |
| 2-Asian |
| 5-White |
| 1-American Indian or Alaska Native |
| 2-Asian |
| 2-Asian |
| 2-Asian |
| 5-White |
| 5-White |
| 3-Black or African American |
| 3-Black or African American |
| 3-Black or African American |
| 3-Black or African American |
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| 5-No co-applicant |  |  |
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| 3-Information not provided by applicant in mail, internet, or telephone application |
| :--- |
| 2-Not Hispanic or Latino |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
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| 14-Other Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
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| 2-Not Hispanic or Latino |
| 11-Mexican |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
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| 14-Other Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 1-Hispanic or Latino |
| 2-Not Hispanic or Latino |
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| 2-Not Hispanic or Latino or Latino |
| 1-Hot Hispanic or Latino or Latino |
| 2-Not Hispanic or Latino |
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| 5-No co-applicant |
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| 5-No co-applicant |
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| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
| 11-Mexican |
| 2-Not Hispanic or Latino |
| 2-Not Hispanic or Latino |
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| 14-Other Hispanic or Latino |
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| 8331.00 | 6-Purchased loan | 1 |
| :---: | :---: | :---: |
| 8435.00 | 1-Loan originated | 1 |
| 1503.00 | 1-Loan originated | 1 |
| 2211.00 | 1-Loan originated | 3 |
| 710.00 | 1-Loan originated | 1 |
| 305.00 | 6-Purchased loan | 1 |
| 512.00 | 1-Loan originated | 1 |
| 3201.01 | 6-Purchased loan | 1 |
| 5608.00 | 6-Purchased loan | 1 |
| 8428.00 | 1-Loan originated | 1 |
| 1505.01 | 1-Loan originated | 1 |
| 7115.00 | 1-Loan originated | 1 |
| 1603.00 | 6-Purchased loan | 1 |
| 321.00 | 1-Loan originated | 1 |
| 7005.01 | 6-Purchased loan | 1 |
| 2505.00 | 1-Loan originated | 1 |
| 1906.02 | 6-Purchased loan | 1 |
| 2435.00 | 1-Loan originated | 1 |
| 8430.00 | 1-Loan originated | 1 |
| 801.00 | 1-Loan originated | 1 |
| 306.04 | 1-Loan originated | 1 |
| 8331.00 | 1-Loan originated | 1 |
| 4301.02 | 1-Loan originated | 1 |
| 7003.02 | 3-Application denied | 1 |
| 4301.02 | 3-Application denied | 1 |
| 7104.00 | 3-Application denied | 1 |
| 6607.00 | 3-Application denied | 1 |
| 4101.00 | 3-Application denied | 1 |
| 5003.00 | 3-Application denied | 1 |
| 3907.00 | 3-Application denied | 1 |
| 4003.00 | 3-Application denied | 1 |
| 4203.00 | 1-Loan originated | 1 |
| 402.02 | 1-Loan originated | 1 |
| 4608.00 | 1-Loan originated | 2 |
| 4403.00 | 1-Loan originated | 1 |
| 5001.00 | 1-Loan originated | 1 |
| 201.00 | 1-Loan originated | 1 |
| 4314.00 | 1-Loan originated | 1 |
| 3301.02 | 6-Purchased loan | 1 |
| 7005.01 | 1-Loan originated | 1 |
| 5305.03 | 1-Loan originated | 1 |
| 4301.02 | 1-Loan originated | 1 |
| 8344.00 | 1-Loan originated | 1 |
| 8390.00 | 1-Loan originated | 1 |
| 8390.00 | 1-Loan originated | 1 |
| 7706.02 | 1-Loan originated | 1 |
| 203.02 | 6-Purchased loan | 1 |
| 3801.00 | 1-Loan originated | 1 |
| 7207.00 | 1-Loan originated | 1 |
| 4909.02 | 1-Loan originated | 1 |
| 3907.00 | 1-Loan originated | 1 |
| 4303.00 | 6-Purchased loan | 1 |
| 4305.00 | 1-Loan originated | 1 |
| 813.00 | 3-Application denied | 1 |
| 902.00 | 3-Application denied | 1 |
| 5608.00 | 3-Application denied | 1 |
| 902.00 | 3-Application denied | 1 |
| 8324.00 | 3-Application denied | 1 |
| 7003.02 | 1-Loan originated | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improvement |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 2-Federal Housing Administration insured (FHA) | 2-Home Improvement |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |


| 2-Not an open-end line of credit | 281191.39 | NA | 3.625 | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 363584 | 20220314 | 4.25 | 360 |
| 2-Not an open-end line of credit | 182400 | 20211214 | 2.875 | 360 |
| 2-Not an open-end line of credit | 510000 | 20211101 | 2.75 | 180 |
| 2-Not an open-end line of credit | 366000 | 20220208 | 3 | 360 |
| 2-Not an open-end line of credit | 340000 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 480000 | 20221201 | 5.625 | 360 |
| 2-Not an open-end line of credit | 508900 | NA | 4.25 | 360 |
| 2-Not an open-end line of credit | 247500 | NA | 5.425 | 360 |
| 2-Not an open-end line of credit | 517500 | 20220714 | 4.75 | 180 |
| 2-Not an open-end line of credit | 222000 | 20220407 | 4 | 180 |
| 2-Not an open-end line of credit | 65666 | 20220519 | 5.5 | 180 |
| 2-Not an open-end line of credit | 144000 | NA | 4.625 | 360 |
| 2-Not an open-end line of credit | 70000 | 20220523 | 5.99 | 360 |
| 2-Not an open-end line of credit | 230860 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 302500 | 20220324 | 3.875 | 180 |
| 2-Not an open-end line of credit | 190000 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 410850 | 20220520 | 5 | 360 |
| 2-Not an open-end line of credit | 295850 | 20211201 | 2.875 | 360 |
| 2-Not an open-end line of credit | 1900000 | 20220204 | 2.500 | 360 |
| 2-Not an open-end line of credit | 75000 | 20220105 | 3.75 | 360 |
| 2-Not an open-end line of credit | 340000 | 20220519 | 5 | 360 |
| 2-Not an open-end line of credit | 170000 | 20220922 | 6.5 | 180 |
| 2-Not an open-end line of credit | 273946 | 20220804 | NA | 360 |
| 2-Not an open-end line of credit | 89734 | 20211210 | NA | 180 |
| 2-Not an open-end line of credit | 131361 | 20211119 | NA | 360 |
| 2-Not an open-end line of credit | 55962 | 20220818 | NA | 360 |
| 2-Not an open-end line of credit | 165936 | 20220808 | NA | 360 |
| 2-Not an open-end line of credit | 171950 | 20211122 | NA | 360 |
| 2-Not an open-end line of credit | 239400 | 20211213 | NA | 360 |
| 2-Not an open-end line of credit | 117000 | 20220711 | NA | 360 |
| 2-Not an open-end line of credit | 586000 | 20220601 | 5.125 | 360 |
| 2-Not an open-end line of credit | 169200 | 20220223 | 4.875 | 360 |
| 2-Not an open-end line of credit | 199430 | 20220429 | 5.25 | 360 |
| 2-Not an open-end line of credit | 150000 | 20211112 | 3.125 | 360 |
| 2-Not an open-end line of credit | 144000 | 20220624 | 5.625 | 360 |
| 2-Not an open-end line of credit | 85698 | 20220203 | 3.375 | 120 |
| 2-Not an open-end line of credit | 160000 | 20220718 | 4.125 | 360 |
| 2-Not an open-end line of credit | 216822.12 | NA | 7 | 360 |
| 2-Not an open-end line of credit | 196000 | 20220113 | 4.5 | 360 |
| 2-Not an open-end line of credit | 190475 | 20220603 | 5.125 | 360 |
| 2-Not an open-end line of credit | 43000 | 20220520 | 5.5 | 180 |
| 2-Not an open-end line of credit | 227050 | 20220705 | 5.125 | 360 |
| 2-Not an open-end line of credit | 190400 | 20220513 | 4.99 | 180 |
| 2-Not an open-end line of credit | 292200 | 20220330 | 5.875 | 360 |
| 2-Not an open-end line of credit | 382936 | 20221014 | 6.75 | 360 |
| 2-Not an open-end line of credit | 161990 | NA | 5.375 | 360 |
| 2-Not an open-end line of credit | 68000 | 20220313 | 4.625 | 360 |
| 2-Not an open-end line of credit | 127500 | 20220225 | 4.375 | 360 |
| 2-Not an open-end line of credit | 154500 | 20221107 | 6.375 | 360 |
| 2-Not an open-end line of credit | 182250 | 20221121 | 8.125 | 360 |
| 2-Not an open-end line of credit | 208050 | NA | 4.875 | 360 |
| 2-Not an open-end line of credit | 144530 | 20220429 | 5 | 360 |
| 2-Not an open-end line of credit | 182500 | 20211210 | NA | 360 |
| 2-Not an open-end line of credit | 200330 | 20220401 | NA | 360 |
| 2-Not an open-end line of credit | 206687 | 20220419 | NA | 360 |
| 2-Not an open-end line of credit | 100762 | 20220114 | NA | 120 |
| 2-Not an open-end line of credit | 431000 | 20211108 | NA | 360 |
| 2-Not an open-end line of credit | 171716 | 20211009 | 2.5 | 120 |


| NA | 1-Secured by a first lien | 375500 | NA |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 454480 | 80 |
| NA | 1-Secured by a first lien | 400000 | 46 |
| NA | 1-Secured by a first lien | 965000 | 53 |
| NA | 1-Secured by a first lien | 610000 | 60 |
| NA | 1-Secured by a first lien | 400000 | NA |
| NA | 1-Secured by a first lien | 995000 | 49 |
| NA | 1-Secured by a first lien | 727000 | NA |
| NA | 1-Secured by a first lien | 275000 | NA |
| NA | 1-Secured by a first lien | 575000 | 90 |
| NA | 1-Secured by a first lien | 270000 | 83 |
| NA | 1-Secured by a first lien | 155000 | 43 |
| NA | 1-Secured by a first lien | 160000 | NA |
| NA | 1-Secured by a first lien | 90000 | 78 |
| NA | 1-Secured by a first lien | 238000 | NA |
| NA | 1-Secured by a first lien | 404000 | 75 |
| NA | 1-Secured by a first lien | 335000 | NA |
| NA | 1-Secured by a first lien | 456500 | 90 |
| NA | 1-Secured by a first lien | 305000 | 97 |
| NA | 1-Secured by a first lien | 2375000 | 80.000 |
| NA | 1-Secured by a first lien | 115000 | 66 |
| NA | 1-Secured by a first lien | 425000 | 80 |
| NA | 1-Secured by a first lien | 199000 | 86 |
| NA | 1-Secured by a first lien | 279000 | 96.5 |
| NA | 1-Secured by a first lien | 110000 | 90 |
| NA | 1-Secured by a first lien | 140000 | 94 |
| NA | 1-Secured by a first lien | 160000 | 34.38 |
| NA | 1-Secured by a first lien | 169000 | 96.5 |
| NA | 1-Secured by a first lien | 180100 | 96 |
| NA | 1-Secured by a first lien | 225000 | 107 |
| NA | 1-Secured by a first lien | 130000 | 90 |
| NA | 1-Secured by a first lien | 689800 | 85 |
| NA | 1-Secured by a first lien | 188000 | 90 |
| NA | 1-Secured by a first lien | 206000 | 95.15 |
| NA | 1-Secured by a first lien | 204000 | 74 |
| NA | 1-Secured by a first lien | 152000 | 95 |
| NA | 1-Secured by a first lien | 175000 | 49 |
| NA | 1-Secured by a first lien | 185000 | 87 |
| NA | 1-Secured by a first lien | 312000 | NA |
| NA | 1-Secured by a first lien | 245000 | 80 |
| NA | 1-Secured by a first lien | 200500 | 95 |
| NA | 1-Secured by a first lien | 92000 | 47 |
| NA | 1-Secured by a first lien | 239000 | 95 |
| NA | 1-Secured by a first lien | 238000 | 80 |
| NA | 1-Secured by a first lien | 301250 | 97 |
| NA | 1-Secured by a first lien | 390000 | 96.5 |
| NA | 1-Secured by a first lien | 167000 | NA |
| NA | 1-Secured by a first lien | 85000 | 80 |
| NA | 1-Secured by a first lien | 185000 | 69 |
| NA | 1-Secured by a first lien | 226000 | 69 |
| NA | 1-Secured by a first lien | 243000 | 75 |
| NA | 1-Secured by a first lien | 219000 | NA |
| NA | 1-Secured by a first lien | 149000 | 97 |
| NA | 1-Secured by a first lien | 200000 | 92 |
| NA | 1-Secured by a first lien | 377400 | 62 |
| NA | 1-Secured by a first lien | 320000 | 65 |
| NA | 1-Secured by a first lien | 172000 | 59 |
| NA | 1-Secured by a first lien | 550000 | 79 |
| NA | 1-Secured by a first lien | 325000 | 53 |


|  | 10-Not applicable |
| :---: | :---: |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
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|  | 3-Credit history |
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|  | 4-Collateral |
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|  | 10-Not applicable |
|  | 4-Collateral |
|  | 9-Other |
|  | 1-Debt-to-income ratio |
|  | 4-Collateral |
|  | 5-Insufficient cash (downpayment, closing costs) |
|  | 10-Not applicable |



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| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 23-Filipino |  |
| 3-Black or African American |  |
| 5-White |  |
| 5-White |  |
| 5-White |  |
| 5-White |  |
| 6-Information not provided by applicant in mail, internet, or telephone application |  |
| 1-American Indian or Alaska Native |  |
| 2-Asian |  |
| 2-Asian |  |
| 2-Asian |  |
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| 3-Black or African American |  |
| 3-Black or African American |  |
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|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6 -Information not provided by applicant in mail, internet, or telephone application |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 23-Filipino |
|  | 3-Black or African American |
|  | 5-White |
|  | 5-White |
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|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 8-No co-applicant |
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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 5-No co-applicant |
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| 2-Not Hispanic or Latino |
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| 12-Puerto Rican |
| 1-Hispanic or Latino |
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| 14-Other Hispanic or Latino |
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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 5-No co-applicant |
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| 7003.01 | 6-Purchased loan | 1 |
| :---: | :---: | :---: |
| 2416.00 | 1-Loan originated | 1 |
| 7001.00 | 6-Purchased loan | 1 |
| 6204.00 | 6-Purchased loan | 1 |
| 8432.00 | 6-Purchased loan | 2 |
| 8318.00 | 1-Loan originated | 2 |
| 102.01 | 1-Loan originated | 2 |
| 701.01 | 1-Loan originated | 1 |
| 1708.00 | 1-Loan originated | 1 |
| 801.00 | 1-Loan originated | 1 |
| 8435.00 | 6-Purchased loan | 1 |
| 1907.01 | 1-Loan originated | 2 |
| 309.00 | 6-Purchased loan | 1 |
| 8315.00 | 1-Loan originated | 1 |
| 514.00 | 1-Loan originated | 3 |
| 8331.00 | 1-Loan originated | 1 |
| 801.00 | 6-Purchased loan | 1 |
| 1702.00 | 1-Loan originated | 1 |
| 8390.00 | 1-Loan originated | 1 |
| 704.00 | 6-Purchased loan | 1 |
| 8104.00 | 1-Loan originated | 1 |
| 4203.00 | 1-Loan originated | 1 |
| 2109.00 | 1-Loan originated | 1 |
| 1104.00 | 1-Loan originated | 1 |
| 305.00 | 1-Loan originated | 1 |
| 302.00 | 1-Loan originated | 2 |
| 314.00 | 1-Loan originated | 1 |
| 203.01 | 1-Loan originated | 1 |
| 8364.00 | 1-Loan originated | 1 |
| 2508.00 | 1-Loan originated | 2 |
| 1105.02 | 1-Loan originated | 1 |
| 7207.00 | 6-Purchased loan | 3 |
| 609.00 | 1-Loan originated | 1 |
| 1710.00 | 1-Loan originated | 1 |
| 1503.00 | 6-Purchased loan | 1 |
| 619.02 | 1-Loan originated | 1 |
| 1202.00 | 1-Loan originated | 1 |
| 2001.00 | 6-Purchased loan | 1 |
| 8319.00 | 1-Loan originated | 1 |
| 8309.00 | 1-Loan originated | 1 |
| 303.00 | 1-Loan originated | 1 |
| 8419.00 | 6-Purchased loan | 1 |
| 8319.00 | 1-Loan originated | 1 |
| 609.00 | 1-Loan originated | 1 |
| 2001.00 | 1-Loan originated | 1 |
| 1709.00 | 1-Loan originated | 1 |
| 8306.00 | 6-Purchased loan | 1 |
| 208.02 | 6-Purchased loan | 1 |
| 633.01 | 1-Loan originated | 1 |
| 633.02 | 1-Loan originated | 1 |
| 103.00 | 1-Loan originated | 1 |
| 811.00 | 1-Loan originated | 1 |
| 703.00 | 6-Purchased loan | 1 |
| 8331.00 | 1-Loan originated | 1 |
| 321.00 | 6-Purchased loan | 1 |
| 302.00 | 1-Loan originated | 1 |
| 8421.00 | 1-Loan originated | 1 |
| 1913.01 | 1-Loan originated | 1 |
| 2212.00 | 1-Loan originated | 1 |


| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | me Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improvement |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 2-Federal Housing Administration insured (FHA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 2-Home Improvement |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purcha |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |


| 2-Not an open-end line of credit | 207708 | NA | 3.75 | 360 |
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| 2-Not an open-end line of credit | 212000 | 20220218 | 3.25 | 240 |
| 2-Not an open-end line of credit | 232800 | NA | 3.375 | 360 |
| 2-Not an open-end line of credit | 283500 | NA | 2.99 | 360 |
| 2-Not an open-end line of credit | 301900 | NA | 4.5 | 360 |
| 2-Not an open-end line of credit | 289600 | 20211110 | 3.125 | 360 |
| 2-Not an open-end line of credit | 218500 | 20220315 | 4.625 | 240 |
| 2-Not an open-end line of credit | 218250 | 20221017 | 7 | 120 |
| 2-Not an open-end line of credit | 232000 | 20220324 | 4.875 | 360 |
| 2-Not an open-end line of credit | 380000 | 20211007 | 3.375 | 360 |
| 2-Not an open-end line of credit | 184185 | NA | 3.75 | 360 |
| 2-Not an open-end line of credit | 384000 | 20220202 | 4.5 | 360 |
| 2-Not an open-end line of credit | 399410.72 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 301750 | 20220228 | 3.75 | 360 |
| 2-Not an open-end line of credit | 465000 | 20211014 | 2.875 | 240 |
| 2-Not an open-end line of credit | 269100 | 20220316 | 3.375 | 180 |
| 2-Not an open-end line of credit | 157875 | NA | 6.99 | 360 |
| 2-Not an open-end line of credit | 206200 | 20220309 | 3.625 | 360 |
| 2-Not an open-end line of credit | 244000 | 20221005 | 6.5 | 360 |
| 2-Not an open-end line of credit | 300129 | NA | 4.375 | 360 |
| 2-Not an open-end line of credit | 222000 | 20220909 | 6.25 | 360 |
| 2-Not an open-end line of credit | 252000 | 20220301 | 3.99 | 360 |
| 2-Not an open-end line of credit | 692000 | 20220725 | 4.75 | 360 |
| 2-Not an open-end line of credit | 45000 | 20220621 | 7 | 360 |
| 2-Not an open-end line of credit | 279200 | 20220322 | 4 | 360 |
| 2-Not an open-end line of credit | 331250 | 20211219 | 3.49 | 360 |
| 2-Not an open-end line of credit | 120000 | 20220422 | 4.875 | 360 |
| 2-Not an open-end line of credit | 76827 | 20211113 | 3.25 | 360 |
| 2-Not an open-end line of credit | 162000 | 20220429 | 5.75 | 360 |
| 2-Not an open-end line of credit | 227795 | 20220914 | 5.5 | 360 |
| 2-Not an open-end line of credit | 256500 | 20220421 | 5.25 | 360 |
| 2-Not an open-end line of credit | 240000 | NA | 5.875 | 360 |
| 2-Not an open-end line of credit | 120065 | 20220201 | 3 | 360 |
| 2-Not an open-end line of credit | 164000 | 20220608 | 5.365 | 360 |
| 2-Not an open-end line of credit | 205600 | NA | 5.875 | 360 |
| 2-Not an open-end line of credit | 232000 | 20220817 | 6.49 | 360 |
| 2-Not an open-end line of credit | 407500 | 20220121 | 3.49 | 360 |
| 2-Not an open-end line of credit | 444000 | NA | 2.99 | 360 |
| 2-Not an open-end line of credit | 300000 | 20220323 | 3.875 | 360 |
| 2-Not an open-end line of credit | 384750 | 20211214 | 3.25 | 360 |
| 2-Not an open-end line of credit | 300000 | 20211124 | 2.5 | 180 |
| 2-Not an open-end line of credit | 307800 | NA | 3.75 | 360 |
| 2-Not an open-end line of credit | 230000 | 20220826 | 5.375 | 360 |
| 2-Not an open-end line of credit | 276250 | 20220308 | 3.875 | 360 |
| 2-Not an open-end line of credit | 324000 | 20221011 | 6.99 | 360 |
| 2-Not an open-end line of credit | 157500 | 20220328 | 4.5 | 360 |
| 2-Not an open-end line of credit | 185965.73 | NA | 4.75 | 360 |
| 2-Not an open-end line of credit | 376000 | NA | 3.75 | 360 |
| 2-Not an open-end line of credit | 60000 | 20220113 | 3.875 | 360 |
| 2-Not an open-end line of credit | 171000 | 20220808 | 4.875 | 300 |
| 2-Not an open-end line of credit | 135005 | 20220224 | 3.75 | 120 |
| 2-Not an open-end line of credit | 206250 | 20220111 | 3.125 | 360 |
| 2-Not an open-end line of credit | 334000 | NA | 2.5 | 180 |
| 2-Not an open-end line of credit | 574750 | 20220125 | 3.625 | 360 |
| 2-Not an open-end line of credit | 238155.75 | NA | 3.99 | 360 |
| 2-Not an open-end line of credit | 224780 | 20211223 | 3.125 | 360 |
| 2-Not an open-end line of credit | 166600 | 20220209 | 3.375 | 180 |
| 2-Not an open-end line of credit | 200000 | 20220906 | 6.99 | 360 |
| 2-Not an open-end line of credit | 190000 | 20211217 | 3 | 360 |


| NA | 1-Secured by a first lien | 290000 | NA |
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| NA | 1-Secured by a first lien | 412000 | 52 |
| NA | 1-Secured by a first lien | 240000 | NA |
| NA | 1-Secured by a first lien | 300000 | NA |
| NA | 1-Secured by a first lien | 460000 | NA |
| NA | 1-Secured by a first lien | 362000 | 80 |
| NA | 1-Secured by a first lien | 505000 | 44 |
| NA | 1-Secured by a first lien | 242500 | 90 |
| NA | 1-Secured by a first lien | 290000 | 80 |
| NA | 1-Secured by a first lien | 475000 | 80 |
| NA | 1-Secured by a first lien | 196000 | NA |
| NA | 1-Secured by a first lien | 480000 | 80 |
| NA | 1-Secured by a first lien | 600000 | NA |
| NA | 1-Secured by a first lien | 355000 | 85 |
| NA | 1-Secured by a first lien | 620000 | 75 |
| NA | 1-Secured by a first lien | 480000 | 57 |
| NA | 1-Secured by a first lien | 210500 | NA |
| NA | 1-Secured by a first lien | 259000 | 80 |
| NA | 1-Secured by a first lien | 305000 | 80 |
| NA | 1-Secured by a first lien | 414129 | NA |
| NA | 1-Secured by a first lien | 475000 | 47 |
| NA | 1-Secured by a first lien | 315000 | 80 |
| NA | 1-Secured by a first lien | 865000 | 80 |
| NA | 1-Secured by a first lien | 120000 | 38 |
| NA | 1-Secured by a first lien | 349000 | 80 |
| NA | 1-Secured by a first lien | 525000 | 64 |
| NA | 1-Secured by a first lien | 172000 | 70 |
| NA | 1-Secured by a first lien | 126000 | 61 |
| NA | 1-Secured by a first lien | 180000 | 90 |
| NA | 1-Secured by a first lien | 232000 | 96.5 |
| NA | 1-Secured by a first lien | 285000 | 90 |
| NA | 1-Secured by a first lien | 300000 | NA |
| NA | 1-Secured by a first lien | 210000 | 58 |
| NA | 1-Secured by a first lien | 394000 | 42 |
| NA | 1-Secured by a first lien | 257000 | NA |
| NA | 1-Secured by a first lien | 290000 | 80 |
| NA | 1-Secured by a first lien | 775000 | 53 |
| NA | 1-Secured by a first lien | 555000 | NA |
| NA | 1-Secured by a first lien | 430000 | 70 |
| NA | 1-Secured by a first lien | 405000 | 95 |
| NA | 1-Secured by a first lien | 375000 | 80 |
| NA | 1-Secured by a first lien | 324000 | NA |
| NA | 1-Secured by a first lien | 380000 | 61 |
| NA | 1-Secured by a first lien | 325000 | 85 |
| NA | 1-Secured by a first lien | 360000 | 90 |
| NA | 1-Secured by a first lien | 210000 | 75 |
| NA | 1-Secured by a first lien | 196000 | NA |
| NA | 1-Secured by a first lien | 470000 | NA |
| NA | 1-Secured by a first lien | 105000 | 58 |
| NA | 1-Secured by a first lien | 285000 | 60 |
| NA | 1-Secured by a first lien | 250000 | 54 |
| NA | 1-Secured by a first lien | 275000 | 75 |
| NA | 1-Secured by a first lien | 416000 | NA |
| NA | 1-Secured by a first lien | 605000 | 95 |
| NA | 1-Secured by a first lien | 265000 | NA |
| NA | 1-Secured by a first lien | 630000 | 36 |
| NA | 1-Secured by a first lien | 250000 | 67 |
| NA | 1-Secured by a first lien | 215000 | 94 |
| NA | 1-Secured by a first lien | 200000 | 95 |


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|  | 14-Other Hispanic or Latino |
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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
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| 314.00 | 6-Purchased loan | 1 |
| :--- | :--- | :--- |
| 303.00 | 6-Purchased loan | 1 |
| 201.00 | 1-Loan originated | 1 |
| 817.00 | 1-Loan originated | 1 |
| 704.00 | 6-Purchased loan | 1 |
| 8421.00 | 1-Loan originated | 2 |
| 1606.01 | 6-Purchased loan | 1 |
| 8324.00 | 1-Loan originated | 1 |
| 8429.00 | 1-Loan originated | 1 |
| 2410.00 | 1-Loan originated | 1 |
| 2101.00 | 1-Loan originated | 1 |
| 2206.02 | 1-Loan originated | 1 |
| 107.02 | 6-Purchased loan | 1 |
| 7002.00 | 6-Purchased loan | 1 |
| 2004.01 | 3-Application denied | 1 |
| 6501.00 | 1-Loan originated | 1 |
| 2503.00 | 1-Loan originated | 1 |
| 7403.00 | 1-Loan originated | 1 |
| 812.01 | 1-Loan originated | 1 |
| 3301.02 | 1-Loan originated | 1 |
| 813.00 | 1-Loan originated | 1 |
| 4304.00 | 6-Purchased loan | 1 |
| 623.00 | 1-Loan originated | 1 |
| 7005.01 | 6-Purchased loan | 1 |
| 1508.00 | 1-Loan originated | 1 |
| 2712.00 | 6-Purchased loan | 1 |
| 818.00 | 1-Loan originated | 1 |
| 2838.00 | 1-Loan originated | 1 |
| 8310.00 | 3-Application denied | 1 |
| 2427.00 | 1-Loan originated | 1 |
| 8331.00 | 1-Loan originated | 1 |
| 2406.00 | 6-Purchased loan | 1 |
| 701.01 | 1-Loan originated | 1 |
| 8321.00 | 1-Loan originated | 1 |
| 629.00 | 1-Loan originated | 1 |
| 703.00 | 6-Purchased loan | 1 |
| 2405.00 | 1-Loan originated | 3 |
| 7307.00 | 6-Purchased loan | 1 |
| 2432.00 | 1-Loan originated | 1 |
| 301.04 | 1-Loan originated | 1 |
| 3301.03 | 1-Loan originated | 1 |
| 408.00 | 6-Purchased loan | 1 |
| 311.00 | 6-Purchased loan | 1 |
| 814.02 | 1-Loan originated | 1 |
| 8326.00 | 1-Loan originated | 1 |
| 8400.00 | 6-Purchased loan | 1 |
| 801.00 | 1-Loan originated | 1 |
| 502.00 | 6-Purchased loan | 1 |
| 2433.00 | 1-Loan originated | 1 |
| 610.00 | 6-Purchased loan | 1 |
| 3204.00 | 1-Loan originated | 1 |
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| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| :---: | :---: |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 2-Federal Housing Administration insured (FHA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinanc |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 31-Refinance |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 1-Home Purchase |
| 1-Conventional (not insured or guaranteed by FHA, VA, RHS, or FSA) | 32-Cash Out |


| 2-Not an open-end line of credit | 195000 | NA | 3.125 | 360 |
| :---: | :---: | :---: | :---: | :---: |
| 2-Not an open-end line of credit | 274550 | NA | 4.75 | 360 |
| 2-Not an open-end line of credit | 117000 | 20211227 | 3.25 | 360 |
| 2-Not an open-end line of credit | 480250 | 20220418 | 4.250 | 360 |
| 2-Not an open-end line of credit | 389509.33 | NA | 4.75 | 360 |
| 2-Not an open-end line of credit | 225000 | 20220105 | 4.25 | 360 |
| 2-Not an open-end line of credit | 207100 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 620000 | 20220816 | 5.375 | 360 |
| 2-Not an open-end line of credit | 93900 | 20220128 | 3.5 | 180 |
| 2-Not an open-end line of credit | 387000 | 20220216 | 3.99 | 360 |
| 2-Not an open-end line of credit | 373500 | 20220130 | 3.5 | 360 |
| 2-Not an open-end line of credit | 318600 | 20220322 | 4.5 | 360 |
| 2-Not an open-end line of credit | 130000 | NA | 5 | 360 |
| 2-Not an open-end line of credit | 202200 | NA | 3.25 | 360 |
| 2-Not an open-end line of credit | 187000 | 20220912 | NA | 360 |
| 2-Not an open-end line of credit | 185600 | 20211213 | 2.25 | 180 |
| 2-Not an open-end line of credit | 149500 | 20211217 | 3.125 | 360 |
| 2-Not an open-end line of credit | 245831 | 20220421 | 4.625 | 360 |
| 2-Not an open-end line of credit | 885000 | 20211209 | 2.125 | 360 |
| 2-Not an open-end line of credit | 316000 | 20220117 | 3.75 | 360 |
| 2-Not an open-end line of credit | 291000 | 20220329 | 4.875 | 360 |
| 2-Not an open-end line of credit | 120600 | NA | 3.99 | 360 |
| 2-Not an open-end line of credit | 600000 | 20220509 | 4.875 | 360 |
| 2-Not an open-end line of credit | 177694.54 | NA | 3 | 360 |
| 2-Not an open-end line of credit | 205116 | 20220110 | 2.75 | 180 |
| 2-Not an open-end line of credit | 165999.6 | NA | 3.75 | 360 |
| 2-Not an open-end line of credit | 108000 | 20211210 | 3.25 | 360 |
| 2-Not an open-end line of credit | 202000 | 20220425 | 5.25 | 360 |
| 2-Not an open-end line of credit | 428000 | 20221114 | NA | 360 |
| 2-Not an open-end line of credit | 603000 | 20220929 | 6.49 | 360 |
| 2-Not an open-end line of credit | 760000 | 20220203 | 2.875 | 360 |
| 2-Not an open-end line of credit | 670650 | NA | 4.125 | 360 |
| 2-Not an open-end line of credit | 232500 | 20221006 | 6.75 | 360 |
| 2-Not an open-end line of credit | 457900 | 20211108 | 2.875 | 360 |
| 2-Not an open-end line of credit | 1068000 | 20220422 | 4.75 | 360 |
| 2-Not an open-end line of credit | 638500 | NA | 2.625 | 360 |
| 2-Not an open-end line of credit | 580000 | 20211101 | 3.500 | 360 |
| 2-Not an open-end line of credit | 296400 | NA | 4.125 | 360 |
| 2-Not an open-end line of credit | 1190000 | 20220720 | 4.250 | 360 |
| 2-Not an open-end line of credit | 88000 | 20220809 | 6.375 | 360 |
| 2-Not an open-end line of credit | 303750 | 20220130 | 3.49 | 360 |
| 2-Not an open-end line of credit | 135789.68 | NA | 3.6 | 360 |
| 2-Not an open-end line of credit | 191700 | NA | 4.75 | 360 |
| 2-Not an open-end line of credit | 1885000 | 20211214 | 2.75 | 360 |
| 2-Not an open-end line of credit | 1904000 | 20211028 | 2.125 | 360 |
| 2-Not an open-end line of credit | 220023.49 | NA | 4.375 | 240 |
| 2-Not an open-end line of credit | 1975400 | 20211217 | 2.750 | 360 |
| 2-Not an open-end line of credit | 540800 | NA | 3.875 | 360 |
| 2-Not an open-end line of credit | 2480000 | 20220421 | 4.125 | 360 |
| 2-Not an open-end line of credit | 236250 | NA | 5.375 | 360 |
| 2-Not an open-end line of credit | 673750 | 20210817 | 3.125 | 360 |


| NA | 1-Secured by a first lien | 245000 | NA |
| :---: | :---: | :---: | :---: |
| NA | 1-Secured by a first lien | 289000 | NA |
| NA | 1-Secured by a first lien | 125000 | 94 |
| NA | 1-Secured by a first lien | 565000 | 85.000 |
| NA | 1-Secured by a first lien | 520000 | NA |
| NA | 1-Secured by a first lien | 300000 | 75 |
| NA | 1-Secured by a first lien | 218000 | NA |
| NA | 1-Secured by a first lien | 775000 | 80 |
| NA | 1-Secured by a first lien | 313200 | 30 |
| NA | 1-Secured by a first lien | 645000 | 60 |
| NA | 1-Secured by a first lien | 415000 | 90 |
| NA | 1-Secured by a first lien | 354000 | 90 |
| NA | 1-Secured by a first lien | 162000 | NA |
| NA | 1-Secured by a first lien | 290000 | NA |
| NA | 1-Secured by a first lien | 250000 | 75 |
| NA | 1-Secured by a first lien | 232000 | 80 |
| NA | 1-Secured by a first lien | 257000 | 59 |
| NA | 1-Secured by a first lien | 306000 | 78.96 |
| NA | 1-Secured by a first lien | 2040000 | 43.38 |
| NA | 1-Secured by a first lien | 395000 | 80 |
| NA | 1-Secured by a first lien | 471000 | 62 |
| NA | 1-Secured by a first lien | 134000 | NA |
| NA | 1-Secured by a first lien | 1149000 | 53 |
| NA | 1-Secured by a first lien | 333000 | NA |
| NA | 1-Secured by a first lien | 335000 | 62 |
| NA | 1-Secured by a first lien | 175000 | NA |
| NA | 1-Secured by a first lien | 472000 | 23 |
| NA | 1-Secured by a first lien | 252500 | 80 |
| NA | 1-Secured by a first lien | 535000 | 80 |
| NA | 1-Secured by a first lien | 670000 | 90 |
| NA | 1-Secured by a first lien | 950000 | 80.000 |
| NA | 1-Secured by a first lien | 789000 | NA |
| NA | 1-Secured by a first lien | 310000 | 75 |
| NA | 1-Secured by a first lien | 675000 | 68 |
| NA | 1-Secured by a first lien | 1335000 | 80 |
| NA | 1-Secured by a first lien | 881000 | NA |
| NA | 1-Secured by a first lien | 1175000 | 49.362 |
| NA | 1-Secured by a first lien | 312000 | NA |
| NA | 1-Secured by a first lien | 1400000 | 85.000 |
| NA | 1-Secured by a first lien | 110000 | 80 |
| NA | 1-Secured by a first lien | 370000 | 83 |
| NA | 1-Secured by a first lien | 170000 | NA |
| NA | 1-Secured by a first lien | 213000 | NA |
| NA | 1-Secured by a first lien | 2900000 | 65 |
| NA | 1-Secured by a first lien | 2550000 | 75.255 |
| NA | 1-Secured by a first lien | 290000 | NA |
| NA | 1-Secured by a first lien | 2822000 | 70.000 |
| NA | 1-Secured by a first lien | 676000 | NA |
| NA | 1-Secured by a first lien | 3100000 | 80 |
| NA | 1-Secured by a first lien | 262500 | NA |
| NA | 1-Secured by a first lien | 1225000 | 55.000 |


|  | 10-Not applicable |
| :---: | :---: |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
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|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 5-Insufficient cash (downpayment, closing costs) |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
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|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 1-Debt-to-income ratio |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
|  | 10-Not applicable |
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|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
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|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 22-Chinese |
|  | 23-Filipino |
|  | 24-Japanese |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
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|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Black or African American |
|  | 5-White |
|  | 5-White |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
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|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 7-Not applicable |


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|  | 8-No co-applicant |
|  | 8-No co-applicant |
|  | 8-No co-applicant |
|  | 5-White |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 6-Information not provided by applicant in mail, internet, or telephone application |
|  | 7-Not applicable |
|  | 8-No co-applicant |
|  | 8-No co-applicant |
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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
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|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 4-Not applicable |


| 5-No co-applicant |
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| 5-No co-applicant |
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| 5-No co-applicant |
| 2-Female |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 3-Information not provided by applicant in mail, internet, or telephone application |
| 4-Not applicable |
| 5-No co-applicant |
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2-Not Hispanic or Latino
2-Not Hispanic or Latino
2-Not Hispanic or Latino
2-Not Hispanic or Latino
2-Not Hispanic or Latino
1-Hispanic or Latino
2-Not Hispanic or Latino
2-Not Hispanic or Latino
2-Not Hispanic or Latino
2-Not Hispanic or Latino
2-Not Hispanic or Latino
2-Not Hispanic or Latino
2-Not Hispanic or Latino
2-Not Hispanic or Latino
2-Not Hispanic or Latino
1-Hispanic or Latino
1-Hispanic or Latino
11-Mexican
3-Information not provided by applicant in mail, internet, or telephone application
3-Information not provided by applicant in mail, internet, or telephone application
2-Not Hispanic or Latino
3-Information not provided by applicant in mail, internet, or telephone application
3-Information not provided by applicant in mail, internet, or telephone application
3-Information not provided by applicant in mail, internet, or telephone application
2-Not Hispanic or Latino
3-Information not provided by applicant in mail, internet, or telephone application
2-Not Hispanic or Latino
2-Not Hispanic or Latino
2-Not Hispanic or Latino
3-Information not provided by applicant in mail, internet, or telephone application
3-Information not provided by applicant in mail, internet, or telephone application
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3-Information not provided by applicant in mail, internet, or telephone application
3-Information not provided by applicant in mail, internet, or telephone application
3-Information not provided by applicant in mail, internet, or telephone application
2-Not Hispanic or Latino
3-Information not provided by applicant in mail, internet, or telephone application
2-Not Hispanic or Latino
2-Not Hispanic or Latino
12-Puerto Rican
3-Information not provided by applicant in mail, internet, or telephone application
3-Information not provided by applicant in mail, internet, or telephone application
2-Not Hispanic or Latino
3-Information not provided by applicant in mail, internet, or telephone application 3-Information not provided by applicant in mail, internet, or telephone application 3-Information not provided by applicant in mail, internet, or telephone application 3-Information not provided by applicant in mail, internet, or telephone application 3-Information not provided by applicant in mail, internet, or telephone application 3-Information not provided by applicant in mail, internet, or telephone application 3-Information not provided by applicant in mail, internet, or telephone application 4-Not applicable



|  | 5-No co-applicant |
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|  | 5-No co-applicant |
|  | 2-Not Hispanic or Latino |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 3-Information not provided by applicant in mail, internet, or telephone application |
|  | 2-Not Hispanic or Latino |
|  | 4-Not applicable |
|  | 5-No co-applicant |
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| Instructions - Form A-2Residential LendingConstruction Loans(For loans closed or purchased in calendar year 2022) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Instructions: In this Form A2, provide construction loan data sourced from the submitting institution's internal records. |  |  |  |  |  |
| Column | Field Name | Description | Data Filters | 2022 HDMA Data Field Number | Municipal Code (2-32-440) |
| 1 | Census Tract | Specify the 11 digit census tract code for each property's location within Chicago city limits. Multiple loans within a given census tract are to be listed separately. Do not include loans with census tract information outside of Chicago. | Census Tract within City limits | 15 | $\mathrm{a}-7, \mathrm{~g}-3$ |
| 2 | Loan Amount | Indicate the principal amount of each loan. |  | 9 | a-7, g-3 |
| 3 | Application Date | Indicate the loan application. |  | 3 | g-3 |
| 4 | Interest Rate | Indicate the effective interest rate on the loan. |  | 31 | g-4 |
| 5 | Loan Term (Months) | Indicate the term in months of each loan. |  | 35 | g-3 |
| 6 | Total Points and Fees | Indicate the total dollar amount of points and fees charges for each loan. |  | 27 | g-4 |
| 7 | Lien Status | Indicate whether the loan is a first lien loan or a subordinate lien loan. |  | 24 | g-4 |
| 8 | Total Units | Indicate the number of total units |  | 41 |  |


| Residential Lending |
| :---: |
| Construction Loans |
| (For loans closed or purchased in calendar year 2022) |

Not applicable

| Instructions- Form BResidential Loan Foreclosures and Insurance Financed (1-4 Units)Condominium or Cooperative Units. Include Loans for Properties Located in Chicago Only.(For loans Closed within the 12-month Period Ending December 31, 2022) |  |  |
| :---: | :---: | :---: |
| Question | Description | Municipal Code |
| 1 | (Number) Indicate the total number of secured residential loans closed in 2022. | g-5-A |
| 2 | (Number) Indicate the total number of secured loans closed in 2022 where the premium of any single premium credit life, credit disability, credit unemployment or any other life or health insurance was financed directly or indirectly into the loan. | g-5-C |
| 3 | (Number) Indicate the number of loans foreclosed in 2022 where the premium of any single premium credit life, credit disability, credit unemployment or any other life or health insurance was financed directly or indirectly with the loan, regardless of when the loan was closed. | g-5-D |
| 4 | (Number) Indicate the total number of loans, by census tract, in which foreclosure proceedings were completed in the 12-month period ending December 31, 2022 regardless of when the loan was closed. | g-5-B |


|  |
| :---: |
| Question |
| 1 |
| 2 |
| 3 |
| 4 |

Residential Loan Foreclosures and Insurance Financed (1-4 Units)
Condominium or Cooperative Units. Include Loans for Properties Located in Chicago Only.
(For loans Closed within the 12-month Period Ending December 31, 2022)
Description
Indicate the total number of secured residential loans closed in 2022.
Indicate the total number of secured loans closed in 2022 where the premium of any single premium credit life, credit disability, credit unemployment or any other life or health insurance was financed directly or indirectly into the loan.
Indicate the number of loans foreclosed in 2022 where the premium of any single premium credit life, credit disability, credit unemployment or any other life or health insurance was financed directly or indirectly with the loan, regardless of when the loan was closed.
Indicate the total number of loans, in which foreclosure proceedings were completed in the 12-month period ending December 31, 2022 regardless of when the loan was closed.

Due to data privacy and data confidentiality we cannot provide by census tract


## INSTRUCTIONS- FORM C <br> COMMERCIAL LENDING <br> (FOR LOANS CLOSED IN CALENDAR YEAR 2022)

Instructions: In this Form C, include loans (secured and unsecured) made to businesses to finance short or long-term needs, such as inventory purchases, the movement of goods, plant and equipment and all other loans recorded by your institution as commercial loans. Note: Rollovers should be counted only once in each calendar year (provided that there is no increase in the outstanding principal and that the parties to the loan remain the same). The data is to be sourced from the submitting institution's internal records.

| Column | Field Name | Description | Data Filters | Municipal Code (2-32-440) |
| :---: | :---: | :---: | :---: | :---: |
| 1 | Census Tract | Specify the 11 digit census tract code for each property's location within Chicago city limits. Multiple loans within a given census tract are to be listed separately. Do not include loans with census tract information outside of Chicago. | Census Tract within City of Chicago City limits | C-2 |
| 2 | Number of Loans | Indicate number of commercial loans made within the specified census tracts. |  | C-2 |
| 3 | Loan Amount | Indicate the aggregate principal amount of the loans within the specified census tracts. |  | C-2 |

## JPMorgan Chase


(For Loans Closed within the 12-Month Period Ending December 31, 2022)

| (1) | (2) | (3) |  |
| :---: | :---: | :---: | :---: |
| Zip Code | Number of Loans | Total Combined Loan Amount |  |
| 60601 | 35 | \$ | 50,572,307.00 |
| 60602 | 19 | \$ | 172,647,207.16 |
| 60603 | 19 | \$ | 16,068,735.93 |
| 60604 | 8 | \$ | 1,905,000.00 |
| 60605 | 10 | \$ | 11,080,000.00 |
| 60606 | 67 | \$ | 1,111,150,419.61 |
| 60607 | 18 | \$ | 69,363,117.72 |
| 60608 | 16 | \$ | 1,911,762.50 |
| 60609 | 7 | \$ | 881,806.97 |
| 60610 | 11 | \$ | 1,524,000.00 |
| 60611 | 33 | \$ | 400,293,921.46 |
| 60612 | 13 | \$ | 11,633,333.33 |
| 60613 | 14 | \$ | 403,789,971.98 |
| 60614 | 23 | \$ | 1,568,292.00 |
| 60615 | 3 | \$ | 100,000.00 |
| 60616 | 6 | \$ | 265,595.14 |
| 60617 | 9 | \$ | 160,000.00 |
| 60618 | 15 | \$ | 2,293,000.00 |
| 60619 | 7 | \$ | 400,000.00 |
| 60620 | 3 | \$ | 70,000.00 |
| 60622 | 18 | \$ | 5,681,333.33 |
| 60623 | 6 | \$ | 580,000.00 |
| 60625 | 14 | \$ | 55,151,766.53 |
| 60626 | 2 | \$ | 20,000.00 |
| 60628 | 3 | \$ | 1,500,000.00 |
| 60629 | 3 | \$ | 1,225,000.00 |
| 60630 | 6 | \$ | 3,843,000.00 |
| 60631 | 11 | \$ | 162,415,076.17 |
| 60632 | 6 | \$ | 1,260,000.00 |
| 60633 | 2 | \$ | 28,878,146.00 |
| 60634 | 8 | \$ | 2,955,000.00 |
| 60636 | 3 | \$ | 92,000.00 |
| 60637 | 2 | \$ | 110,000.00 |
| 60638 | 8 | \$ | 11,811,605.00 |
| 60639 | 5 | \$ | 3,531,427.00 |
| 60640 | 16 | \$ | 1,585,395.43 |
| 60641 | 12 | \$ | 6,282,430.74 |
| 60642 | 10 | \$ | 853,000.00 |
| 60644 | 1 | \$ | 2,500,000.00 |
| 60645 | 5 | \$ | 4,580,000.00 |
| 60646 | 4 | \$ | 550,000.00 |
| 60647 | 27 | \$ | 2,966,254.37 |
| 60649 | 1 | \$ | 40,000.00 |
| 60651 | 5 | \$ | 2,750,000.00 |
| 60652 | 3 | \$ | 106,883.00 |
| 60653 | 5 | \$ | 122,000.00 |
| 60654 | 26 | \$ | 19,280,600.84 |
| 60655 | 2 | \$ | 42,000.00 |
| 60656 | 7 | \$ | 1,393,708.00 |
| 60657 | 12 | \$ | 1,941,250.00 |
| 60659 | 3 | \$ | 200,000.00 |
| 60661 | 6 | \$ | 4,909,249.08 |
| 60707 | 4 | \$ | 1,209,000.00 |

## CONSUMER LENDING

## FOR LOANS CLOSED IN CALENDAR YEAR 2022)

 and all other loans recorded by your institution as consumer loans. The data is to be sourced from the submitting institution's internal records

| Column | Field Name | Description | Data Filters | Municipal Code (2-32-440) |
| :---: | :---: | :---: | :---: | :---: |
| 1 | Census Tract | Specify the 11 digit census tract code for each property's location within Chicago city limits. Multiple loans within a given census tract are to be listed separately. Do not include loans with census tract information outside of Chicago. | Census Tract within City of Chicago City limits | B-2 |
| 2 | Number of Loans | Indicate the number of consumer loans made within the specified census tracts. |  | B-2 |
| 3 | Loan Amount | Indicate the aggregate principal amount of the loans within the specified census tracts. |  | B-2 |

This is information is not available by census tract, loan count or loan amount

| INSTRUCTIONS- FORM E <br> SAVINGS ACCOUNT DATA <br> (Balance as of December 31, 2022) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Instructions: In this Form E, include all accounts recorded by your institution as savings accounts, such as regular savings (both passbook and statement), money market, and certificate of deposit accounts. The data is to be sourced from the submitting institution's internal records. |  |  |  |  |
| Column | Field Name | Description | Data Filters |  |
| 1 | Census Tract | Specify the 11 digit census tract code for each property's location within Chicago city limits. Multiple loans within a given census tract are to be listed separately. Do not include loans with census tract information outside of Chicago. | Census Tract within City of Chicago City limits | d |
| 2 | Number of Accounts | Indicate the number of savings accounts made within the specified census tracts. |  | d |
| 3 | Total Combined Balance | Indicate the aggregate account balance within the specified census tracts. |  | d |


| INSTRUCTIONS- FORM F CHECKING ACCOUNT DATA (Balance as of December 31, 2022) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Instructions: In this Form F, include all account recorded by your institution as checking accounts. |  |  |  |  |
| Column | Field Name | Description | Required Value | Municipal Code (2-32-440) |
| 1 | Census Tract | Specify the 11 digit census tract code for each property's location within Chicago city limits. <br> Multiple loans within a given census tract are to be listed separately. Do not include loans with census tract information outside of Chicago. | Census Tract within City of Chicago City limits | d |
| 2 | Number of Accounts | Indicate the number of checking accounts within the specified census tracts that were active as of December 31, 2022. | NA | d |
| 3 | Total Combined Balance | Indicate the aggregate principal amount of the loans within the specified census tracts. | NA | d |

FORM E\&F
SAVINGS \& CHECKING ACCOUNT DATA
(Balance as of December 31, 2022)
Zip Code
Total Deposit Amount
(000s)

Note: Combined checking and savings account data consistent with Federal Summary Deposit Reporting

## Instruction - Form G <br> Depository Information (Balance as of December 31, 2022)

Instructions: In this Form G, Include the number and location of your institution's facilities within the City of Chicago, and the census tract of each facility, as reported to the Community Reinvestment Act. Only include customer-facing deposit-taking banking centers.

| Column | Field Name | Description | Municipal Code (2-32-440) |
| :---: | :--- | :--- | :--- | :---: |
| 1 | Census Tract | Specify, by 11 digit census tract, the Chicago location of each of your facilities. | i |
| 2 | Office Address | Indicate the street address of each of your facilities | i |


| census_tract1 | LR_ACTION | LR_UNITS | LR_LOAN_TYPE |
| :---: | :---: | :---: | :---: |
| 101 | 1 | 25 | 1 |
| 101 | 6 | 1 | 1 |
| 101 | 1 | 1 | 1 |
| 101 | 1 | 1 | $\square$ |
| 101 | 3 | 1 | 1 |
| 101 | 6 | 1 | 1 |
| 101 | 6 | 1 | 1 |
| 102.01 | 3 | 1 | $\square$ |
| 102.01 | 1 | 1 | $\square 1$ |
| 102.01 | 6 | 1 | $\square 1$ |
| 102.01 | 1 | 1 | $\square$ |
| 102.01 | 6 | 1 | 2 |
| 102.01 | 6 | 1 | $\square$ |
| 102.01 | 3 | 2 | 1 |
| 102.01 | 6 | 1 | 1 |
| 102.01 | 6 | 1 | 1 |
| 102.01 | 6 | 1 | 2 |
| 102.01 | 6 | 1 | 2 |
| 102.01 | 6 | 1 | 1 |
| 102.02 | 6 | 1 | $\square 1$ |
| 102.02 | 6 | 1 | $\square 1$ |
| 102.02 | 3 | 1 | $\square 1$ |
| 102.02 | 6 | 1 | 1 |
| 103 | 3 | 1 | 1 |
| 103 | 1 | 1 | 1 |


| 103 | 6 | 1 | $1 \quad 1$ |
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| 103 | 6 | 1 | 1 |
| 104 | 6 | 1 | 1 |
| 104 | 3 | 1 | 1 |
| 104 | 6 | 1 | 1 |
| 104 | 6 | 1 | 1 |
| 105.01 | 6 | 1 | 1 |
| 105.01 | 6 | 1 | $1 \quad 1$ |
| 105.01 | 6 | 1 | 1 |
| 105.01 | 6 | 1 | $1 \quad 1$ |
| 105.01 | 3 | 1 | 11 |
| 105.02 | 6 | 3 | 3 |
| 105.02 | 6 | 3 | 3 |
| 105.02 | 6 | 1 | 1 |
| 105.02 | 3 | 1 | 1 |
| 105.02 | 1 | 1 | 1 |
| 105.03 | 1 | 1 | 1 |
| 106 | 6 | - 1 | 1 |
| 106 | 6 | - 1 | 1 |
| 106 | 6 | - 1 | 1 |
| 106 | 6 | 1 | 1 |
| 106 | 1 | 3 | 3 |
| 106 | 6 | 1 | 1 |
| 106 | 6 | 1 | 1 |
| 106 | 6 | 1 | 1 |
| 106 | 6 | 1 | 1 |
| 106 | 1 | 1 | 1 |
| 107.01 | 6 | 1 | 1 |
| 107.01 | 1 | 11 | 1 |
| 107.01 | 1 | 1 | 1 |
| 107.01 | 1 | 1 | 1 |
| 107.01 | 6 | 1 | 1 |
| 107.01 | 6 | [ | $1 \square$ |



| 203.02 | 1 | 1 | 1 |
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| 203.02 | 1 | 1 | $\square$ |
| 204 | 1 | 1 | $\square$ |
| 204 | 1 | 1 |  |
| 204 | 6 | 1 | $\square$ |
| 204 | 1 | 1 | 1 |
| 204 | 6 | 1 | $\square 1$ |
| 204 | 3 | 1 | $\square 1$ |
| 205 | 3 | 1 | $\square$ |
| 205 | 1 | 2 | - 2 |
| 205 | 3 | 1 | $\square 1$ |
| 206.01 | 6 | 1 | $\square 1$ |
| 206.01 | 1 | 1 | $\square 1$ |
| 206.01 | 3 | 1 | 1 |
| 206.02 | 6 | 1 | 1 |
| 206.02 | 3 | 1 | 1 |
| 206.02 | 3 | 1 | 1 |
| 207.01 | 6 | 1 | $\square 1$ |
| 207.01 | 3 | 1 | $\square 1$ |
| 207.01 | 6 | 1 | $\square 1$ |
| 207.02 | 3 | 1 | $\square 1$ |
| 207.02 | 3 | 2 | 1 |
| 207.02 | 1 | 1 | 1 |
| 207.02 | 1 | 1 | 1 |
| 207.02 | 6 | 2 | 1 |
| 207.02 | 1 | 1 | $\square 1$ |
| 208.01 | 3 | 2 | - 1 |
| 208.01 | 1 | 1 | $\square 1$ |
| 208.01 | 1 | 2 | - 1 |
| 208.01 | 1 | 1 | 1 |
| 208.01 | 3 | 2 | 1 |
| 208.01 | 1 | 1 | 1 |
| 208.01 | 3 | 3 | $\square$ |










| 407 | 6 | 1 | 1 1 1 |
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| 407 | 6 | 1 | 1 |
| 407 | 6 | 1 | 11 |
| 407 | 6 | 1 | 1 |
| 407 | 6 | 2 | $2 \square 1$ |
| 407 | 1 | 2 | $2 \quad 1$ |
| 407 | 6 | 1 | $1 \quad 1$ |
| 407 | 3 | 2 | 2 |
| 407 | 1 | 1 | $1 \quad 1$ |
| 407 | 6 | 2 | $2 \square 1$ |
| 407 | 1 | 1 | 1 |
| 407 | 6 | 1 | 1 |
| 408 | 6 | 2 | 2 |
| 408 | 3 | 1 | 1 |
| 408 | 6 | 2 | 2 |
| 408 | 6 | 2 | 2 |
| 409 | 6 | - 1 | $1 \quad 2$ |
| 409 | 1 | - 1 | $1 \quad 1$ |
| 409 | 6 | - 2 | 2 |
| 409 | 6 | 1 | 1 |
| 409 | 6 | - | 1 |
| 409 | 1 | 1 | 1 - 1 |
| 501 | 3 | 2 | 2 |
| 501 | 1 | 1 | 1 |
| 501 | 3 | - 2 | 2 |
| 501 | 6 | - 1 | 1 |
| 501 | 6 | 1 | 1 |
| 501 | 3 | - 4 | 4 |
| 501 | 3 | 2 | 2 |
| 501 | 6 | 1 | 1 |
| 501 | 1 | 3 | $3 \square 1$ |
| 502 | 1 | ( | $1{ }^{1}$ |


| 502 | 6 | 4 | $4 \square 1$ |
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| 502 | 6 | 1 | 1 |
| 502 | 6 | 1 | 1 |
| 502 | 1 | 1 | 1 |
| 502 | 6 | 2 | 2 |
| 502 | 6 | 1 | $1 \quad 1$ |
| 502 | 6 | 2 | $2 \square 1$ |
| 502 | 3 | 2 | $2 \quad 1$ |
| 502 | 6 | 1 | 1 |
| 502 | 1 | 1 | 1 1 1 |
| 502 | 1 | 1 | 1 |
| 502 | 6 | 2 | 2 |
| 502 | 6 | 1 | 1 |
| 502 | 6 | 1 | 1 |
| 503 | 1 | 1 | 1 |
| 503 | 6 | 1 | 1 |
| 503 | 6 | 1 | 1 |
| 503 | 1 | 1 | 1 |
| 503 | 3 | 1 | 1 |
| 503 | 1 | 1 | 1 |
| 503 | 6 | 1 | 1 |
| 503 | 1 | 1 | 1 |
| 503 | 1 | 1 | 1 |
| 503 | 6 | 1 | 1 |
| 503 | 3 | 3 | 3 |
| 503 | 6 | 2 | 2 |
| 505 | 6 | 1 | 1 |
| 505 | 1 | 2 | 2 |
| 505 | 1 | 1 | 1 |
| 505 | 3 | 2 | 2 |
| 505 | 6 | 1 | 1 |
| 505 | 6 | 1 | 1 |
| 505 | 1 | ( | $1 \times 1$ |








| 626 | 6 | 1 | $1 \quad 1$ |
| :---: | :---: | :---: | :---: |
| 626 | 6 | 1 | $1 \quad 1$ |
| 626 | 6 | 2 | 2 |
| 626 | 6 | 1 | 1 |
| 626 | 1 | 1 | 1 |
| 626 | 1 | 1 | $1 \square$ |
| 626 | 6 | 3 | $3 \quad 1$ |
| 627 | 1 | 1 | $1 \quad 1$ |
| 627 | 6 | 1 | 11 |
| 627 | 6 | 1 | $1 \quad 1$ |
| 627 | 1 | 1 | $1 \quad 1$ |
| 627 | 1 | 3 | $3 \square 1$ |
| 627 | 1 | 1 | $1 \square$ |
| 628 | 6 | - 1 | $1 \quad 1$ |
| 628 | 1 | 1 | $1 \square$ |
| 628 | 1 | 1 | $1 \quad 1$ |
| 628 | 1 | 1 | 1 |
| 628 | 1 | 1 | $1 \quad 1$ |
| 628 | 1 | 1 | $1 \quad 1$ |
| 628 | 1 | 1 | $1 \quad 1$ |
| 628 | 6 | - 1 | 1 |
| 628 | 1 | 1 | $1 \times 1$ |
| 628 | 6 | 1 | $1 \quad 1$ |
| 628 | 1 | 1 | $1 \quad 1$ |
| 628 | 6 | ( | $1 \times 1$ |
| 628 | 6 | 1 | 1 |
| 628 | 3 | - 4 | $4 \square 1$ |
| 628 | 6 | 1 | 1 - 1 |
| 628 | 1 | 1 | 11 |
| 628 | 1 | 2 | $2 \square 1$ |
| 628 | 6 | 3 | $3 \square 1$ |
| 629 | 1 | 1 | 1 - 1 |
| 629 | 6 | - | $1 \times 1$ |
















| 1004 | 6 |  | 1 | 1 |
| :---: | :---: | :---: | :---: | :---: |
| 1004 | 6 |  | 1 | 1 |
| 1004 | 1 |  | 1 | 1 |
| 1004 | 6 |  | 1 | 1 |
| 1004 | 6 |  | 1 | 1 |
| 1004 | 3 |  | 1 | 1 |
| 1005 | 6 |  | 1 | 1 |
| 1005 | 1 |  | 1 | 1 |
| 1005 | 3 |  | 1 | 1 |
| 1005 | 1 |  | 1 | 1 |
| 1005 | 6 |  | 1 | 1 |
| 1005 | 6 |  | 1 | 1 |
| 1005 | 6 |  | 1 | 1 |
| 1005 | 1 |  | 1 | 1 |
| 1005 | 1 |  | 1 | 1 |
| 1005 | 6 |  | 1 | 1 |
| 1005 | 1 |  | 1 | 1 |
| 1005 | 6 |  | 1 | 1 |
| 1005 | 1 |  | 1 | 1 |
| 1005 | 1 |  | 1 | 1 |
| 1005 | 1 |  | 1 | 1 |
| 1005 | 1 |  | 1 | 1 |
| 1005 | 6 |  | 1 | 2 |
| 1005 | 1 |  | 1 | 1 |
| 1005 | 6 |  | 1 | 1 |
| 1006 | 6 |  | 1 | 1 |
| 1006 | 3 |  | 1 | 1 |
| 1006 | 6 |  | 1 | 1 |
| 1006 | 6 |  | 1 | 1 |
| 1006 | 6 |  | 1 | 2 |
| 1006 | 6 |  | 1 | 1 |
| 1006 | 6 |  | 1 | 1 |
| 1006 | 1 |  | 1 | 1 |
| 1006 | 1 | L | 1 | 1 |















| 1710 | 1 |  | 1 | 1 |
| :---: | :---: | :---: | :---: | :---: |
| 1710 | 6 |  | 1 | 1 |
| 1710 | 1 |  | 1 | 1 |
| 1710 | 6 |  | 1 | 1 |
| 1710 | 1 |  | 1 | 1 |
| 1710 | 1 |  | 1 | 1 |
| 1710 | 6 |  | 1 | 1 |
| 1710 | 3 |  | 1 | 1 |
| 1710 | 1 |  | 1 | 1 |
| 1710 | 6 |  | 1 | 1 |
| 1710 | 1 |  | 1 | 1 |
| 1710 | 1 |  | 1 | 2 |
| 1710 | 1 |  | 1 | 1 |
| 1711 | 6 |  | 4 | 1 |
| 1711 | 3 |  | 1 | 1 |
| 1711 | 6 |  | 3 | 2 |
| 1711 | 3 |  | 1 | 1 |
| 1711 | 1 |  | 1 | 1 |
| 1711 | 6 |  | 1 | 1 |
| 1711 | 1 |  | 1 | 1 |
| 1711 | 3 |  | 1 | 1 |
| 1711 | 3 |  | 1 | 1 |
| 1801 | 6 |  | 1 | 1 |
| 1801 | 6 |  | 1 | 1 |
| 1801 | 6 |  | 1 | 2 |
| 1801 | 6 |  | 1 | 2 |
| 1801 | 1 |  | 1 | 1 |
| 1801 | 1 |  | 2 | 1 |
| 1801 | 6 |  | 1 | 1 |
| 1801 | 1 |  | 1 | 1 |
| 1801 | 6 |  | 1 | 1 |
| 1801 | 1 |  | 1 | 1 |
| 1801 | 6 |  | 3 | 2 |
| 1801 | 3 |  | 1 | 1 |



| 1906.01 | 1 | 6 | $6 \square$ |
| :---: | :---: | :---: | :---: |
| 1906.01 | 6 | 2 | 2 |
| 1906.02 | 6 | 1 | 1 |
| 1906.02 | 6 | 1 | 1 |
| 1906.02 | , | 1 | 1 |
| 1906.02 | 6 | 1 | $\square 2$ |
| 1906.02 |  | 1 | 1 |
| 1906.02 | 1 | 1 | 1 |
| 1906.02 | 6 | 1 | 1 |
| 1906.02 | 3 | 2 | - 1 |
| 1906.02 | 3 | 1 | 1 |
| 1906.02 | 3 | 1 | 1 |
| 1907.01 |  | 12 | $\square 1$ |
| 1907.01 | 1 | 1 | $\square 1$ |
| 1907.01 | 6 | 2 | 2 |
| 1907.02 | 6 | 1 | 1 |
| 1907.02 | , | 2 | 2 |
| 1908 | 6 | 2 | - 3 |
| 1908 | 6 | 3 | - 2 |
| 1908 | 1 | 1 | 1 |
| 1908 | 1 | 1 | 1 |
| 1908 | 3 | 1 | 1 |
| 1908 | 6 | 4 | 4 |
| 1911 | 6 | 2 | 2 |
| 1911 | 6 | 4 | 4 |
| 1911 | 6 | 2 | - 2 |
| 1911 | 6 | 2 | $2 \square$ |
| 1911 | 6 | 1 | 1 |
| 1912 | 6 | 1 | 1 |
| 1912 | 3 | 2 | $2 \square$ |
| 1912 | 3 | 2 | - 1 |
| 1913.01 | 6 | 1 | 1 |
| 1913.01 | 1 | 1 | $\square 1$ |
| 1913.01 | 1 | 1 | 1 |






















| 2838 | 6 | 1 | $1 \quad 1$ |
| :---: | :---: | :---: | :---: |
| 2838 | 6 | 1 | 1 |
| 2838 | 3 | 1 | 1 |
| 2838 | 6 | 1 | $1 \quad 2$ |
| 2838 | 1 | 1 | 1 |
| 2909 | 6 | 1 | $1 \quad 2$ |
| 2909 | 6 | 2 | $2 \square$ |
| 2909 | 6 | 3 | 3 $\quad 1$ |
| 2909 | 3 | 2 | 2 |
| 2909 | 1 | 1 | 1 |
| 2916 | 3 | 2 | 2 |
| 2922 | 3 | 3 | 3 |
| 2922 | 6 | 1 | 1 |
| 2922 | 3 | 2 | 2 |
| 2922 | 3 | 3 | 3 |
| 2922 | 6 | 2 | $2 \square$ |
| 2924 | 6 | 2 | $2 \square$ |
| 2924 | 6 | 1 | 1.2 |
| 2924 | 6 | 1 | 1 |
| 2924 | 6 | 2 | $2 \square$ |
| 2924 | 6 | 2 | $2 \square 2$ |
| 2924 | 6 | 1 | 1 - 2 |
| 2925 | 6 | 1 | 1.2 |
| 2925 | 6 | 2 | $2 \square$ |
| 2925 | 3 | 1 | 1.1 |
| 3005 | 6 | 3 | 3 |
| 3005 | 1 | 2 | 2 |
| 3006 | 6 | 2 | $2 \square$ |
| 3006 | 1 | 2 | 2 |
| 3007 | 1 | 1 | 1 |
| 3007 | 3 | 2 | 2 |
| 3008 | 3 | 3 | 3 |
| 3008 | 6 | 2 | $2 \square 1$ |
| 3009 | 1 | - 1 | 1 |






| 3301 | , | 1 | 1 |
| :---: | :---: | :---: | :---: |
| 3302 | 1 | 1 | 1 |
| 3302 | 6 | 1 | 1 |
| 3302 | 3 | 1 | 1 |
| 3302 | 1 | - | 1 |
| 3302 | 1 | 1 | 1 |
| 3302 | 6 | 1 | $\square 1$ |
| 3403 | 1 | 1 | $\square 1$ |
| 3403 | 1 | 1 | $\square 1$ |
| 3403 | 1 | 1 | 1 |
| 3403 | 3 | 1 | - 1 |
| 3403 | 3 | 2 | $2 \square 1$ |
| 3403 | 1 | 2 | - 1 |
| 3403 | 1 | 3 | 3 $\quad 1$ |
| 3404 | 1 | 2 | - 1 |
| 3514 | 6 | 1 | 1 |
| 3514 | 3 | 1 | $\square 1$ |
| 3514 | 6 | 1 | $\square 1$ |
| 3514 | 3 | 1 | $\square 1$ |
| 3514 | 3 | 1 | 1 |
| 3801 | 1 | 1 | - 1 |
| 3801 | 6 | 1 | 1 |
| 3801 | 1 | 1 | 1 |
| 3801 | 1 | 1 | 1 |
| 3802 | 6 | 1 | 1 |
| 3802 | 6 | 1 | 1 |
| 3807 | 1 | 1 | 1 |
| 3807 | 6 | 1 | 1 |
| 3812 | 6 | 1 | $\square 1$ |
| 3812 | 6 | 2 | - 1 |
| 3812 | 3 | 7 | - 1 |
| 3812 | 1 | 1 | 1 |
| 3812 | 6 | 1 | 1 |
| 3814 | 6 | 1 | 1 |






| 4402.02 | 6 | 1 | 1 - 1 |
| :---: | :---: | :---: | :---: |
| 4402.02 | 3 | 1 | 1 |
| 4403 | 1 | 1 | 1 |
| 4403 | 3 | 1 | 1 |
| 4403 | 3 | 1 | 12 <br>  |
| 4403 | 1 | 1 | 1 |
| 4403 | 6 | 1 | $1 \quad 2$ |
| 4403 | 6 | 1 | 1 - 2 |
| 4403 | 6 | 1 | $1-2$ |
| 4403 | 3 | 1 | 1 |
| 4403 | 1 | 1 | 1 |
| 4403 | 6 | 1 | $1 \quad 2$ |
| 4406 | 6 | 1 | 1 |
| 4406 | 6 | 1 | $1-2$ |
| 4406 | 6 | 1 | 1 |
| 4406 | 6 | 1 | 1 - 2 |
| 4406 | 3 | 1 | 1 |
| 4406 | 6 | 1 | 1.2 |
| 4406 | 3 | 1 | 1 |
| 4406 | 3 | 1 | 1 |
| 4407 | 6 | 2 | $2 \square$ |
| 4407 | 3 | 1 | 1 |
| 4407 | 1 | 8 | 8 |
| 4407 | 6 | 1 | $1-2$ |
| 4407 | 3 | 1 | 1 |
| 4407 | 3 | 1 | 1 |
| 4407 | 3 | 1 | 1 |
| 4407 | 3 | 1 | 1 |
| 4408 | 6 | 1 | 1 |
| 4409 | 6 | 1 | 1.2 |
| 4409 | 6 | - | $1-2$ |
| 4409 | 6 | 2 | 2 |
| 4409 | 1 | 10 | - 1 |
| 4409 | 6 | - | 1 |


















| 5611 | 6 | 1 | 2 |
| :---: | :---: | :---: | :---: |
| 5611 | 6 | [ | 1 |
| 5611 | 1 | 1 | 1 |
| 5611 | 1 | \| | - 1 |
| 5611 | 6 | - | $\square 1$ |
| 5611 | 3 | - 1 | 1 |
| 5611 | 6 | [ | - 1 |
| 5611 | 6 | \| | 1 |
| 5611 | 6 | 6 | - 1 |
| 5611 | 6 | - 1 | 1 |
| 5611 | 6 | ( | $\square 1$ |
| 5611 | 1 | 1-1 | - 1 |
| 5611 | 1 | 1 - 1 | 1 |
| 5611 | 1 | \| | 1 |
| 5611 | 1 | ( | $\square 1$ |
| 5701 | 6 | ( | $\square 2$ |
| 5702 | 3 | - 1 | 1 |
| 5703 | 6 | - | $2 \square$ |
| 5703 | 1 | \| | 1 |
| 5703 | 1 | 1 | 1 |
| 5703 | 1 | ( | $\square 1$ |
| 5703 | 6 | - | $\square 2$ |
| 5703 | 6 | - 2 | - 2 |
| 5703 | 6 | 6 | 2 |
| 5703 | 6 | 6 | 1 |
| 5703 | 6 | [ | - 1 |
| 5703 | 6 | - 1 | 1 |
| 5703 | 1 | 1-1 | 1 |
| 5704 | 1 | \| | 1 |
| 5705 | 6 | [ 1 | 1 |
| 5801 | 3 | - 4 | 4 |
| 5801 | 6 | - 4 | - 2 |
| 5801 | 3 | - 1 | 1 |
| 5801 | 6 | 6 | - 2 |











| 6604 | 3 | 1 | $1 \quad 1$ |
| :---: | :---: | :---: | :---: |
| 6604 | 6 | - 1 | 11 |
| 6604 | 3 | 3 - 1 | 1 |
| 6604 | 1 | - | 1 |
| 6605 | 1 | - | 1 |
| 6605 | 6 | - 2 | $2 \square$ |
| 6605 | 1 | 50 | 0 |
| 6605 | 6 | 2 | 2 |
| 6605 | 3 | 3 - 1 | 1 |
| 6605 | 3 | 3 | 1 - 1 |
| 6605 | 3 | 1 | 1 |
| 6605 | 6 | - | 11 |
| 6605 | 3 | 3 - 1 | 1 |
| 6606 | 6 | 2 | $2 \square$ |
| 6606 | 6 | 2 | $2 \square$ |
| 6606 | 6 | - | $1 \quad 2$ |
| 6606 | 3 | 17 | 7 |
| 6606 | 3 | 1 | 1 - 1 |
| 6606 | 1 | - 1 | 1 |
| 6606 | 6 |  | 1 - 2 |
| 6606 | 6 | - | $1 \quad 2$ |
| 6607 | 6 | 1 | $1 \quad 2$ |
| 6607 | 6 |  | 1 2 2 |
| 6607 | 3 | 1 | 1 |
| 6607 | 6 | - 1 | $1 \quad 2$ |
| 6608 | 6 | - 2 | $2 \square 2$ |
| 6608 | 3 | 10 | 0 |
| 6608 | 6 | 2 | $2 \square$ |
| 6608 | 1 | 11 | 1 |
| 6608 | 1 | - 10 | 10 |
| 6608 | 1 | 2 | 2 |
| 6608 | 6 | 1 | 1 |
| 6608 | 3 |  | 1 |
| 6608 | 6 | , | $2 \square$ |




| 6718 | 1 | 1 | 1 － 1 |
| :---: | :---: | :---: | :---: |
| 6718 | 3 | 1 | 1 |
| 6720 | 6 | 1 | 1 － 2 |
| 6720 | 6 | 1 | 1 － 2 |
| 6720 | 6 | 1 | 1 2 |
| 6720 | 6 | 1 | 1 |
| 6720 | 3 | 1 | 1 |
| 6720 | 6 | 1 | 1 － 1 |
| 6720 | 6 | 1 | 1 |
| 6805 | 6 | 2 | $2 \square$ |
| 6805 | 6 | 2 | $2 \square$ |
| 6805 | 3 | 2 | 2 |
| 6806 | 6 | 2 | $2 \square$ |
| 6806 | 1 | 1 | 1 |
| 6806 | 3 | 2 | 2 |
| 6809 | 1 | 1 | 1 |
| 6810 | 6 | 2 | $2 \square$ |
| 6810 | 3 | 2 | 2 |
| 6810 | 6 | 2 | 2－2 |
| 6810 | 3 | 2 | 2 |
| 6810 | 1 | 2 | 2 |
| 6811 | 3 | 3 | $3 \quad 2$ |
| 6811 | 6 | 2 | $2 \square$ |
| 6811 | 6 | 2 | $2 \square$ |
| 6811 | 6 | 2 | $2 \square$ |
| 6811 | 6 | 2 | $2 \square 2$ |
| 6811 | 6 | 2 | $2 \quad 2$ |
| 6811 | 6 | 2 | $2 \square$ |
| 6812 | 1 | 1 | 1 |
| 6812 | 6 | 2 | $2 \square$ |
| 6812 | 3 | 10 | 仡 |
| 6812 | 3 | － 1 | 1 |
| 6813 | 6 | 2 | $2 \square$ |
| 6813 | 3 | － 1 | 1 |








| 7104 | 3 | 1 | 1 |
| :---: | :---: | :---: | :---: |
| 7104 | 6 | 1 | $1 \quad 2$ |
| 7104 | 6 | 1 | 1 - 2 |
| 7104 | 6 | 1 | $1 \quad 2$ |
| 7104 | 1 | 1 | 1 |
| 7104 | 3 | 1 | 1 |
| 7105 | 6 | 1 | $1 \quad 2$ |
| 7105 | 6 | 1 | $1 \quad 2$ |
| 7105 | 3 | 1 | 1 |
| 7105 | 3 | 1 | 1 |
| 7105 | 6 | 1 | 1 - 2 |
| 7106 | 6 | 1 | $1 \quad 2$ |
| 7106 | 6 | 2 | 2 |
| 7106 | 6 | 1 | 1 - 3 |
| 7106 | 6 | 1 | 1 |
| 7106 | 6 | 1 | 1 - 2 |
| 7106 | 3 | 2 | 2 |
| 7106 | 3 | 2 | $2 \square 1$ |
| 7106 | 1 | 1 | 1 |
| 7107 | 3 | 1 | 1 |
| 7107 | 3 | 1 | 1 - 1 |
| 7107 | 3 | 1 | 1 |
| 7107 | 1 | 16 | 6 |
| 7108 | 6 | 1 | 1 - 1 |
| 7108 | 1 | 1 | 1 - 1 |
| 7108 | 6 | 2 | $2 \quad 2$ |
| 7108 | 6 | 1 | $1 \quad 2$ |
| 7108 | 1 | 12 | 2 |
| 7108 | 6 | - 2 | 2 |
| 7109 | 6 | 1 | 1 |
| 7109 | 1 | 3 | 3 |
| 7110 | 6 | 1 | $1 \quad 2$ |
| 7111 | 6 | 2 | $2 \quad 1$ |
| 7111 | 6 | - 1 | $1 \square 2$ |
































| 8439 | 6 | 1 | 1 |
| ---: | ---: | ---: | ---: | ---: |
| 8439 | 3 | 1 | 1 |


| LR_PURPOSE | LR_HELOC_FLA | LR_LOAN_AMOUNT | LR_APPL_DAT | LR_NOTE_RAT\| | LR_LOAN_TERM | LR_POINTS_FEES_TOTA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 2000000 | 20210504 | 2.55 | 61 | NA |
| 31 | 2 | 194200 | NA | 2.5 | 180 | NA |
| 31 | 2 | 223000 | 20210204 | 2.99 | 360 | NA |
| 31 | 2 | 227000 | 20201104 | 2.99 | 360 | NA |
| 1 | 1 | 150000 | 20210202 | NA | 360 | NA |
| 31 | 2 | 239014.93 | NA | 3.375 | 360 | NA |
| 1 | 2 | 258020 | NA | 3.25 | 360 | NA |
| 2 | 1 | 15000 | 20210407 | NA | 360 | NA |
| 31 | 2 | 124000 | 20210201 | 2.99 | 360 | NA |
| 1 | 2 | 260814.36 | NA | 3.75 | 360 | NA |
| 1 | 2 | 350075 | 20211119 | 2.99 | 360 | NA |
| 1 | 2 | 142373 | NA | 3.5 | 360 | NA |
| 1 | 2 | 240560 | NA | 3.75 | 360 | NA |
| 2 | 1 | 50000 | 20210417 | NA | 360 | NA |
| 1 | 2 | 173119.59 | NA | 3.875 | 360 | NA |
| 1 | 2 | 105571.13 | NA | 3.75 | 360 | NA |
| 1 | 2 | 202627.5 | NA | 2.75 | 360 | NA |
| 1 | 2 | 386141 | NA | 2.75 | 360 | NA |
| 1 | 2 | 169750 | NA | 3.875 | 360 | NA |
| 1 | 2 | 129010 | NA | 3.75 | 360 | NA |
| 1 | 2 | 117475.34 | NA | 3.375 | 360 | NA |
| 31 | 2 | 185000 | 20210228 | NA | 20 | NA |
| 1 | 2 | 135595.47 | NA | 3.75 | 360 | NA |
| 31 | 2 | 94400 | 20210805 | NA | 360 | NA |
| 1 | 2 | 249850 | 20210222 | 3.5 | 360 | NA |


| 1 | 2 | 208550 | NA | 3.75 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 225400 | NA | 3.875 | 360 | NA |
| 1 | 2 | 169100 | NA | 3.625 | 360 | NA |
| 1 | 1 | 200000 | 20210701 | NA | 360 | NA |
| 1 | 2 | 259731 | NA | 3.125 | 360 | NA |
| 31 | 2 | 300000 | NA | 3 | 360 | NA |
| 1 | 2 | 313500 | NA | 3.125 | 360 | NA |
| 1 | 2 | 127655.86 | NA | 3.625 | 360 | NA |
| 1 | 2 | 240100 | NA | 3.25 | 360 | NA |
| 1 | 2 | 168708.4 | NA | 3.375 | 360 | NA |
| 31 | 2 | 93000 | 20210210 | NA | 240 | NA |
| 31 | 2 | 657000 | NA | 3.5 | 360 | NA |
| 31 | 2 | 688000 | NA | 3.5 | 360 | NA |
| 1 | 2 | 141300 | NA | 3.75 | 360 | NA |
| 31 | 2 | 82000 | 20210201 | NA | 180 | NA |
| 31 | 2 | 146814 | 20210209 | 2.99 | 360 | NA |
| 1 | 2 | 145000 | 20210810 | 2.125 | 120 | NA |
| 1 | 2 | 112341.12 | NA | 3.625 | 360 | NA |
| 1 | 2 | 191090 | NA | 3.875 | 360 | NA |
| 1 | 2 | 216000 | NA | 2.625 | 360 | NA |
| 1 | 2 | 93938.66 | NA | 3.375 | 360 | NA |
| 31 | 2 | 325000 | 20210125 | 3.625 | 360 | NA |
| 31 | 2 | 178500 | NA | 2.75 | 180 | NA |
| 1 | 2 | 344000 | NA | 3.125 | 360 | NA |
| 31 | 2 | 409000 | NA | 3.125 | 360 | NA |
| 1 | 2 | 203906.94 | NA | 3.125 | 360 | NA |
| 1 | 2 | 84000 | 20210629 | 2.99 | 240 | NA |
| 1 | 2 | 155200 | NA | 3.25 | 360 | NA |
| 31 | 2 | 475000 | 20210308 | 3.26 | 61 | NA |
| 31 | 2 | 417800 | 20201021 | 2.5 | 180 | NA |
| 31 | 2 | 470000 | 20201122 | 2.875 | 360 | NA |
| 31 | 2 | 156918.31 | NA | 4.25 | 360 | NA |
| 31 | 2 | 227000 | NA | 3.125 | 240 | NA |


| 31 | 2 | 475000 | NA | 3.25 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 161020 | NA | 3.625 | 360 | NA |
| 2 | 2 | 20000 | 20210924 | 5.45 | 120 | NA |
| 1 | 2 | 299250 | NA | 3.625 | 360 | NA |
| 1 | 2 | 98000 | 20210512 | NA | 360 | NA |
| 1 | 2 | 100700 | NA | 3.375 | 360 | NA |
| 1 | 2 | 213383.2 | NA | 3 | 360 | NA |
| 31 | 2 | 329400 | NA | 3.625 | 360 | NA |
| 1 | 2 | 72250 | 20210322 | 3.375 | 360 | NA |
| 32 | 2 | 59000 | 20210205 | NA | 360 | NA |
| 1 | 2 | 443625 | NA | 2.75 | 360 | NA |
| 2 | 1 | 80364 | 20210425 | 3.65 | 360 | NA |
| 31 | 2 | 877000 | 20210520 | 2.875 | 180 | NA |
| 32 | 2 | 457500 | NA | 3.125 | 360 | NA |
| 31 | 2 | 164500 | 20210729 | 3.04 | 240 | NA |
| 2 | 1 | 50000 | 20210830 | 4.35 | 360 | NA |
| 31 | 2 | 405000 | 20201114 | 2.875 | 360 | NA |
| 31 | 2 | 200000 | 20210805 | 2.59 | 120 | NA |
| 1 | 2 | 85000 | 20210312 | NA | 360 | NA |
| 31 | 2 | 95000 | 20210727 | NA | 180 | NA |
| 31 | 2 | 125654 | 20210907 | NA | 180 | NA |
| 1 | 2 | 502500 | NA | 2.75 | 360 | NA |
| 31 | 2 | 277000 | NA | 2.875 | 240 | NA |
| 31 | 2 | 448000 | 20201115 | 2.875 | 360 | NA |
| 31 | 2 | 124000 | 20210913 | 3.14 | 180 | NA |
| 31 | 2 | 163500 | 20201204 | NA | 360 | NA |
| 31 | 2 | 129500 | 20210716 | NA | 180 | NA |
| 31 | 2 | 218500 | 20210122 | NA | 180 | NA |
| 1 | 2 | 116708.96 | NA | 3.75 | 360 | NA |
| 32 | 2 | 548000 | NA | 2.75 | 360 | NA |
| 32 | 2 | 100000 | 20210409 | 2.5 | 120 | NA |
| 1 | 2 | 161256.76 | NA | 3.75 | 360 | NA |
| 1 | 2 | 280000 | 20210519 | NA | 360 | NA |


| 2 | 1 | 35000 | 20210128 | 4.7 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 263690 | 20210812 | 2.25 | 180 | NA |
| 31 | 2 | 200400 | 20201228 | 2.99 | 360 | NA |
| 31 | 2 | 165000 | 20211014 | 3.5 | 240 | NA |
| 1 | 2 | 429250 | NA | 3.625 | 360 | NA |
| 32 | 2 | 71000 | 20201118 | 2.75 | 180 | NA |
| 1 | 2 | 143000 | NA | 3.125 | 360 | NA |
| 2 | 1 | 20000 | 20210803 | NA | 360 | NA |
| 31 | 2 | 85000 | 20210312 | NA | 360 | NA |
| 1 | 2 | 466396 | 20210719 | 2.875 | 360 | NA |
| 31 | 2 | 116000 | 20210511 | NA | 180 | NA |
| 1 | 2 | 137547.07 | NA | 3.875 | 360 | NA |
| 32 | 2 | 272500 | 20210310 | 3.375 | 240 | NA |
| 31 | 1 | 75000 | 20210429 | NA | 360 | NA |
| 31 | 2 | 307800 | NA | 3 | 360 | NA |
| 2 | 1 | 100000 | 20210610 | NA | 360 | NA |
| 1 | 1 | 100000 | 20210605 | NA | 360 | NA |
| 1 | 2 | 463500 | NA | 2.75 | 360 | NA |
| 31 | 1 | 190000 | 20210510 | NA | 360 | NA |
| 31 | 2 | 450725.21 | NA | 3 | 360 | NA |
| 31 | 2 | 120000 | 20210804 | NA | 240 | NA |
| 2 | 1 | 350000 | 20210907 | NA | 360 | NA |
| 31 | 2 | 83400 | 20210111 | 2.5 | 180 | NA |
| 31 | 2 | 232500 | 20210618 | 3.09 | 180 | NA |
| 32 | 2 | 528407.57 | NA | 3.125 | 240 | NA |
| 31 | 2 | 250400 | 20210113 | 2.5 | 180 | NA |
| 2 | 1 | 50000 | 20210116 | NA | 360 | NA |
| 2 | 1 | 100000 | 20211115 | 5.15 | 360 | NA |
| 1 | 2 | 267000 | 20210301 | 3.625 | 360 | NA |
| 31 | 2 | 133000 | 20210312 | 2.84 | 120 | NA |
| 2 | 1 | 343000 | 20210610 | NA | 360 | NA |
| 32 | 2 | 304000 | 20210111 | 3.125 | 360 | NA |
| 31 | 2 | 364000 | 20201221 | NA | 360 | NA |


| 2 | 2 | 250000 | 20210909 | NA | 240 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 493487 | NA | 2.625 | 360 | NA |
| 1 | 2 | 370500 | NA | 2.875 | 360 | NA |
| 31 | 2 | 463658 | NA | 2.875 | 360 | NA |
| 1 | 2 | 147046.1 | NA | 3.375 | 360 | NA |
| 1 | 2 | 69349.84 | 20201203 | 5.02 | 36 | NA |
| 31 | 2 | 358000 | 20201203 | 2.5 | 180 | NA |
| 31 | 2 | 257500 | NA | 2.875 | 180 | NA |
| 31 | 2 | 442000 | 20201221 | NA | 360 | NA |
| 1 | 2 | 183330 | NA | 3.625 | 360 | NA |
| 1 | 2 | 742571 | NA | 2.5 | 360 | NA |
| 31 | 2 | 100000 | 20210119 | 2.5 | 180 | NA |
| 2 | 1 | 40000 | 20210510 | NA | 360 | NA |
| 2 | 1 | 100000 | 20210126 | NA | 360 | NA |
| 31 | 1 | 172000 | 20210125 | 3.95 | 360 | NA |
| 1 | 2 | 156750 | NA | 3.75 | 360 | NA |
| 1 | 2 | 184300 | NA | 3.625 | 360 | NA |
| 1 | 2 | 208678.2 | NA | 3.625 | 360 | NA |
| 1 | 2 | 142285.37 | NA | 3.75 | 360 | NA |
| 1 | 2 | 625000 | 20210504 | NA | 60 | NA |
| 31 | 2 | 122500 | 20201023 | 2.99 | 360 | NA |
| 31 | 2 | 127000 | 20210713 | NA | 180 | NA |
| 31 | 2 | 88550 | 20201216 | 2.99 | 360 | NA |
| 31 | 2 | 146020 | 20210826 | 2.99 | 360 | NA |
| 1 | 2 | 103014 | NA | 3.625 | 360 | NA |
| 1 | 2 | 110200 | NA | 3.75 | 360 | NA |
| 31 | 2 | 164500 | 20201116 | 2.5 | 180 | NA |
| 31 | 2 | 179000 | 20210128 | 3.125 | 240 | NA |
| 1 | 2 | 188858.77 | NA | 3.625 | 360 | NA |
| 1 | 2 | 230000 | 20210421 | 2.99 | 360 | NA |
| 1 | 2 | 139789.14 | NA | 3.75 | 360 | NA |
| 1 | 2 | 122814.74 | NA | 3.75 | 360 | NA |
| 31 | 2 | 105885 | 20210210 | 3.29 | 240 | NA |


| 1 | 2 | 140000 | 20210125 | NA | 60 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 115900 | 20210108 | 2.99 | 360 | NA |
| 1 | 2 | 113500 | NA | 3.75 | 360 | NA |
| 31 | 2 | 113100 | 20200909 | 2.625 | 180 | NA |
| 32 | 2 | 187200 | 20210621 | 3.5 | 240 | NA |
| 1 | 2 | 548000 | NA | 2.75 | 360 | NA |
| 1 | 2 | 276165 | NA | 3.75 | 360 | NA |
| 31 | 2 | 163782 | 20210715 | 2.875 | 360 | NA |
| 2 | 1 | 130000 | 20210626 | NA | 360 | NA |
| 31 | 2 | 284000 | NA | 3.125 | 360 | NA |
| 32 | 2 | 270000 | 20211119 | NA | 360 | NA |
| 2 | 2 | 35000 | 20210414 | NA | 120 | NA |
| 31 | 2 | 148500 | 20200710 | 2.625 | 180 | NA |
| 1 | 2 | 273000 | 20210513 | 2.75 | 240 | NA |
| 1 | 2 | 663200 | NA | 3.5 | 360 | NA |
| 1 | 2 | 440100 | NA | 3.125 | 360 | NA |
| 31 | 2 | 474900 | 20210510 | 2.99 | 360 | NA |
| 2 | 1 | 100000 | 20210309 | 3.95 | 360 | NA |
| 31 | 2 | 364500 | NA | 2.625 | 240 | NA |
| 1 | 2 | 125100 | NA | 3.75 | 360 | NA |
| 1 | 2 | 184016.24 | NA | 3.625 | 360 | NA |
| 31 | 2 | 234000 | NA | 2.75 | 240 | NA |
| 31 | 2 | 224000 | 20210930 | 3.25 | 360 | NA |
| 2 | 1 | 143750 | 20210104 | 3.95 | 360 | NA |
| 1 | 2 | 448000 | NA | 2.75 | 360 | NA |
| 1 | 2 | 898400 | 20210304 | 2.75 | 360 | NA |
| 1 | 2 | 158000 | NA | 3.125 | 360 | NA |
| 31 | 2 | 1020000 | NA | 2.75 | 360 | NA |
| 1 | 2 | 590750 | NA | 3.125 | 360 | NA |
| 31 | 2 | 238685 | 20210909 | 3.04 | 240 | NA |
| 1 | 2 | 179392.13 | NA | 3.75 | 360 | NA |
| 2 | 2 | 200000 | 20210220 | NA | 20 | NA |
| 2 | 1 | 250000 | 20211021 | NA | 360 | NA |


| 1 | 2 | 552500 | 20211012 | NA | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 200000 | 20211006 | 3.375 | 180 | NA |
| 31 | 2 | 295000 | NA | 2.875 | 240 | NA |
| 2 | 1 | 478000 | 20200928 | 3.45 | 360 | NA |
| 32 | 2 | 185000 | 20210810 | NA | 360 | NA |
| 31 | 2 | 450600 | 20210721 | NA | 360 | NA |
| 2 | 1 | 140000 | 20210602 | NA | 360 | NA |
| 1 | 2 | 187500 | 20211209 | 2.5 | 360 | NA |
| 1 | 2 | 455000 | NA | 3.125 | 360 | NA |
| 31 | 2 | 223750 | 20210204 | 2.875 | 360 | NA |
| 31 | 2 | 201200 | 20201019 | 2.875 | 240 | NA |
| 31 | 2 | 254556 | 20210727 | NA | 240 | NA |
| 2 | 1 | 200000 | 20210921 | NA | 360 | NA |
| 1 | 2 | 351882.03 | NA | 2.875 | 360 | NA |
| 1 | 2 | 334400 | NA | 2.99 | 240 | NA |
| 1 | 2 | 198000 | 20210308 | 3.125 | 360 | NA |
| 31 | 2 | 135700 | 20210811 | 2.375 | 120 | NA |
| 1 | 2 | 261000 | 20210512 | 2.875 | 360 | NA |
| 1 | 2 | 122400 | 20210923 | 2.25 | 180 | NA |
| 31 | 2 | 83000 | 20211027 | NA | 180 | NA |
| 1 | 2 | 163930 | NA | 3.625 | 360 | NA |
| 31 | 1 | 30000 | 20210828 | NA | 360 | NA |
| 1 | 2 | 135390.29 | NA | 3.75 | 360 | NA |
| 32 | 2 | 110000 | 20210611 | 3.25 | 360 | NA |
| 31 | 2 | 102000 | 20200917 | 2.625 | 120 | NA |
| 31 | 2 | 175000 | 20211004 | 2.25 | 180 | NA |
| 1 | 2 | 97125 | 20210604 | 3.25 | 360 | NA |
| 1 | 2 | 133950 | NA | 3.375 | 360 | NA |
| 2 | 1 | 93000 | 20211105 | 3.65 | 360 | NA |
| 31 | 1 | 128993 | 20210928 | NA | 360 | NA |
| 1 | 2 | 169750 | 20210427 | 3.75 | 360 | NA |
| 2 | 2 | 15000 | 20210728 | 4.8 | 120 | NA |
| 31 | 2 | 556000 | 20210603 | 3.125 | 360 | NA |


| 31 | 2 | 199400 | 20211004 | NA | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 1 | 50000 | 20210503 | 3.65 | 360 | NA |
| 31 | 2 | 246500 | 20210503 | 2.625 | 180 | NA |
| 31 | 2 | 501404.16 | NA | 2.625 | 240 | NA |
| 31 | 2 | 508000 | NA | 2.875 | 240 | NA |
| 31 | 2 | 222000 | 20210814 | 2 | 120 | NA |
| 31 | 1 | 145000 | 20210504 | NA | 360 | NA |
| 31 | 2 | 889750 | 20201001 | 3.375 | 360 | NA |
| 1 | 2 | 698824.29 | NA | 3.125 | 360 | NA |
| 1 | 2 | 300001 | 20210402 | 2.875 | 360 | NA |
| 31 | 2 | 235500 | 20210106 | 2.375 | 180 | NA |
| 31 | 2 | 100000 | 20201202 | 2.625 | 180 | NA |
| 1 | 2 | 452000 | NA | 2.99 | 360 | NA |
| 1 | 2 | 386259.36 | NA | 3.625 | 360 | NA |
| 31 | 2 | 291000 | NA | 2.875 | 240 | NA |
| 31 | 2 | 156484 | 20210130 | NA | 20 | NA |
| 31 | 2 | 740500 | 20210914 | 2.625 | 360 | NA |
| 31 | 2 | 680000 | 20210812 | NA | 360 | NA |
| 1 | 2 | 234000 | 20211013 | 3.25 | 360 | NA |
| 1 | 2 | 256000 | 20210511 | 2.875 | 360 | NA |
| 31 | 2 | 754000 | 20210714 | 2.875 | 360 | NA |
| 2 | 1 | 24894 | 20201216 | 5.45 | 360 | NA |
| 1 | 2 | 504000 | NA | 2.625 | 360 | NA |
| 1 | 2 | 355775 | 20211101 | 3 | 360 | NA |
| 31 | 2 | 486000 | 20210128 | NA | 300 | NA |
| 31 | 2 | 454000 | NA | 2.75 | 360 | NA |
| 1 | 2 | 526875 | NA | 2.75 | 360 | NA |
| 31 | 2 | 517000 | 20210107 | 2.875 | 360 | NA |
| 31 | 2 | 487500 | 20210330 | 3.125 | 300 | NA |
| 1 | 2 | 248625 | NA | 2.875 | 360 | NA |
| 31 | 1 | 60000 | 20210930 | NA | 360 | NA |
| 1 | 2 | 256500 | NA | 3.125 | 360 | NA |
| 1 | 2 | 170535.07 | NA | 2.75 | 360 | NA |


| 1 | 2 | 174600 | NA | 3.25 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 201695.76 | NA | 3.75 | 360 | NA |
| 31 | 2 | 86000 | 20210915 | 2.84 | 180 | NA |
| 1 | 2 | 203393.19 | NA | 3.75 | 360 | NA |
| 31 | 2 | 309468.03 | NA | 3 | 360 | NA |
| 1 | 2 | 115631.71 | NA | 3.375 | 360 | NA |
| 1 | 2 | 86450 | NA | 3.375 | 360 | NA |
| 2 | 2 | 100000 | 20210901 | NA | 72 | NA |
| 1 | 2 | 130950 | NA | 3.125 | 360 | NA |
| 31 | 2 | 151000 | 20210817 | 2.25 | 180 | NA |
| 1 | 2 | 115900 | NA | 3.875 | 360 | NA |
| 1 | 2 | 184800 | NA | 3.75 | 360 | NA |
| 1 | 2 | 140125 | NA | 3.125 | 360 | NA |
| 1 | 2 | 286705.57 | NA | 2.75 | 180 | NA |
| 31 | 2 | 324357 | NA | 2.75 | 360 | NA |
| 1 | 2 | 154961.04 | NA | 3.625 | 360 | NA |
| 1 | 2 | 149200 | NA | 3.625 | 360 | NA |
| 1 | 2 | 103200 | NA | 3.625 | 360 | NA |
| 31 | 2 | 166000 | 20200928 | 2.75 | 180 | NA |
| 2 | 1 | 60412 | 20210803 | 3.95 | 360 | NA |
| 32 | 2 | 253000 | NA | 2.625 | 360 | NA |
| 32 | 2 | 185000 | 20210609 | 3.25 | 360 | NA |
| 31 | 2 | 90000 | 20211127 | NA | 120 | NA |
| 1 | 2 | 1250000 | NA | 2.75 | 360 | NA |
| 1 | 2 | 121250 | NA | 3.625 | 360 | NA |
| 31 | 2 | 678700 | NA | 2.99 | 360 | NA |
| 31 | 2 | 82000 | 20210121 | 2.99 | 360 | NA |
| 1 | 2 | 120000 | 20210520 | 3 | 360 | NA |
| 31 | 2 | 36742 | 20210719 | NA | 240 | NA |
| 31 | 2 | 90000 | 20210413 | 2.375 | 120 | NA |
| 1 | 2 | 345100 | NA | 3.125 | 360 | NA |
| 31 | 2 | 281831.1 | NA | 3.25 | 360 | NA |
| 1 | 2 | 201275 | NA | 3.75 | 360 | NA |


| 31 | 2 | 137000 | NA | 2.875 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 233750 | 20210111 | 2.75 | 360 | NA |
| 1 | 2 | 262499 | 20210122 | 2.625 | 360 | NA |
| 1 | 1 | 55000 | 20211028 | NA | 360 | NA |
| 1 | 2 | 206830.03 | NA | 3.125 | 360 | NA |
| 31 | 2 | 166175 | 20210629 | 2.5 | 120 | NA |
| 31 | 2 | 296000 | 20210521 | 3.125 | 360 | NA |
| 1 | 2 | 439333 | NA | 3 | 360 | NA |
| 1 | 2 | 292958.1 | NA | 3.75 | 360 | NA |
| 1 | 2 | 265500 | NA | 2.99 | 360 | NA |
| 31 | 2 | 445000 | NA | 2.75 | 360 | NA |
| 31 | 2 | 508000 | NA | 2.875 | 360 | NA |
| 32 | 2 | 160000 | NA | 3.125 | 360 | NA |
| 1 | 2 | 798000 | 20210611 | NA | 60 | NA |
| 31 | 2 | 370500 | 20210105 | 2.99 | 360 | NA |
| 1 | 2 | 737450 | 20210218 | 2.875 | 360 | NA |
| 31 | 2 | 111000 | 20201210 | 2.5 | 180 | NA |
| 32 | 2 | 262077.78 | NA | 3.375 | 360 | NA |
| 31 | 2 | 250405 | NA | 2.75 | 240 | NA |
| 1 | 2 | 200000 | 20210929 | 2.99 | 360 | NA |
| 31 | 2 | 159000 | 20211018 | NA | 240 | NA |
| 31 | 2 | 535593 | NA | 2.75 | 360 | NA |
| 1 | 2 | 276235.26 | NA | 3.125 | 360 | NA |
| 1 | 2 | 229520.24 | NA | 3.375 | 360 | NA |
| 31 | 2 | 405000 | NA | 2.75 | 360 | NA |
| 31 | 2 | 111000 | 20210802 | 2.79 | 180 | NA |
| 1 | 2 | 262776.87 | NA | 3.625 | 360 | NA |
| 31 | 2 | 406254.51 | NA | 3.125 | 360 | NA |
| 1 | 2 | 125571.31 | NA | 3.75 | 360 | NA |
| 1 | 2 | 328500 | NA | 3.375 | 360 | NA |
| 1 | 2 | 304788 | NA | 2.75 | 360 | NA |
| 31 | 2 | 192000 | 20210527 | 3.375 | 360 | NA |
| 1 | 2 | 183690.96 | NA | 3.125 | 360 | NA |


| 1 | 2 | 355300 | NA | 3.125 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | 1 | 212000 | 20210304 | 3.95 | 360 | NA |
| 2 | 1 | 100000 | 20211115 | 3.65 | 360 | NA |
| 1 | 2 | 547268.23 | NA | 2.75 | 360 | NA |
| 31 | 2 | 490400 | NA | 2.625 | 240 | NA |
| 2 | 1 | 80000 | 20210527 | NA | 360 | NA |
| 31 | 2 | 418249.68 | NA | 2.75 | 360 | NA |
| 1 | 2 | 1012000 | 20210713 | 2.625 | 360 | NA |
| 32 | 2 | 471500 | 20210205 | NA | 240 | NA |
| 1 | 2 | 505750 | 20210526 | 2.875 | 360 | NA |
| 1 | 2 | 234650 | NA | 3.75 | 360 | NA |
| 31 | 2 | 487000 | 20210615 | 2.25 | 180 | NA |
| 1 | 2 | 572000 | 20210510 | 2.625 | 360 | NA |
| 31 | 2 | 548250 | NA | 3.25 | 360 | NA |
| 1 | 2 | 190000 | 20210308 | 2.99 | 360 | NA |
| 1 | 2 | 589050 | NA | 3.125 | 360 | NA |
| 2 | 1 | 100000 | 20211201 | NA | 360 | NA |
| 1 | 2 | 203700 | 20210323 | 3.125 | 360 | NA |
| 31 | 2 | 120000 | 20210505 | 2.99 | 360 | NA |
| 1 | 2 | 211945 | NA | 3.125 | 360 | NA |
| 1 | 2 | 724000 | 20210505 | 2.875 | 360 | NA |
| 1 | 2 | 220167.89 | NA | 3.75 | 360 | NA |
| 1 | 2 | 576000 | 20210902 | 2.99 | 360 | NA |
| 1 | 2 | 509466.48 | NA | 2.625 | 360 | NA |
| 1 | 2 | 147058.3 | NA | 3.75 | 360 | NA |
| 31 | 2 | 165000 | 20210312 | 3.09 | 180 | NA |
| 1 | 2 | 171000 | NA | 3.25 | 360 | NA |
| 1 | 2 | 209000 | NA | 3.625 | 360 | NA |
| 1 | 1 | 500000 | 20210518 | NA | 360 | NA |
| 1 | 2 | 134100 | NA | 3.75 | 360 | NA |
| 2 | 1 | 20000 | 20210809 | NA | 360 | NA |
| 2 | 1 | 70000 | 20210929 | NA | 360 | NA |
| 31 | 2 | 323000 | 20210201 | 2.375 | 180 | NA |


| 31 | 2 | 178500 | 20210907 | 2.79 | 180 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 156000 | 20210215 | 2.875 | 360 | NA |
| 31 | 2 | 163000 | 20210202 | 3.625 | 360 | NA |
| 1 | 2 | 218479.94 | NA | 3.625 | 360 | NA |
| 31 | 2 | 115814 | 20210507 | 2.94 | 240 | NA |
| 31 | 2 | 201500 | 20210515 | 2.99 | 180 | NA |
| 31 | 2 | 431833.63 | NA | 2.875 | 360 | NA |
| 2 | 1 | 250000 | 20210816 | 3.95 | 360 | NA |
| 1 | 2 | 188865.11 | NA | 3.75 | 360 | NA |
| 31 | 2 | 163500 | 20210114 | NA | 180 | NA |
| 31 | 2 | 592300 | 20210222 | 2.25 | 360 | NA |
| 1 | 2 | 227050 | NA | 2.875 | 360 | NA |
| 32 | 2 | 230000 | 20201216 | 2.625 | 180 | NA |
| 1 | 2 | 1000000 | 20210322 | 3.25 | 360 | NA |
| 31 | 2 | 110000 | 20210108 | NA | 240 | NA |
| 1 | 2 | 548250 | NA | 3 | 360 | NA |
| 31 | 2 | 572037.6 | NA | 3.125 | 360 | NA |
| 2 | 1 | 93100 | 20210412 | 3.65 | 360 | NA |
| 31 | 2 | 524400 | 20210216 | 2.99 | 360 | NA |
| 31 | 2 | 660000 | NA | 2.875 | 360 | NA |
| 1 | 2 | 544000 | NA | 3.125 | 360 | NA |
| 1 | 2 | 544800 | 20210306 | 2.875 | 360 | NA |
| 31 | 2 | 339000 | NA | 2.75 | 360 | NA |
| 1 | 2 | 271920 | 20210701 | 2.99 | 360 | NA |
| 2 | 1 | 50000 | 20210927 | 3.65 | 360 | NA |
| 31 | 2 | 221000 | 20210824 | 3.125 | 360 | NA |
| 31 | 2 | 1268000 | 20201217 | NA | 360 | NA |
| 31 | 2 | 923000 | 20210805 | 2.625 | 348 | NA |
| 1 | 2 | 139000 | 20201222 | 2.5 | 360 | NA |
| 31 | 2 | 845000 | 20200424 | 3.375 | 360 | NA |
| 31 | 2 | 357897.86 | NA | 3.125 | 360 | NA |
| 31 | 2 | 156000 | 20200910 | 2.75 | 180 | NA |
| 31 | 2 | 593000 | NA | 3.125 | 360 | NA |


| 1 | 2 | 392889 | NA | 3.125 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 840000 | 20210917 | 2.5 | 360 | NA |
| 1 | 2 | 259862.8 | NA | 3.125 | 360 | NA |
| 1 | 2 | 246934.55 | NA | 3.125 | 360 | NA |
| 31 | 2 | 832500 | NA | 2.875 | 360 | NA |
| 31 | 2 | 336000 | NA | 2.99 | 240 | NA |
| 31 | 2 | 460000 | 20201207 | 2.99 | 360 | NA |
| 1 | 2 | 288000 | NA | 3.625 | 360 | NA |
| 2 | 1 | 100000 | 20210324 | NA | 360 | NA |
| 31 | 2 | 165500 | 20201201 | 2.625 | 180 | NA |
| 32 | 2 | 333993.47 | NA | 3.125 | 240 | NA |
| 31 | 2 | 281000 | 20201012 | 2.625 | 180 | NA |
| 1 | 2 | 262430.09 | NA | 3.75 | 360 | NA |
| 31 | 2 | 560000 | NA | 3.5 | 360 | NA |
| 1 | 1 | 40000 | 20210722 | NA | 360 | NA |
| 31 | 2 | 555000 | NA | 3.5 | 360 | NA |
| 1 | 2 | 472000 | NA | 3.625 | 360 | NA |
| 1 | 2 | 191468 | NA | 2.625 | 360 | NA |
| 31 | 2 | 1393996 | 20210818 | 2.5 | 360 | NA |
| 32 | 2 | 682500 | NA | 3.125 | 360 | NA |
| 1 | 2 | 262200 | NA | 3.625 | 360 | NA |
| 31 | 2 | 350500 | NA | 2.625 | 360 | NA |
| 31 | 2 | 1050000 | 20210119 | 3.125 | 360 | NA |
| 31 | 1 | 325000 | 20210625 | NA | 360 | NA |
| 1 | 2 | 825000 | 20210428 | 2.625 | 360 | NA |
| 2 | 1 | 250000 | 20210413 | NA | 360 | NA |
| 31 | 2 | 546000 | NA | 2.875 | 360 | NA |
| 31 | 2 | 283274.42 | NA | 2.625 | 240 | NA |
| 1 | 2 | 860000 | 20211122 | NA | 84 | NA |
| 2 | 1 | 325000 | 20210721 | NA | 360 | NA |
| 31 | 2 | 180000 | NA | 3 | 360 | NA |
| 31 | 2 | 602450 | 20200811 | 2.99 | 360 | NA |
| 1 | 2 | 570000 | 20210701 | 3 | 360 | NA |


| 31 | 2 | 515000 | NA | 2.75 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 474149.39 | NA | 2.75 | 360 | NA |
| 31 | 2 | 186830.39 | NA | 2.75 | 240 | NA |
| 31 | 2 | 315875 | 20210804 | 2.5 | 240 | NA |
| 32 | 2 | 500000 | NA | 2.625 | 360 | NA |
| 1 | 2 | 548250 | NA | 3.125 | 360 | NA |
| 31 | 2 | 465000 | NA | 3 | 240 | NA |
| 31 | 2 | 180000 | 20210416 | NA | 180 | NA |
| 31 | 2 | 370000 | NA | 2.625 | 240 | NA |
| 31 | 2 | 960000 | 20211028 | 2.625 | 360 | NA |
| 1 | 2 | 494000 | 20210312 | 3.125 | 360 | NA |
| 1 | 2 | 559858.09 | NA | 3.125 | 360 | NA |
| 31 | 2 | 307000 | NA | 3.125 | 360 | NA |
| 31 | 2 | 504000 | NA | 2.75 | 360 | NA |
| 1 | 2 | 428800 | 20210207 | 2.75 | 360 | NA |
| 31 | 2 | 548250 | NA | 2.875 | 360 | NA |
| 32 | 2 | 458750 | NA | 3.125 | 360 | NA |
| 1 | 2 | 417600 | 20210207 | 2.75 | 360 | NA |
| 31 | 2 | 832000 | 20201008 | NA | 360 | NA |
| 2 | 1 | 112500 | 20211122 | 3.65 | 360 | NA |
| 31 | 2 | 347896.88 | NA | 2.75 | 360 | NA |
| 31 | 2 | 602000 | 20210709 | 2.625 | 360 | NA |
| 31 | 2 | 933500 | 20210519 | 2.875 | 360 | NA |
| 31 | 2 | 339615.21 | NA | 2.99 | 360 | NA |
| 31 | 2 | 410300 | 20210105 | NA | 360 | NA |
| 31 | 2 | 490000 | NA | 2.875 | 360 | NA |
| 31 | 2 | 538000 | NA | 2.75 | 360 | NA |
| 2 | 1 | 178000 | 20210623 | 3.95 | 360 | NA |
| 1 | 2 | 595000 | 20210318 | 2.875 | 360 | NA |
| 2 | 1 | 80000 | 20211001 | NA | 360 | NA |
| 1 | 2 | 295953.58 | NA | 3.75 | 360 | NA |
| 31 | 2 | 417235.47 | NA | 2.625 | 360 | NA |
| 1 | 2 | 1296000 | 20210526 | 2.25 | 360 | NA |


| 31 | 2 | 465000 | NA | 2.99 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 167046 | NA | 3.5 | 240 | NA |
| 1 | 2 | 243090.17 | NA | 3.75 | 360 | NA |
| 31 | 2 | 497000 | 20210429 | 3.5 | 360 | NA |
| 31 | 2 | 249000 | 20210608 | NA | 60 | NA |
| 31 | 2 | 655724 | 20210720 | 2.875 | 360 | NA |
| 1 | 2 | 1144480 | 20201104 | 2.625 | 360 | NA |
| 31 | 2 | 702000 | 20210209 | 2.99 | 360 | NA |
| 1 | 2 | 518500 | NA | 2.75 | 360 | NA |
| 31 | 2 | 497000 | 20210217 | 3.25 | 360 | NA |
| 1 | 2 | 719200 | 20210628 | 2.5 | 360 | NA |
| 31 | 2 | 2475000 | 20210111 | NA | 360 | NA |
| 1 | 2 | 529000 | NA | 2.75 | 360 | NA |
| 1 | 2 | 158156.11 | NA | 3.625 | 360 | NA |
| 31 | 2 | 386000 | 20201204 | 2.5 | 180 | NA |
| 1 | 1 | 150001 | 20211029 | NA | 360 | NA |
| 31 | 2 | 330000 | NA | 3.125 | 360 | NA |
| 31 | 2 | 655000 | 20210105 | 3.5 | 360 | NA |
| 31 | 2 | 2525000 | 20210112 | 3 | 360 | NA |
| 32 | 2 | 468000 | NA | 3.125 | 360 | NA |
| 1 | 2 | 320750 | NA | 3 | 360 | NA |
| 31 | 2 | 256000 | NA | 2.625 | 240 | NA |
| 31 | 2 | 495122 | NA | 2.875 | 360 | NA |
| 31 | 1 | 150000 | 20210317 | 3.45 | 360 | NA |
| 31 | 2 | 512000 | 20210317 | 2.625 | 180 | NA |
| 31 | 2 | 690000 | 20210818 | 2.625 | 360 | NA |
| 31 | 2 | 548250 | NA | 2.75 | 360 | NA |
| 1 | 2 | 644000 | 20210507 | 2.75 | 360 | NA |
| 31 | 2 | 967000 | 20211018 | 3.375 | 360 | NA |
| 31 | 2 | 350000 | NA | 2.5 | 360 | NA |
| 31 | 2 | 533000 | 20210804 | 2.125 | 180 | NA |
| 31 | 2 | 494000 | 20210122 | 2.375 | 180 | NA |
| 31 | 2 | 691000 | NA | 3 | 360 | NA |


| 31 | 2 | 773700 | 20210219 | 2.75 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 254600 | NA | 3.125 | 360 | NA |
| 31 | 2 | 495000 | NA | 2.75 | 360 | NA |
| 1 | 2 | 532000 | 20210523 | NA | 360 | NA |
| 1 | 2 | 1172800 | NA | 3.125 | 360 | NA |
| 31 | 2 | 793300 | 20210712 | 2.875 | 360 | NA |
| 31 | 2 | 655000 | 20201205 | 3.375 | 360 | NA |
| 32 | 2 | 1100000 | 20201109 | 3.125 | 360 | NA |
| 1 | 2 | 512138.37 | NA | 3.125 | 360 | NA |
| 1 | 2 | 840000 | 20210304 | 2.375 | 360 | NA |
| 31 | 2 | 935500 | 20210422 | 2.875 | 360 | NA |
| 31 | 2 | 902000 | 20210105 | 2.875 | 360 | NA |
| 1 | 2 | 483750 | NA | 3.125 | 360 | NA |
| 1 | 2 | 495000 | NA | 2.75 | 360 | NA |
| 1 | 2 | 928000 | 20210331 | 2.875 | 360 | NA |
| 31 | 2 | 334000 | 20210518 | 2.375 | 180 | NA |
| 2 | 1 | 100000 | 20210626 | NA | 360 | NA |
| 1 | 2 | 435684.68 | NA | 2.5 | 360 | NA |
| 1 | 2 | 643500 | 20210210 | 2.875 | 360 | NA |
| 31 | 2 | 411000 | NA | 3 | 360 | NA |
| 1 | 2 | 800000 | NA | 2.875 | 360 | NA |
| 31 | 2 | 215911 | NA | 3.125 | 240 | NA |
| 32 | 2 | 937500 | 20210709 | 2.5 | 360 | NA |
| 1 | 2 | 326250 | NA | 2.875 | 360 | NA |
| 31 | 2 | 100700 | 20210628 | 2.5 | 180 | NA |
| 31 | 2 | 621000 | 20210716 | 3 | 360 | NA |
| 31 | 2 | 374500 | 20210929 | 2.375 | 180 | NA |
| 31 | 2 | 540000 | 20210430 | 2.125 | 120 | NA |
| 31 | 2 | 208000 | 20210122 | 2.875 | 360 | NA |
| 31 | 2 | 728000 | 20210901 | 2.375 | 360 | NA |
| 2 | 1 | 239250 | 20210701 | 4.95 | 360 | NA |
| 1 | 2 | 412300 | 20210623 | 2.99 | 360 | NA |
| 1 | 2 | 1000000 | 20210810 | 2.375 | 360 | NA |


| 1 | 2 | 591000 | NA | 3.125 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | 1 | 202000 | 20210309 | 3.95 | 360 | NA |
| 1 | 2 | 660000 | 20210512 | 2.875 | 360 | NA |
| 1 | 2 | 276450 | NA | 3.375 | 360 | NA |
| 1 | 2 | 180000 | 20210603 | 2.875 | 360 | NA |
| 32 | 2 | 510000 | 20201120 | 2.875 | 360 | NA |
| 1 | 2 | 1650000 | 20210114 | 2.625 | 360 | NA |
| 1 | 2 | 172660 | NA | 3.75 | 360 | NA |
| 31 | 2 | 1680000 | 20210126 | 2.625 | 360 | NA |
| 1 | 2 | 1006400 | 20210729 | 2.625 | 360 | NA |
| 31 | 2 | 728000 | 20210514 | NA | 360 | NA |
| 31 | 2 | 728000 | 20210514 | NA | 360 | NA |
| 31 | 2 | 1105000 | 20210721 | 2.25 | 360 | NA |
| 31 | 2 | 1092700 | 20210121 | 2.5 | 360 | NA |
| 31 | 2 | 688000 | NA | 3.375 | 360 | NA |
| 31 | 2 | 472000 | 20201123 | 2.99 | 180 | NA |
| 31 | 2 | 1244000 | 20211025 | 3.25 | 61 | NA |
| 1 | 2 | 1199600 | 20210421 | NA | 360 | NA |
| 31 | 2 | 547267.22 | NA | 2.75 | 360 | NA |
| 1 | 2 | 266000 | 20210316 | 3.25 | 360 | NA |
| 31 | 2 | 1443700 | 20210616 | 2.25 | 360 | NA |
| 31 | 1 | 750000 | 20210319 | 3.45 | 360 | NA |
| 31 | 2 | 179300 | 20210302 | 3.99 | 360 | NA |
| 31 | 1 | 150000 | 20211018 | 4.15 | 360 | NA |
| 1 | 2 | 652500 | 20210708 | 2.875 | 360 | NA |
| 31 | 1 | 200000 | 20210513 | NA | 360 | NA |
| 2 | 2 | 50000 | 20211105 | NA | 61 | NA |
| 1 | 2 | 90000 | 20210719 | NA | 180 | NA |
| 1 | 2 | 548250 | NA | 2.99 | 360 | NA |
| 1 | 2 | 1068000 | 20210519 | NA | 360 | NA |
| 1 | 2 | 548250 | 20210402 | 2.99 | 360 | NA |
| 1 | 2 | 229075 | NA | 3.25 | 360 | NA |
| 2 | 1 | 50000 | 20211101 | NA | 360 | NA |


| 31 | 2 | 522431.32 | NA | 2.625 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | 1 | 250000 | 20210419 | 5.65 | 360 | NA |
| 1 | 2 | 936000 | 20210414 | 2.75 | 360 | NA |
| 2 | 1 | 110000 | 20211116 | 5.15 | 360 | NA |
| 31 | 2 | 655000 | 20210909 | 2.75 | 360 | NA |
| 31 | 2 | 925000 | NA | 2.875 | 360 | NA |
| 31 | 2 | 543700 | NA | 2.99 | 360 | NA |
| 1 | 2 | 548250 | NA | 3.125 | 360 | NA |
| 32 | 2 | 492000 | 20210608 | 3.5 | 360 | NA |
| 31 | 2 | 355900 | 20210313 | 2.625 | 180 | NA |
| 31 | 2 | 164500 | 20210121 | 3.25 | 300 | NA |
| 1 | 2 | 275000 | 20210202 | 2.75 | 360 | NA |
| 1 | 2 | 196650 | NA | 2.875 | 360 | NA |
| 1 | 2 | 230850 | NA | 3.75 | 360 | NA |
| 1 | 2 | 137935.1 | NA | 3.5 | 360 | NA |
| 31 | 2 | 118000 | 20200715 | 3 | 180 | NA |
| 31 | 2 | 130000 | 20210322 | 3.25 | 360 | NA |
| 31 | 2 | 128200 | 20201119 | 2.5 | 180 | NA |
| 1 | 2 | 174319.16 | NA | 3.375 | 360 | NA |
| 2 | 2 | 148660.82 | 20210401 | NA | 240 | NA |
| 31 | 2 | 130000 | 20210707 | 2.5 | 180 | NA |
| 1 | 2 | 175434.43 | NA | 3.75 | 360 | NA |
| 1 | 2 | 140000 | 20210201 | 3.25 | 360 | NA |
| 1 | 2 | 135000 | 20210616 | 3.125 | 360 | NA |
| 1 | 2 | 158954.89 | NA | 3.625 | 360 | NA |
| 1 | 2 | 144000 | NA | 3.25 | 360 | NA |
| 2 | 1 | 50000 | 20210522 | NA | 360 | NA |
| 1 | 2 | 159808.94 | NA | 3.75 | 360 | NA |
| 31 | 2 | 96325 | 20210201 | 3.375 | 360 | NA |
| 1 | 2 | 204326.23 | NA | 3.125 | 360 | NA |
| 31 | 2 | 157454 | 20200923 | 3.25 | 360 | NA |
| 1 | 2 | 178730.4 | NA | 3.75 | 360 | NA |
| 1 | 2 | 128250 | 20211026 | NA | 360 | NA |


| 31 | 2 | 201250 | 20210512 | 2.375 | 180 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 146800 | 20210509 | 2.5 | 180 | NA |
| 1 | 2 | 175500 | 20210713 | 3.5 | 360 | NA |
| 1 | 2 | 116885 | NA | 3.75 | 360 | NA |
| 2 | 2 | 150000 | 20210809 | 3.25 | 360 | NA |
| 1 | 2 | 140438.16 | NA | 3.75 | 360 | NA |
| 1 | 2 | 213303 | NA | 3.625 | 360 | NA |
| 1 | 2 | 159518.84 | NA | 3.625 | 360 | NA |
| 1 | 2 | 384750 | 20210414 | 2.875 | 360 | NA |
| 31 | 2 | 378500 | NA | 2.875 | 360 | NA |
| 2 | 1 | 96198 | 20210120 | 3.95 | 360 | NA |
| 1 | 2 | 474000 | NA | 3 | 360 | NA |
| 32 | 2 | 320000 | NA | 2.875 | 360 | NA |
| 31 | 2 | 324000 | 20201230 | NA | 360 | NA |
| 31 | 2 | 1721200 | 20210625 | 2.375 | 360 | NA |
| 31 | 2 | 252000 | NA | 3.5 | 240 | NA |
| 31 | 2 | 142600 | 20210920 | 2.375 | 180 | NA |
| 1 | 2 | 1927700 | 20210819 | 2.5 | 360 | NA |
| 1 | 2 | 249814.77 | NA | 3.625 | 360 | NA |
| 1 | 2 | 272650 | NA | 3.375 | 360 | NA |
| 31 | 2 | 526397.13 | NA | 3 | 360 | NA |
| 1 | 2 | 130000 | 20210621 | 3.08 | 60 | NA |
| 1 | 2 | 145000 | 20210608 | NA | 60 | NA |
| 31 | 2 | 269948 | 20210119 | 3.25 | 360 | NA |
| 31 | 2 | 698250 | 20201218 | 3.25 | 240 | NA |
| 1 | 2 | 171740.94 | NA | 3.75 | 360 | NA |
| 31 | 2 | 204000 | 20201016 | 2.99 | 360 | NA |
| 1 | 2 | 193500 | NA | 3.625 | 360 | NA |
| 1 | 2 | 182535.32 | NA | 3.625 | 360 | NA |
| 1 | 2 | 181390 | NA | 3.75 | 360 | NA |
| 31 | 2 | 120000 | 20210204 | 2.99 | 360 | NA |
| 1 | 2 | 143763.3 | NA | 3.25 | 360 | NA |
| 1 | 2 | 169750 | NA | 3.75 | 360 | NA |


| 1 | 2 | 216125 | NA | 3.75 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 193500 | 20210517 | 3 | 360 | NA |
| 1 | 2 | 204750 | NA | 2.99 | 360 | NA |
| 31 | 1 | 592000 | 20211101 | 4.15 | 300 | NA |
| 31 | 2 | 151500 | 20210624 | NA | 180 | NA |
| 31 | 2 | 513560 | NA | 2.5 | 360 | NA |
| 31 | 2 | 544783 | NA | 3.125 | 360 | NA |
| 1 | 2 | 558400 | 20211216 | NA | 360 | NA |
| 1 | 2 | 444465 | NA | 2.99 | 360 | NA |
| 1 | 2 | 514000 | 20210210 | 2.75 | 360 | NA |
| 1 | 2 | 378000 | NA | 3.125 | 360 | NA |
| 1 | 2 | 314000 | 20210919 | 2.375 | 360 | NA |
| 31 | 2 | 301000 | 20210614 | 3.125 | 360 | NA |
| 2 | 1 | 250000 | 20210209 | NA | 360 | NA |
| 1 | 2 | 651700 | 20210803 | 2.625 | 360 | NA |
| 1 | 2 | 515950 | NA | 2.875 | 360 | NA |
| 1 | 2 | 1300000 | 20210331 | 2.25 | 360 | NA |
| 1 | 2 | 497250 | 20210504 | 2.875 | 360 | NA |
| 1 | 2 | 1079920 | 20210323 | 2.875 | 360 | NA |
| 31 | 2 | 367000 | 20210127 | NA | 60 | NA |
| 1 | 2 | 238839.73 | NA | 3.75 | 360 | NA |
| 31 | 2 | 616589 | 20210528 | 3.375 | 360 | NA |
| 2 | 1 | 200000 | 20210812 | NA | 360 | NA |
| 1 | 2 | 415150 | 20210212 | 3.125 | 360 | NA |
| 31 | 2 | 418000 | NA | 2.875 | 360 | NA |
| 31 | 2 | 251180 | NA | 2.75 | 240 | NA |
| 1 | 2 | 885600 | 20210504 | 2.75 | 360 | NA |
| 31 | 2 | 312000 | NA | 2.5 | 360 | NA |
| 31 | 2 | 180000 | NA | 2.625 | 360 | NA |
| 1 | 2 | 216750 | 20210308 | NA | 360 | NA |
| 31 | 2 | 185000 | NA | 3.125 | 360 | NA |
| 1 | 2 | 204250 | 20210323 | NA | 360 | NA |
| 1 | 2 | 457900 | NA | 3.25 | 360 | NA |


| 31 | 2 | 433558 | NA | 3 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 999900 | NA | 3.25 | 360 | NA |
| 31 | 2 | 617500 | NA | 3.125 | 360 | NA |
| 1 | 2 | 299485.19 | NA | 3 | 360 | NA |
| 31 | 2 | 464500 | 20210204 | 2.25 | 360 | NA |
| 1 | 2 | 756000 | 20210609 | 2.875 | 360 | NA |
| 31 | 2 | 692000 | NA | 3.5 | 360 | NA |
| 31 | 2 | 593000 | 20210610 | 2.875 | 360 | NA |
| 1 | 2 | 408800 | NA | 3.125 | 360 | NA |
| 31 | 2 | 364386.95 | NA | 3.125 | 360 | NA |
| 1 | 2 | 450750 | 20210525 | 2.625 | 240 | NA |
| 31 | 2 | 699200 | 20201113 | 2.875 | 360 | NA |
| 1 | 2 | 620500 | 20210708 | 2.375 | 360 | NA |
| 1 | 2 | 430000 | NA | 3.125 | 360 | NA |
| 31 | 2 | 322480 | 20211101 | 2.75 | 240 | NA |
| 1 | 2 | 548250 | 20210611 | 1.875 | 120 | NA |
| 1 | 2 | 540000 | 20211007 | 2.5 | 360 | NA |
| 31 | 2 | 222000 | 20211022 | 3.25 | 360 | NA |
| 1 | 2 | 839200 | 20210503 | 3 | 360 | NA |
| 1 | 2 | 809100 | 20210208 | 2.5 | 360 | NA |
| 1 | 2 | 547288.87 | NA | 2.875 | 360 | NA |
| 31 | 2 | 278000 | 20201202 | 3 | 360 | NA |
| 1 | 2 | 548250 | NA | 2.75 | 360 | NA |
| 32 | 2 | 865000 | 20210902 | 2.5 | 360 | NA |
| 1 | 2 | 506250 | NA | 2.75 | 240 | NA |
| 1 | 2 | 414000 | NA | 3.125 | 360 | NA |
| 31 | 2 | 632000 | 20210317 | NA | 360 | NA |
| 31 | 2 | 257000 | NA | 2.75 | 360 | NA |
| 1 | 2 | 265600 | 20210427 | 2.875 | 360 | NA |
| 1 | 2 | 1064000 | 20210622 | 2.875 | 360 | NA |
| 32 | 2 | 800000 | NA | 3.125 | 360 | NA |
| 31 | 2 | 788600 | 20211004 | 2.375 | 360 | NA |
| 31 | 2 | 1295000 | NA | 3 | 360 | NA |


| 31 | 2 | 342000 | 20210120 | 2.375 | 180 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 198733 | NA | 3.375 | 360 | NA |
| 1 | 2 | 489250 | 20210331 | 3.25 | 360 | NA |
| 31 | 2 | 458449 | 20210825 | 2.25 | 180 | NA |
| 1 | 2 | 748000 | 20210201 | 2.125 | 360 | NA |
| 2 | 2 | 1750000 | 20201016 | NA | 360 | NA |
| 1 | 2 | 655450 | 20210226 | 3 | 360 | NA |
| 31 | 2 | 321038.99 | NA | 2.75 | 240 | NA |
| 1 | 2 | 160000 | 20210823 | 2.75 | 360 | NA |
| 32 | 2 | 750000 | 20210128 | 2.625 | 360 | NA |
| 31 | 2 | 239700 | 20210126 | 3.125 | 360 | NA |
| 1 | 2 | 495000 | 20210105 | 2.625 | 360 | NA |
| 31 | 2 | 598800 | 20210609 | 3 | 360 | NA |
| 31 | 2 | 853300 | 20210712 | 2.625 | 360 | NA |
| 31 | 1 | 180000 | 20211105 | NA | 360 | NA |
| 31 | 2 | 425000 | NA | 2.875 | 360 | NA |
| 1 | 1 | 290000 | 20210105 | NA | 360 | NA |
| 31 | 2 | 1437100 | 20211105 | NA | 360 | NA |
| 1 | 2 | 644000 | 20210228 | 3 | 360 | NA |
| 31 | 2 | 162000 | 20201204 | 2.875 | 360 | NA |
| 1 | 2 | 494910 | 20210608 | 2.875 | 360 | NA |
| 1 | 2 | 660000 | 20210702 | 2.75 | 360 | NA |
| 1 | 2 | 416250 | 20210430 | 2.875 | 360 | NA |
| 31 | 2 | 837000 | 20210127 | NA | 60 | NA |
| 31 | 2 | 207000 | 20201014 | 3.375 | 360 | NA |
| 1 | 2 | 285000 | 20210226 | 3 | 360 | NA |
| 1 | 2 | 272350 | 20210414 | 2.875 | 360 | NA |
| 31 | 2 | 343200 | 20210308 | 2.5 | 180 | NA |
| 1 | 2 | 547288.87 | NA | 2.875 | 360 | NA |
| 32 | 2 | 200000 | 20201201 | NA | 360 | NA |
| 31 | 2 | 157000 | 20210115 | 2.625 | 180 | NA |
| 31 | 2 | 320021.18 | NA | 2.99 | 240 | NA |
| 1 | 2 | 82500 | 20210319 | 3.125 | 360 | NA |


| 31 | 2 | 551200 | 20210723 | 2.75 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 746000 | 20210615 | 2.375 | 360 | NA |
| 1 | 2 | 169494.33 | NA | 3.75 | 360 | NA |
| 1 | 2 | 505000 | NA | 3.125 | 360 | NA |
| 1 | 2 | 234862.83 | NA | 3.625 | 360 | NA |
| 1 | 2 | 235730 | NA | 2.875 | 360 | NA |
| 1 | 2 | 360000 | 20210416 | 2.875 | 360 | NA |
| 1 | 2 | 300000 | 20210323 | 3 | 360 | NA |
| 1 | 2 | 400500 | NA | 3.125 | 360 | NA |
| 2 | 1 | 272000 | 20210114 | 3.95 | 360 | NA |
| 1 | 2 | 165000 | 20210509 | 2.75 | 360 | NA |
| 1 | 2 | 371600 | 20210427 | 2.125 | 180 | NA |
| 31 | 2 | 598000 | 20210617 | 2.875 | 360 | NA |
| 31 | 2 | 471000 | 20211015 | 3.625 | 360 | NA |
| 31 | 2 | 405600 | 20210125 | 2.75 | 360 | NA |
| 1 | 2 | 467892.65 | NA | 2.625 | 360 | NA |
| 1 | 2 | 380000 | NA | 3.125 | 360 | NA |
| 31 | 2 | 400001 | 20210105 | 2.25 | 180 | NA |
| 1 | 2 | 243750 | 20210510 | 3.625 | 360 | NA |
| 31 | 2 | 355000 | NA | 2.75 | 360 | NA |
| 1 | 2 | 222300 | 20201016 | 2.625 | 360 | NA |
| 1 | 2 | 103500 | 20201221 | 2.875 | 360 | NA |
| 1 | 2 | 111799.44 | NA | 2.75 | 360 | NA |
| 31 | 2 | 415000 | 20210519 | 2.99 | 360 | NA |
| 2 | 1 | 38000 | 20210418 | 5.3 | 360 | NA |
| 1 | 2 | 192000 | 20211015 | 3.25 | 360 | NA |
| 1 | 2 | 517500 | 20211014 | 2.99 | 360 | NA |
| 1 | 2 | 3760000 | 20210203 | 2.375 | 360 | NA |
| 1 | 2 | 517500 | NA | 2.875 | 360 | NA |
| 31 | 2 | 198500 | 20200708 | NA | 180 | NA |
| 31 | 2 | 723440 | 20210420 | 2.625 | 360 | NA |
| 1 | 2 | 267900 | 20210504 | 2.99 | 360 | NA |
| 1 | 2 | 142000 | 20210805 | 3.125 | 360 | NA |


| 1 | 2 | 247500 | 20211001 | 3.25 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 909000 | 20210902 | 2.75 | 360 | NA |
| 31 | 2 | 437450 | 20210818 | 3.5 | 360 | NA |
| 31 | 2 | 548250 | NA | 3.125 | 360 | NA |
| 1 | 2 | 332000 | NA | 3.25 | 360 | NA |
| 1 | 2 | 297600 | 20210104 | 2.875 | 360 | NA |
| 31 | 2 | 328000 | 20210608 | NA | 300 | NA |
| 1 | 2 | 290250 | 20210305 | 3.99 | 360 | NA |
| 1 | 2 | 391500 | NA | 3.125 | 360 | NA |
| 31 | 2 | 200000 | 20210412 | 3.25 | 300 | NA |
| 31 | 2 | 88000 | 20210119 | 2.99 | 360 | NA |
| 1 | 2 | 1375368 | 20210427 | 2.5 | 360 | NA |
| 1 | 2 | 389200 | NA | 2.625 | 360 | NA |
| 1 | 2 | 432250 | NA | 2.5 | 360 | NA |
| 1 | 2 | 680000 | 20210126 | 2.625 | 360 | NA |
| 1 | 2 | 540000 | 20210804 | 2.875 | 360 | NA |
| 1 | 2 | 800001 | 20201110 | 3 | 360 | NA |
| 1 | 2 | 516000 | NA | 2.625 | 360 | NA |
| 1 | 2 | 500000 | NA | 2.875 | 360 | NA |
| 1 | 2 | 487510 | 20210223 | 2.875 | 360 | NA |
| 31 | 2 | 1113000 | 20201221 | NA | 360 | NA |
| 31 | 2 | 500628 | NA | 2.875 | 360 | NA |
| 1 | 2 | 705500 | 20210308 | 2.625 | 360 | NA |
| 1 | 2 | 1182600 | 20210420 | 2.625 | 360 | NA |
| 1 | 2 | 601600 | 20211008 | 2.5 | 360 | NA |
| 1 | 2 | 455200 | 20210419 | 2.875 | 360 | NA |
| 31 | 2 | 512200 | 20210203 | 2.25 | 180 | NA |
| 31 | 2 | 447200 | 20210503 | 3.125 | 360 | NA |
| 1 | 2 | 259899.22 | NA | 3.625 | 360 | NA |
| 31 | 2 | 1018173.44 | NA | 2.75 | 360 | NA |
| 1 | 2 | 532000 | NA | 2.99 | 360 | NA |
| 31 | 2 | 349784 | NA | 2.875 | 240 | NA |
| 31 | 2 | 400000 | 20210512 | 2.375 | 180 | NA |


| 31 | 2 | 292000 | 20210505 | 2.99 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 1028500 | 20210716 | 2.75 | 360 | NA |
| 31 | 2 | 505000 | NA | 2.75 | 360 | NA |
| 31 | 2 | 357000 | NA | 2.625 | 360 | NA |
| 31 | 1 | 128380 | 20211012 | 5.15 | 360 | NA |
| 2 | 1 | 300000 | 20210922 | NA | 360 | NA |
| 31 | 2 | 1118400 | 20211004 | 2.875 | 360 | NA |
| 1 | 2 | 436000 | 20210405 | 2.875 | 360 | NA |
| 31 | 2 | 1659700 | 20210203 | 3 | 360 | NA |
| 1 | 2 | 243750 | 20211115 | 3.5 | 360 | NA |
| 1 | 2 | 356250 | NA | 2.75 | 240 | NA |
| 1 | 2 | 672000 | 20210610 | 2.75 | 360 | NA |
| 1 | 2 | 272250 | 20210212 | 2.99 | 360 | NA |
| 31 | 2 | 216000 | 20201123 | 2.375 | 180 | NA |
| 31 | 2 | 548250 | 20210217 | 2.375 | 180 | NA |
| 2 | 1 | 394900 | 20210302 | 3.95 | 360 | NA |
| 1 | 2 | 418000 | 20210306 | 2.875 | 360 | NA |
| 31 | 2 | 894300 | 20210806 | 2.5 | 360 | NA |
| 1 | 2 | 645000 | 20210818 | 2 | 360 | NA |
| 31 | 2 | 1057000 | 20210127 | NA | 60 | NA |
| 1 | 2 | 411562 | 20210913 | 3.375 | 360 | NA |
| 1 | 2 | 374750 | NA | 2.25 | 360 | NA |
| 32 | 2 | 580000 | 20210415 | 3 | 360 | NA |
| 1 | 2 | 464750 | 20210614 | 2.75 | 360 | NA |
| 1 | 2 | 1000800 | 20210628 | 2.25 | 360 | NA |
| 31 | 2 | 441000 | NA | 2.375 | 360 | NA |
| 1 | 2 | 354889.95 | NA | 3 | 360 | NA |
| 31 | 2 | 155700 | NA | 2.75 | 240 | NA |
| 31 | 2 | 800000 | 20210616 | 2.75 | 180 | NA |
| 1 | 2 | 1452000 | NA | 3.5 | 360 | NA |
| 1 | 2 | 718200 | 20210901 | 2.875 | 360 | NA |
| 31 | 2 | 346500 | 20200708 | 2.5 | 180 | NA |
| 1 | 2 | 390000 | NA | 2.875 | 360 | NA |


| 1 | 2 | 268000 | 20210602 | 2.99 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 513000 | 20210218 | 2.5 | 360 | NA |
| 1 | 2 | 372000 | NA | 2.75 | 360 | NA |
| 31 | 2 | 244800 | 20210721 | 2.25 | 180 | NA |
| 1 | 2 | 315623 | NA | 3.75 | 360 | NA |
| 1 | 2 | 548250 | NA | 3.125 | 360 | NA |
| 1 | 2 | 427056 | 20210520 | 2.99 | 360 | NA |
| 31 | 2 | 1500000 | 20210310 | 2.5 | 360 | NA |
| 1 | 2 | 476180.05 | NA | 2.99 | 360 | NA |
| 2 | 1 | 150000 | 20210812 | NA | 360 | NA |
| 1 | 2 | 500000 | NA | 2.75 | 360 | NA |
| 31 | 2 | 194000 | 20201216 | 2.5 | 180 | NA |
| 2 | 1 | 53100 | 20210306 | 4.35 | 360 | NA |
| 2 | 2 | 500000 | 20211108 | 2.625 | 360 | NA |
| 1 | 2 | 1200000 | 20210521 | 2.625 | 360 | NA |
| 1 | 2 | 3780000 | 20210712 | 2.375 | 360 | NA |
| 31 | 2 | 1254200 | 20201020 | 2.75 | 360 | NA |
| 31 | 2 | 490000 | 20210622 | 2.5 | 120 | NA |
| 31 | 2 | 510400 | NA | 2.75 | 360 | NA |
| 31 | 2 | 287000 | 20210125 | 2.375 | 180 | NA |
| 1 | 2 | 544500 | 20211111 | 2.5 | 360 | NA |
| 1 | 2 | 862500 | 20211020 | 3.5 | 360 | NA |
| 1 | 2 | 276750 | NA | 3.75 | 360 | NA |
| 1 | 2 | 956000 | 20201216 | 2.375 | 360 | NA |
| 31 | 2 | 2067200 | 20210825 | 2.125 | 360 | NA |
| 31 | 2 | 308000 | 20201224 | 3 | 240 | NA |
| 1 | 2 | 1500000 | 20210413 | 2.625 | 360 | NA |
| 1 | 2 | 445500 | NA | 2.75 | 360 | NA |
| 31 | 2 | 1123000 | 20210721 | 2.25 | 360 | NA |
| 31 | 2 | 1124000 | 20210120 | 2.625 | 360 | NA |
| 1 | 2 | 293600 | NA | 3.125 | 360 | NA |
| 31 | 2 | 1600000 | 20201208 | 3 | 360 | NA |
| 1 | 2 | 1320000 | 20210427 | 2.375 | 360 | NA |


| 2 | 1 | 64000 | 20210420 | 5.15 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 376670 | 20210916 | 2.75 | 360 | NA |
| 2 | 1 | 233037 | 20210228 | 3.95 | 360 | NA |
| 1 | 2 | 1215000 | 20210612 | 3.125 | 360 | NA |
| 1 | 2 | 1960000 | 20210318 | 2.375 | 180 | NA |
| 1 | 2 | 408000 | NA | 3.125 | 360 | NA |
| 1 | 2 | 1628000 | 20210625 | 2.25 | 360 | NA |
| 1 | 2 | 128945.28 | NA | 3.125 | 360 | NA |
| 32 | 2 | 956250 | 20210917 | 2.625 | 360 | NA |
| 1 | 2 | 201675 | NA | 3 | 360 | NA |
| 31 | 2 | 999999 | NA | 2.75 | 360 | NA |
| 31 | 2 | 261000 | 20201214 | 2.875 | 360 | NA |
| 31 | 2 | 182863 | 20210409 | 2.75 | 180 | NA |
| 1 | 2 | 195940 | NA | 2.875 | 360 | NA |
| 31 | 2 | 766000 | 20210210 | NA | 360 | NA |
| 1 | 2 | 196988 | NA | 3.75 | 360 | NA |
| 31 | 2 | 763000 | 20210325 | NA | 360 | NA |
| 1 | 2 | 367341 | NA | 2.75 | 360 | NA |
| 1 | 2 | 713719.62 | NA | 2.75 | 360 | NA |
| 31 | 2 | 750000 | 20210903 | NA | 240 | NA |
| 31 | 2 | 415000 | NA | 2.875 | 360 | NA |
| 1 | 2 | 513000 | NA | 3.125 | 360 | NA |
| 31 | 2 | 715300 | 20201201 | 3.25 | 360 | NA |
| 31 | 2 | 1205000 | 20210226 | 2.75 | 360 | NA |
| 1 | 2 | 492000 | 20210818 | 3.125 | 360 | NA |
| 31 | 2 | 479000 | 20201123 | 2.99 | 360 | NA |
| 31 | 2 | 1000000 | NA | 2.875 | 360 | NA |
| 31 | 2 | 1136000 | 20210826 | 2.5 | 360 | NA |
| 31 | 2 | 939750 | 20210110 | 2.5 | 360 | NA |
| 31 | 2 | 548250 | NA | 2.875 | 360 | NA |
| 1 | 2 | 604000 | 20210726 | 2.75 | 360 | NA |
| 1 | 2 | 560800 | 20210223 | 2.75 | 360 | NA |
| 31 | 2 | 4500000 | 20210802 | 2.375 | 360 | NA |
| 31 | 2 | 2531000 | 20201217 | NA | 360 | NA |


| 31 | 2 | 539053.33 | NA | 2.875 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 1 | 100000 | 20211015 | NA | 360 | NA |
| 31 | 2 | 2625000 | 20210929 | 2.625 | 360 | NA |
| 31 | 2 | 445000 | NA | 2.875 | 360 | NA |
| 2 | 1 | 188500 | 20211026 | 5.15 | 360 | NA |
| 31 | 2 | 506000 | 20201105 | 2.875 | 360 | NA |
| 1 | 2 | 420000 | 20210219 | 3 | 360 | NA |
| 1 | 2 | 547268.23 | NA | 2.75 | 360 | NA |
| 1 | 2 | 400000 | 20210630 | 2.75 | 360 | NA |
| 1 | 2 | 932000 | 20211008 | 2.625 | 360 | NA |
| 1 | 2 | 1348000 | NA | 3 | 360 | NA |
| 31 | 2 | 403000 | 20210209 | 2.875 | 360 | NA |
| 31 | 2 | 492400 | 20210208 | 2.875 | 360 | NA |
| 1 | 2 | 294103 | NA | 3.75 | 360 | NA |
| 31 | 2 | 250001 | 20210626 | 2.875 | 240 | NA |
| 31 | 2 | 1488000 | 20210915 | 2.625 | 360 | NA |
| 31 | 2 | 680000 | 20210108 | 2.625 | 360 | NA |
| 31 | 2 | 343000 | 20211203 | NA | 240 | NA |
| 1 | 2 | 795000 | 20210305 | 2.75 | 360 | NA |
| 1 | 2 | 428800 | NA | 3.125 | 360 | NA |
| 1 | 2 | 160000 | NA | 2.99 | 360 | NA |
| 31 | 2 | 546000 | 20200821 | 2.25 | 180 | NA |
| 31 | 2 | 494272 | 20210615 | 2.375 | 180 | NA |
| 2 | 1 | 240000 | 20210519 | 4.15 | 300 | NA |
| 31 | 2 | 666500 | 20210920 | 3 | 360 | NA |
| 31 | 2 | 770000 | 20210420 | 3.125 | 360 | NA |
| 32 | 2 | 205250 | 20210105 | 3.125 | 360 | NA |
| 31 | 2 | 708500 | 20210920 | 2.5 | 360 | NA |
| 1 | 2 | 267750 | 20210920 | NA | 360 | NA |
| 31 | 2 | 131100 | NA | 2.75 | 360 | NA |
| 31 | 2 | 80000 | 20210408 | 3.25 | 360 | NA |
| 1 | 2 | 260935.37 | NA | 3.75 | 360 | NA |
| 31 | 2 | 228000 | 20210125 | 3.125 | 360 | NA |
| 31 | 2 | 111500 | 20210209 | 2.375 | 120 | NA |


| 1 | 2 | 213400 | NA | 3.75 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 165870 | NA | 3.75 | 360 | NA |
| 1 | 2 | 182776.89 | NA | 3.75 | 360 | NA |
| 31 | 2 | 176900 | 20210211 | 3.625 | 360 | NA |
| 32 | 2 | 146000 | 20210315 | 3.125 | 360 | NA |
| 1 | 2 | 158650 | 20210415 | 2.875 | 360 | NA |
| 1 | 2 | 194400 | 20210106 | 2.625 | 360 | NA |
| 1 | 2 | 310400 | NA | 3.625 | 360 | NA |
| 31 | 2 | 77500 | 20210126 | 3 | 240 | NA |
| 31 | 2 | 123500 | 20200929 | NA | 360 | NA |
| 32 | 2 | 150000 | NA | 2.625 | 360 | NA |
| 1 | 2 | 426000 | 20210827 | 2.8 | 60 | NA |
| 1 | 2 | 142625 | 20210218 | 2.99 | 360 | NA |
| 1 | 2 | 163150 | NA | 3.375 | 360 | NA |
| 2 | 1 | 102500 | 20210421 | NA | 360 | NA |
| 31 | 2 | 148000 | 20210430 | 3.29 | 180 | NA |
| 1 | 2 | 820000 | 20210624 | 2.75 | 360 | NA |
| 1 | 2 | 233700 | 20210317 | 3.25 | 360 | NA |
| 1 | 2 | 680000 | 20210113 | 2.375 | 360 | NA |
| 31 | 2 | 150000 | 20210421 | 2.75 | 180 | NA |
| 1 | 2 | 167000 | 20210518 | 3 | 360 | NA |
| 31 | 2 | 331500 | 20210812 | 2.99 | 360 | NA |
| 31 | 2 | 453750 | NA | 3.125 | 360 | NA |
| 31 | 2 | 471000 | 20201120 | 2.875 | 360 | NA |
| 31 | 2 | 236000 | NA | 3 | 360 | NA |
| 1 | 2 | 548000 | NA | 3.25 | 360 | NA |
| 1 | 2 | 345000 | 20210222 | 2.75 | 360 | NA |
| 31 | 2 | 212995 | NA | 2.75 | 360 | NA |
| 2 | 1 | 70756 | 20210522 | 4.15 | 360 | NA |
| 31 | 2 | 860000 | 20210901 | NA | 360 | NA |
| 31 | 2 | 170400 | 20210709 | 3 | 360 | NA |
| 31 | 2 | 325100 | 20210824 | 2.25 | 180 | NA |
| 1 | 2 | 687592.47 | NA | 2.875 | 360 | NA |
| 31 | 2 | 1187600 | 20210425 | NA | 360 | NA |


| 1 | 2 | 1528000 | 20210219 | 2.625 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 518000 | 20210204 | 2.875 | 360 | NA |
| 1 | 2 | 396800 | 20210519 | 2.875 | 360 | NA |
| 1 | 2 | 357750 | NA | 3.375 | 360 | NA |
| 1 | 2 | 504000 | 20210308 | 3.125 | 360 | NA |
| 32 | 2 | 510400 | NA | 2.75 | 360 | NA |
| 31 | 2 | 316000 | NA | 2.875 | 360 | NA |
| 31 | 2 | 506300 | NA | 2.75 | 360 | NA |
| 32 | 2 | 329000 | 20210421 | 3.5 | 360 | NA |
| 31 | 2 | 323500 | 20211109 | 3 | 360 | NA |
| 1 | 2 | 548251 | 20210609 | 2.875 | 360 | NA |
| 31 | 2 | 288800 | 20210625 | 2.99 | 240 | NA |
| 31 | 2 | 806600 | 20210709 | 2.75 | 360 | NA |
| 31 | 2 | 902000 | 20210322 | 3.625 | 360 | NA |
| 31 | 2 | 442214 | NA | 2.875 | 360 | NA |
| 31 | 2 | 319650 | 20210201 | 2.25 | 180 | NA |
| 31 | 2 | 980000 | 20210808 | 2.875 | 360 | NA |
| 1 | 2 | 322500 | 20210623 | 3.25 | 360 | NA |
| 31 | 2 | 300000 | NA | 3.125 | 360 | NA |
| 1 | 2 | 513750 | 20210606 | 2.99 | 240 | NA |
| 31 | 2 | 2100000 | 20210223 | NA | 360 | NA |
| 1 | 2 | 343000 | 20210812 | 2.5 | 180 | NA |
| 1 | 2 | 187150 | NA | 3.25 | 360 | NA |
| 32 | 2 | 1640000 | 20210810 | 2.5 | 360 | NA |
| 1 | 2 | 155200 | NA | 3.625 | 360 | NA |
| 1 | 2 | 300000 | NA | 3.125 | 360 | NA |
| 31 | 2 | 224500 | 20201124 | 2.75 | 180 | NA |
| 1 | 2 | 508000 | 20210610 | 2.75 | 360 | NA |
| 31 | 2 | 264000 | 20210207 | 2.375 | 180 | NA |
| 1 | 2 | 138750 | 20210221 | 2.875 | 360 | NA |
| 31 | 2 | 563000 | 20210902 | 2.75 | 360 | NA |
| 1 | 2 | 440000 | 20210806 | 2.375 | 360 | NA |
| 31 | 2 | 252000 | 20210601 | NA | 240 | NA |
| 32 | 2 | 425000 | 20210202 | 2.375 | 180 | NA |


| 1 | 1 | 647640 | 20211017 | 3.65 | 300 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 275000 | 20201204 | NA | 180 | NA |
| 31 | 2 | 495000 | NA | 3.125 | 360 | NA |
| 31 | 2 | 324000 | 20210510 | 2.25 | 180 | NA |
| 31 | 2 | 276000 | NA | 2.75 | 180 | NA |
| 31 | 2 | 202900 | 20210415 | NA | 360 | NA |
| 32 | 2 | 430000 | 20210107 | NA | 360 | NA |
| 1 | 2 | 231750 | 20210715 | 2.5 | 180 | NA |
| 31 | 2 | 323000 | 20210313 | NA | 360 | NA |
| 31 | 2 | 275000 | 20210225 | NA | 240 | NA |
| 1 | 2 | 548000 | NA | 2.625 | 360 | NA |
| 1 | 2 | 2133922 | 20201108 | 1.75 | 360 | NA |
| 31 | 2 | 377750 | 20201230 | 2.25 | 180 | NA |
| 31 | 2 | 472000 | NA | 2.625 | 360 | NA |
| 31 | 2 | 331400 | NA | 2.75 | 180 | NA |
| 31 | 2 | 340000 | 20210316 | NA | 360 | NA |
| 31 | 2 | 1030000 | 20210324 | 2.75 | 180 | NA |
| 1 | 2 | 173375 | NA | 3.625 | 360 | NA |
| 1 | 2 | 1160000 | 20211015 | 2.75 | 360 | NA |
| 1 | 2 | 253600 | 20210621 | NA | 180 | NA |
| 1 | 2 | 184000 | NA | 3.375 | 360 | NA |
| 1 | 2 | 556750 | 20210901 | 2.875 | 360 | NA |
| 1 | 2 | 129750 | 20210128 | 2 | 180 | NA |
| 31 | 2 | 154020 | 20210625 | 2.99 | 240 | NA |
| 1 | 2 | 547387.17 | NA | 3.5 | 360 | NA |
| 31 | 2 | 313030 | NA | 2.99 | 360 | NA |
| 31 | 2 | 704200 | 20210713 | 2.5 | 360 | NA |
| 1 | 2 | 549000 | 20210426 | 2.625 | 360 | NA |
| 31 | 2 | 238000 | 20200918 | 2.875 | 180 | NA |
| 1 | 2 | 255000 | 20210624 | NA | 360 | NA |
| 1 | 2 | 837000 | 20210512 | 2.75 | 360 | NA |
| 31 | 2 | 474985 | 20210129 | NA | 360 | NA |
| 1 | 2 | 1160000 | 20210223 | 2.75 | 360 | NA |
| 31 | 2 | 800000 | 20211004 | 2.375 | 360 | NA |


| 1 | 2 | 278390.77 | NA | 3.125 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 465000 | 20210816 | 2.5 | 360 | NA |
| 31 | 2 | 236700 | NA | 2.25 | 180 | NA |
| 31 | 2 | 1120000 | 20210901 | 2.25 | 360 | NA |
| 31 | 2 | 414880 | 20210517 | 2.375 | 180 | NA |
| 31 | 2 | 898000 | 20210922 | NA | 360 | NA |
| 31 | 2 | 173550 | 20210701 | 2.99 | 240 | NA |
| 31 | 2 | 495000 | 20201028 | 2.5 | 180 | NA |
| 1 | 2 | 572000 | 20210224 | 3.125 | 360 | NA |
| 2 | 1 | 150000 | 20210417 | NA | 360 | NA |
| 31 | 2 | 250000 | 20201221 | NA | 180 | NA |
| 1 | 2 | 234750 | 20210408 | 3.99 | 360 | NA |
| 1 | 2 | 277875 | NA | 3.75 | 360 | NA |
| 1 | 2 | 219630.49 | NA | 3.125 | 360 | NA |
| 1 | 2 | 285000 | 20210222 | NA | 360 | NA |
| 2 | 1 | 150000 | 20210603 | NA | 360 | NA |
| 1 | 2 | 236250 | 20210726 | 3.625 | 360 | NA |
| 32 | 2 | 288000 | 20210402 | NA | 180 | NA |
| 31 | 2 | 238000 | 20201112 | 2.625 | 180 | NA |
| 1 | 2 | 280401.47 | NA | 3.75 | 360 | NA |
| 32 | 2 | 362250 | NA | 2.625 | 360 | NA |
| 1 | 2 | 275000 | 20210415 | 2.125 | 180 | NA |
| 31 | 2 | 396000 | NA | 2.75 | 360 | NA |
| 1 | 2 | 428000 | 20210628 | 2.375 | 360 | NA |
| 1 | 2 | 230851.78 | NA | 3.75 | 360 | NA |
| 1 | 2 | 357384.61 | NA | 2.99 | 360 | NA |
| 31 | 2 | 310000 | 20210218 | 3.125 | 360 | NA |
| 1 | 2 | 264600 | 20210510 | 2.99 | 360 | NA |
| 1 | 2 | 261400 | NA | 3.75 | 360 | NA |
| 31 | 2 | 380000 | 20210107 | 3.125 | 360 | NA |
| 1 | 2 | 481500 | NA | 3.125 | 360 | NA |
| 1 | 2 | 449194.16 | NA | 2.75 | 360 | NA |
| 1 | 2 | 232500 | NA | 2.5 | 360 | NA |
| 1 | 2 | 205500 | 20210305 | 2.99 | 360 | NA |


| 2 | 1 | 62580 | 20211117 | 3.65 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 233207.64 | NA | 3.125 | 360 | NA |
| 1 | 2 | 495000 | NA | 3 | 360 | NA |
| 1 | 2 | 283100 | NA | 3.125 | 360 | NA |
| 31 | 2 | 200000 | 20211008 | 4 | 240 | NA |
| 1 | 2 | 990000 | 20210717 | 2.5 | 360 | NA |
| 1 | 2 | 282150.3 | NA | 3.125 | 360 | NA |
| 31 | 2 | 339000 | 20211118 | 2.75 | 360 | NA |
| 31 | 2 | 481800 | NA | 3.125 | 360 | NA |
| 31 | 2 | 354035.8 | NA | 2.625 | 360 | NA |
| 31 | 2 | 2710000 | 20210909 | NA | 360 | NA |
| 31 | 2 | 321000 | 20210721 | 2.25 | 180 | NA |
| 1 | 2 | 285000 | 20210310 | 2.875 | 360 | NA |
| 31 | 2 | 495000 | NA | 2.75 | 240 | NA |
| 2 | 1 | 50000 | 20210708 | 3.45 | 360 | NA |
| 31 | 2 | 745780 | 20201223 | 2.75 | 360 | NA |
| 31 | 2 | 427000 | 20200804 | 2.99 | 360 | NA |
| 31 | 2 | 475000 | NA | 2.99 | 360 | NA |
| 31 | 2 | 924000 | 20210930 | 2.75 | 360 | NA |
| 1 | 2 | 335200 | 20210518 | 2.875 | 360 | NA |
| 32 | 2 | 390000 | 20201217 | 2.99 | 240 | NA |
| 1 | 2 | 455905 | NA | 3.125 | 360 | NA |
| 31 | 2 | 636094 | 20201105 | 3.625 | 360 | NA |
| 31 | 2 | 535000 | NA | 2.75 | 360 | NA |
| 31 | 2 | 545598 | 20210211 | 2.875 | 360 | NA |
| 31 | 2 | 250000 | 20210715 | NA | 240 | NA |
| 31 | 2 | 462000 | NA | 2.875 | 360 | NA |
| 1 | 2 | 486618 | NA | 2.75 | 360 | NA |
| 31 | 2 | 391500 | NA | 2.75 | 360 | NA |
| 1 | 2 | 441750 | 20210916 | 2.875 | 360 | NA |
| 1 | 2 | 612577 | 20210318 | 3.875 | 360 | NA |
| 31 | 2 | 454000 | 20210316 | 3.25 | 360 | NA |
| 1 | 2 | 544000 | NA | 2.875 | 360 | NA |
| 31 | 2 | 516523.38 | NA | 2.75 | 360 | NA |


| 1 | 2 | 513000 | 20210326 | 2.99 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 32 | 2 | 198000 | 20210122 | 2.875 | 360 | NA |
| 1 | 2 | 450000 | 20210104 | 3.375 | 360 | NA |
| 31 | 2 | 548000 | 20210721 | 2.875 | 360 | NA |
| 32 | 2 | 265000 | 20211006 | 2.5 | 120 | NA |
| 31 | 2 | 740000 | 20211019 | 3.25 | 360 | NA |
| 1 | 2 | 110409.74 | NA | 3.625 | 360 | NA |
| 31 | 2 | 360500 | 20210331 | 3.25 | 240 | NA |
| 2 | 1 | 100000 | 20210105 | NA | 360 | NA |
| 31 | 2 | 271100 | NA | 2.875 | 240 | NA |
| 32 | 2 | 399000 | NA | 2.75 | 240 | NA |
| 31 | 2 | 548000 | NA | 2.875 | 360 | NA |
| 1 | 2 | 84375 | 20210428 | 3.99 | 360 | NA |
| 1 | 2 | 559200 | NA | 3 | 360 | NA |
| 1 | 2 | 420000 | NA | 2.75 | 360 | NA |
| 32 | 2 | 382000 | NA | 2.625 | 360 | NA |
| 32 | 2 | 300000 | 20210615 | 3.125 | 360 | NA |
| 31 | 2 | 191000 | 20210108 | 3.25 | 180 | NA |
| 31 | 2 | 237000 | NA | 2.875 | 240 | NA |
| 1 | 2 | 126146.77 | NA | 3.375 | 360 | NA |
| 31 | 2 | 212000 | 20210116 | 2.625 | 180 | NA |
| 31 | 2 | 286500 | 20201209 | 2.875 | 360 | NA |
| 31 | 2 | 423000 | 20211028 | 2.75 | 360 | NA |
| 1 | 2 | 333592 | 20210608 | NA | 360 | NA |
| 31 | 2 | 175000 | 20210126 | 2.375 | 180 | NA |
| 32 | 2 | 372000 | NA | 2.75 | 360 | NA |
| 32 | 2 | 255000 | NA | 3.125 | 360 | NA |
| 31 | 2 | 30000 | 20210921 | NA | 120 | NA |
| 2 | 2 | 185000 | 20210208 | 2.79 | 180 | NA |
| 31 | 2 | 327000 | 20210204 | 2.875 | 360 | NA |
| 31 | 2 | 508000 | 20210717 | 2.99 | 360 | NA |
| 31 | 2 | 386000 | 20211118 | NA | 60 | NA |
| 2 | 2 | 175000 | 20210120 | NA | 180 | NA |
| 31 | 2 | 170000 | NA | 3.125 | 360 | NA |


| 2 | 2 | 15000 | 20211021 | 5.1 | 72 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 32 | 2 | 294000 | NA | 3.625 | 240 | NA |
| 1 | 2 | 109800 | NA | 3.25 | 360 | NA |
| 31 | 2 | 523000 | NA | 2.75 | 360 | NA |
| 1 | 2 | 316000 | 20210103 | 2.625 | 360 | NA |
| 31 | 2 | 455214 | NA | 2.5 | 360 | NA |
| 1 | 2 | 460750 | NA | 2.75 | 360 | NA |
| 31 | 2 | 293200 | NA | 2.75 | 240 | NA |
| 31 | 2 | 397801.39 | NA | 2.875 | 360 | NA |
| 1 | 2 | 267200 | NA | 3.125 | 360 | NA |
| 31 | 2 | 520000 | 20200519 | 3.375 | 360 | NA |
| 1 | 2 | 346750 | NA | 2.75 | 360 | NA |
| 31 | 2 | 236000 | 20201103 | 2.75 | 120 | NA |
| 2 | 1 | 100000 | 20210203 | NA | 360 | NA |
| 31 | 2 | 510000 | NA | 2.875 | 360 | NA |
| 31 | 2 | 86000 | 20201201 | NA | 240 | NA |
| 31 | 2 | 327400 | 20201216 | 3.125 | 360 | NA |
| 31 | 2 | 345000 | NA | 2.75 | 240 | NA |
| 1 | 2 | 719723 | NA | 2.625 | 360 | NA |
| 2 | 2 | 100284 | 20201215 | 3.75 | 120 | NA |
| 31 | 2 | 478000 | NA | 2.875 | 360 | NA |
| 1 | 2 | 517500 | NA | 2.75 | 360 | NA |
| 31 | 2 | 302610 | NA | 2.375 | 360 | NA |
| 32 | 2 | 241000 | 20210827 | 2.875 | 360 | NA |
| 2 | 1 | 100000 | 20210222 | 3.95 | 360 | NA |
| 32 | 2 | 540000 | NA | 3.125 | 360 | NA |
| 31 | 2 | 343000 | 20201026 | 2.5 | 180 | NA |
| 31 | 2 | 222500 | NA | 2.875 | 360 | NA |
| 1 | 2 | 296595 | 20210416 | 2.625 | 360 | NA |
| 32 | 2 | 492000 | NA | 3.625 | 360 | NA |
| 31 | 2 | 303000 | NA | 2.875 | 360 | NA |
| 31 | 2 | 27400 | 20210203 | 2.75 | 180 | NA |
| 31 | 2 | 330000 | 20210113 | 2.99 | 360 | NA |
| 31 | 2 | 221000 | 20211111 | 2.375 | 180 | NA |


| 1 | 2 | 306000 | NA | 2.875 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 353000 | NA | 3.125 | 300 | NA |
| 31 | 1 | 312000 | 20210921 | 4.15 | 360 | NA |
| 31 | 2 | 548200 | NA | 2.75 | 360 | NA |
| 1 | 2 | 480000 | NA | 3.125 | 360 | NA |
| 2 | 1 | 15000 | 20210527 | NA | 360 | NA |
| 32 | 2 | 188000 | NA | 2.625 | 240 | NA |
| 31 | 2 | 206310 | 20201130 | 2.875 | 360 | NA |
| 32 | 2 | 302115 | 20210317 | NA | 360 | NA |
| 31 | 2 | 274000 | 20201207 | 2.375 | 180 | NA |
| 1 | 2 | 342000 | NA | 2.99 | 360 | NA |
| 1 | 2 | 467400 | NA | 2.75 | 360 | NA |
| 1 | 2 | 370405 | NA | 2.875 | 360 | NA |
| 1 | 2 | 174503 | 20210416 | 2.99 | 360 | NA |
| 1 | 2 | 448000 | 20210902 | 2.875 | 360 | NA |
| 1 | 2 | 420980 | NA | 2.75 | 360 | NA |
| 32 | 2 | 300000 | 20210512 | 3.5 | 360 | NA |
| 31 | 2 | 368000 | NA | 3.125 | 360 | NA |
| 31 | 2 | 245500 | 20210217 | 3.19 | 240 | NA |
| 31 | 2 | 241500 | 20210125 | 2.99 | 360 | NA |
| 31 | 2 | 172000 | 20210208 | 2.39 | 120 | NA |
| 2 | 2 | 15000 | 20210503 | 4.95 | 48 | NA |
| 1 | 2 | 263643.91 | NA | 2.625 | 360 | NA |
| 31 | 2 | 181000 | 20210324 | 2.75 | 180 | NA |
| 31 | 2 | 292000 | NA | 3.625 | 360 | NA |
| 31 | 2 | 257800 | NA | 2.875 | 360 | NA |
| 2 | 1 | 30000 | 20210603 | NA | 360 | NA |
| 31 | 2 | 297000 | NA | 2.625 | 240 | NA |
| 1 | 2 | 348613.49 | NA | 3.125 | 360 | NA |
| 1 | 2 | 270018 | NA | 3.125 | 360 | NA |
| 32 | 2 | 301600 | NA | 2.99 | 360 | NA |
| 31 | 2 | 461172.68 | NA | 2.75 | 360 | NA |
| 2 | 2 | 50000 | 20211203 | 3.95 | 120 | NA |
| 1 | 2 | 260000 | 20210128 | 2.875 | 360 | NA |


| 1 | 2 | 297000 | NA | 3 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | 2 | 50000 | 20210404 | NA | 120 | NA |
| 31 | 2 | 215000 | 20210811 | NA | 240 | NA |
| 31 | 2 | 217000 | 20210312 | 3.5 | 360 | NA |
| 1 | 2 | 365750 | NA | 3.125 | 360 | NA |
| 31 | 2 | 292000 | 20210308 | 3.5 | 360 | NA |
| 32 | 2 | 333000 | NA | 3.125 | 240 | NA |
| 31 | 2 | 399000 | 20201221 | NA | 360 | NA |
| 32 | 2 | 367500 | NA | 3.5 | 360 | NA |
| 31 | 2 | 175500 | 20210215 | 2.625 | 180 | NA |
| 31 | 2 | 178528.87 | NA | 2.625 | 240 | NA |
| 32 | 2 | 346000 | 20200928 | 3.375 | 360 | NA |
| 2 | 1 | 250000 | 20210916 | 3.65 | 360 | NA |
| 1 | 2 | 316948 | NA | 3.625 | 360 | NA |
| 31 | 2 | 300000 | NA | 3 | 360 | NA |
| 31 | 2 | 254000 | NA | 2.5 | 240 | NA |
| 2 | 2 | 37000 | 20201129 | 3.6 | 180 | NA |
| 1 | 2 | 333841 | 20210313 | 3.125 | 360 | NA |
| 32 | 2 | 203000 | 20210804 | 3.25 | 360 | NA |
| 31 | 2 | 380036 | NA | 2.5 | 360 | NA |
| 31 | 1 | 250000 | 20210420 | 3.65 | 360 | NA |
| 1 | 2 | 304385 | NA | 3.5 | 360 | NA |
| 31 | 2 | 190000 | 20201124 | 2.99 | 360 | NA |
| 2 | 1 | 20000 | 20210623 | NA | 360 | NA |
| 31 | 2 | 306000 | 20210729 | NA | 240 | NA |
| 1 | 2 | 350550 | NA | 3.125 | 360 | NA |
| 32 | 2 | 306000 | 20210815 | NA | 360 | NA |
| 1 | 2 | 249520.59 | NA | 3 | 360 | NA |
| 2 | 1 | 80000 | 20210718 | 3.45 | 360 | NA |
| 31 | 2 | 258000 | 20211029 | 2.375 | 180 | NA |
| 2 | 1 | 150000 | 20211008 | NA | 360 | NA |
| 1 | 2 | 495000 | NA | 2.875 | 360 | NA |
| 1 | 2 | 400000 | 20211111 | 3.125 | 360 | NA |
| 31 | 2 | 266500 | NA | 2.875 | 240 | NA |


| 1 | 2 | 159600 | 20210518 | NA | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 503405 | NA | 3.125 | 360 | NA |
| 1 | 2 | 348650 | 20210708 | 2.75 | 360 | NA |
| 1 | 2 | 697500 | 20210310 | 3 | 360 | NA |
| 31 | 2 | 280000 | 20210426 | 2.99 | 240 | NA |
| 31 | 2 | 178000 | 20210330 | NA | 180 | NA |
| 31 | 2 | 279500 | NA | 3.125 | 240 | NA |
| 1 | 2 | 490063.85 | NA | 2.75 | 360 | NA |
| 32 | 2 | 304000 | NA | 3.125 | 240 | NA |
| 31 | 1 | 214700 | 20210805 | 4.95 | 360 | NA |
| 31 | 2 | 340000 | 20211020 | 2.625 | 180 | NA |
| 1 | 2 | 500000 | 20210607 | 2.75 | 360 | NA |
| 31 | 1 | 232000 | 20211027 | 4.15 | 360 | NA |
| 1 | 2 | 213300 | 20211115 | 2.99 | 360 | NA |
| 2 | 2 | 130864 | 20210218 | 2.64 | 120 | NA |
| 1 | 2 | 640000 | NA | 2.875 | 360 | NA |
| 31 | 2 | 470000 | 20210524 | 2.25 | 180 | NA |
| 32 | 2 | 785000 | 20211110 | 3.125 | 360 | NA |
| 31 | 2 | 368800 | NA | 2.625 | 300 | NA |
| 31 | 2 | 548250 | 20211115 | NA | 240 | NA |
| 31 | 1 | 350000 | 20211001 | 3.65 | 360 | NA |
| 32 | 2 | 412000 | 20211005 | 3.375 | 360 | NA |
| 2 | 1 | 144317 | 20210731 | 3.95 | 360 | NA |
| 1 | 2 | 499500 | NA | 3.125 | 360 | NA |
| 2 | 1 | 70000 | 20210421 | NA | 360 | NA |
| 31 | 2 | 504000 | NA | 2.99 | 360 | NA |
| 1 | 1 | 200000 | 20210814 | NA | 360 | NA |
| 2 | 1 | 176500 | 20210325 | 4.35 | 360 | NA |
| 31 | 2 | 680000 | 20210127 | 2.625 | 360 | NA |
| 31 | 2 | 575000 | 20210804 | 2.875 | 360 | NA |
| 1 | 2 | 479200 | NA | 2.875 | 360 | NA |
| 31 | 2 | 485000 | 20210928 | 2.25 | 180 | NA |
| 1 | 2 | 375250 | NA | 3.125 | 360 | NA |
| 1 | 2 | 742500 | 20210622 | 2.875 | 360 | NA |


| 1 | 2 | 548000 | 20210707 | 2.75 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | 1 | 68654 | 20210707 | 4.95 | 360 | NA |
| 31 | 2 | 290000 | 20210311 | 2.5 | 180 | NA |
| 31 | 2 | 123000 | 20201105 | 2.625 | 180 | NA |
| 31 | 2 | 537000 | 20201215 | 2.875 | 360 | NA |
| 31 | 2 | 286000 | 20210408 | 3.25 | 360 | NA |
| 31 | 2 | 414662.27 | NA | 2.5 | 240 | NA |
| 31 | 2 | 332000 | 20210105 | 2.75 | 360 | NA |
| 1 | 2 | 474000 | NA | 2.99 | 360 | NA |
| 1 | 2 | 505600 | NA | 3.125 | 360 | NA |
| 2 | 1 | 50000 | 20210904 | NA | 360 | NA |
| 31 | 2 | 98756.15 | 20210825 | 2.59 | 84 | NA |
| 31 | 2 | 548250 | 20210830 | 3.25 | 360 | NA |
| 32 | 2 | 356000 | 20210823 | 3 | 288 | NA |
| 31 | 2 | 397830.68 | NA | 3.125 | 360 | NA |
| 2 | 2 | 30000 | 20210510 | 4.3 | 180 | NA |
| 32 | 2 | 340000 | 20210713 | 3.125 | 360 | NA |
| 2 | 1 | 50000 | 20210514 | NA | 360 | NA |
| 1 | 1 | 250000 | 20210112 | NA | 360 | NA |
| 31 | 2 | 700000 | 20201010 | NA | 360 | NA |
| 31 | 2 | 380000 | 20201202 | NA | 360 | NA |
| 31 | 2 | 320500 | 20210517 | 3.125 | 360 | NA |
| 31 | 2 | 307800 | NA | 2.75 | 360 | NA |
| 2 | 2 | 684000 | 20210503 | 3.125 | 360 | NA |
| 31 | 1 | 446000 | 20210508 | 4.15 | 360 | NA |
| 31 | 2 | 280000 | 20210210 | 2.375 | 180 | NA |
| 31 | 2 | 466000 | 20210204 | 2.875 | 360 | NA |
| 31 | 2 | 505281.84 | NA | 3 | 240 | NA |
| 31 | 2 | 380000 | 20210109 | 2.875 | 360 | NA |
| 31 | 2 | 695000 | 20200904 | NA | 360 | NA |
| 32 | 2 | 412000 | NA | 3.125 | 360 | NA |
| 31 | 2 | 142000 | 20210211 | NA | 180 | NA |
| 32 | 2 | 90000 | NA | 2.625 | 240 | NA |
| 31 | 2 | 215000 | 20210810 | NA | 180 | NA |


| 2 | 1 | 100000 | 20210325 | 3.95 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 334000 | 20210322 | 2.75 | 360 | NA |
| 31 | 2 | 320000 | 20201102 | NA | 360 | NA |
| 31 | 2 | 110246.06 | 20210208 | 2.64 | 120 | NA |
| 31 | 2 | 330000 | 20201130 | NA | 360 | NA |
| 31 | 2 | 668000 | 20210701 | 3 | 360 | NA |
| 31 | 2 | 744000 | 20210924 | 2.5 | 360 | NA |
| 31 | 2 | 548055 | NA | 2.75 | 360 | NA |
| 31 | 2 | 248300 | NA | 2.875 | 240 | NA |
| 31 | 2 | 245500 | 20210622 | 2.99 | 240 | NA |
| 1 | 2 | 360000 | NA | 2.99 | 360 | NA |
| 1 | 2 | 382500 | NA | 2.625 | 360 | NA |
| 1 | 2 | 389500 | 20210713 | 2.75 | 360 | NA |
| 1 | 2 | 440000 | 20210611 | 2.875 | 360 | NA |
| 1 | 2 | 405000 | NA | 3.125 | 360 | NA |
| 2 | 1 | 218000 | 20210601 | NA | 360 | NA |
| 2 | 1 | 26077 | 20210401 | 5.6 | 360 | NA |
| 1 | 2 | 631800 | 20210126 | 2.75 | 360 | NA |
| 1 | 2 | 525000 | NA | 2.75 | 360 | NA |
| 31 | 2 | 143000 | 20210818 | 2.25 | 180 | NA |
| 31 | 2 | 346000 | 20201216 | NA | 360 | NA |
| 2 | 1 | 30000 | 20210910 | NA | 360 | NA |
| 1 | 2 | 384000 | NA | 2.75 | 360 | NA |
| 31 | 2 | 345000 | 20210617 | 4.125 | 360 | NA |
| 31 | 2 | 542000 | 20210708 | 2.875 | 360 | NA |
| 31 | 2 | 717500 | 20210127 | 2.875 | 360 | NA |
| 31 | 2 | 183900 | 20210203 | 2.5 | 180 | NA |
| 1 | 2 | 454500 | NA | 2.375 | 360 | NA |
| 1 | 2 | 547200 | 20210815 | 2.125 | 180 | NA |
| 31 | 2 | 220000 | 20210304 | 3.25 | 240 | NA |
| 31 | 2 | 380000 | 20201201 | NA | 360 | NA |
| 31 | 2 | 65850 | 20201123 | 2.625 | 180 | NA |
| 1 | 2 | 374000 | NA | 2.625 | 360 | NA |
| 1 | 2 | 460000 | 20210520 | 2.67 | 48 | NA |


| 31 | 2 | 384000 | 20210818 | 3.25 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 670000 | 20210815 | NA | 60 | NA |
| 1 | 2 | 266790 | NA | 3.625 | 360 | NA |
| 1 | 2 | 494301 | NA | 2.75 | 360 | NA |
| 1 | 2 | 213750 | NA | 2.625 | 360 | NA |
| 1 | 2 | 191250 | NA | 3.75 | 360 | NA |
| 1 | 2 | 217550 | NA | 3.375 | 360 | NA |
| 1 | 2 | 204250 | NA | 3.75 | 360 | NA |
| 1 | 2 | 181381.25 | NA | 3.625 | 360 | NA |
| 1 | 2 | 600000 | 20210507 | 2.75 | 360 | NA |
| 1 | 2 | 478800 | NA | 3.125 | 360 | NA |
| 1 | 2 | 207000 | NA | 3.75 | 360 | NA |
| 1 | 2 | 196377 | NA | 3.125 | 360 | NA |
| 31 | 2 | 430000 | 20211013 | 3.19 | 120 | NA |
| 1 | 2 | 291507.48 | NA | 3.625 | 360 | NA |
| 1 | 2 | 180000 | NA | 3.625 | 360 | NA |
| 31 | 2 | 113000 | 20210122 | 2.875 | 360 | NA |
| 1 | 2 | 173188.76 | NA | 3.75 | 360 | NA |
| 32 | 2 | 186831 | 20200918 | 3.375 | 360 | NA |
| 31 | 2 | 313339 | NA | 2.625 | 240 | NA |
| 1 | 2 | 396000 | 20201210 | 2.5 | 360 | NA |
| 1 | 2 | 620000 | 20210119 | 2.875 | 360 | NA |
| 1 | 2 | 495000 | NA | 2.875 | 360 | NA |
| 31 | 2 | 342734.17 | NA | 2.75 | 360 | NA |
| 31 | 1 | 200000 | 20210809 | 4.45 | 360 | NA |
| 31 | 1 | 350000 | 20210315 | 3.95 | 360 | NA |
| 32 | 2 | 277418 | 20210615 | 3.25 | 360 | NA |
| 31 | 2 | 265000 | 20210104 | 3.25 | 180 | NA |
| 2 | 2 | 50000 | 20210405 | NA | 48 | NA |
| 31 | 2 | 347000 | NA | 2.75 | 360 | NA |
| 1 | 2 | 385600 | NA | 3 | 360 | NA |
| 2 | 1 | 25000 | 20210824 | NA | 360 | NA |
| 2 | 1 | 100000 | 20210505 | NA | 360 | NA |
| 31 | 2 | 122000 | 20210915 | 2.25 | 180 | NA |


| 31 | 2 | 202600 | 20201214 | 2.375 | 180 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 244000 | 20210830 | 2.99 | 360 | NA |
| 31 | 2 | 333500 | 20210107 | 3.125 | 360 | NA |
| 1 | 2 | 300000 | NA | 3.375 | 360 | NA |
| 1 | 2 | 198850 | NA | 3.75 | 360 | NA |
| 1 | 2 | 192500 | NA | 3.375 | 360 | NA |
| 1 | 2 | 251067.1 | NA | 3.75 | 360 | NA |
| 1 | 2 | 178205.2 | NA | 3.625 | 360 | NA |
| 1 | 2 | 168246.21 | NA | 3.75 | 360 | NA |
| 31 | 2 | 475000 | 20210225 | 2.64 | 36 | NA |
| 1 | 2 | 390400 | 20210329 | 3 | 360 | NA |
| 31 | 2 | 293000 | NA | 2.75 | 240 | NA |
| 31 | 2 | 718500 | 20210614 | 3.125 | 360 | NA |
| 2 | 1 | 50000 | 20210501 | NA | 360 | NA |
| 1 | 2 | 742500 | 20211026 | 2.875 | 360 | NA |
| 1 | 2 | 295602.67 | NA | 3.125 | 360 | NA |
| 1 | 2 | 484800 | NA | 3.125 | 360 | NA |
| 31 | 2 | 115500 | 20210917 | 2.875 | 240 | NA |
| 31 | 2 | 300000 | 20210628 | 2.97 | 60 | NA |
| 1 | 2 | 510000 | NA | 2.5 | 360 | NA |
| 1 | 2 | 468000 | 20210427 | 2.875 | 360 | NA |
| 2 | 1 | 60000 | 20210811 | NA | 360 | NA |
| 1 | 2 | 548250 | NA | 2.75 | 360 | NA |
| 1 | 2 | 356202 | 20210111 | 2.75 | 180 | NA |
| 31 | 2 | 234000 | 20210304 | 3.125 | 240 | NA |
| 31 | 2 | 348500 | 20201207 | 2.99 | 360 | NA |
| 31 | 2 | 260342.79 | NA | 2.875 | 360 | NA |
| 1 | 2 | 351500 | NA | 2.75 | 360 | NA |
| 31 | 2 | 386432.75 | NA | 2.75 | 360 | NA |
| 2 | 1 | 100000 | 20210730 | NA | 360 | NA |
| 31 | 2 | 196000 | 20210622 | 2.375 | 180 | NA |
| 1 | 2 | 406721.87 | NA | 2.5 | 360 | NA |
| 31 | 2 | 231537 | 20210224 | 2.75 | 120 | NA |
| 31 | 2 | 288750 | NA | 2.875 | 300 | NA |


| 31 | 2 | 266986.98 | NA | 2.75 | 240 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 467944.23 | NA | 2.99 | 360 | NA |
| 32 | 2 | 548250 | 20210903 | 2.5 | 240 | NA |
| 1 | 2 | 173094.53 | NA | 3.625 | 360 | NA |
| 31 | 2 | 302700 | NA | 3.125 | 360 | NA |
| 1 | 2 | 539910 | NA | 2.75 | 360 | NA |
| 2 | 1 | 74033 | 20210802 | 3.95 | 360 | NA |
| 1 | 2 | 222741.15 | NA | 3.375 | 360 | NA |
| 32 | 2 | 308000 | 20210512 | 3.25 | 360 | NA |
| 1 | 2 | 151320 | 20210709 | 2.875 | 360 | NA |
| 1 | 2 | 176540 | NA | 3.375 | 360 | NA |
| 1 | 2 | 301500 | 20210810 | 2.875 | 360 | NA |
| 1 | 2 | 266000 | 20210224 | 2.38 | 60 | NA |
| 2 | 1 | 50000 | 20210728 | NA | 360 | NA |
| 31 | 2 | 171500 | 20210519 | NA | 240 | NA |
| 1 | 2 | 286328.79 | NA | 3.375 | 360 | NA |
| 1 | 2 | 397664 | NA | 3.625 | 360 | NA |
| 1 | 2 | 395821.63 | NA | 3.625 | 360 | NA |
| 1 | 2 | 113905 | NA | 3.375 | 360 | NA |
| 1 | 2 | 451500 | NA | 2.875 | 360 | NA |
| 2 | 1 | 20000 | 20210805 | NA | 360 | NA |
| 1 | 2 | 351500 | 20210830 | 2.875 | 360 | NA |
| 31 | 2 | 208122 | 20210222 | 2.79 | 177 | NA |
| 1 | 2 | 437000 | 20210803 | 2.75 | 360 | NA |
| 32 | 2 | 181999 | NA | 2.5 | 240 | NA |
| 1 | 2 | 490943 | NA | 2.625 | 360 | NA |
| 31 | 2 | 233000 | NA | 2.875 | 300 | NA |
| 32 | 2 | 275600 | 20200831 | 2.75 | 180 | NA |
| 31 | 2 | 185810 | 20201016 | 2.99 | 360 | NA |
| 31 | 2 | 227560.79 | NA | 2.75 | 360 | NA |
| 31 | 2 | 260750 | 20201223 | 3.125 | 360 | NA |
| 1 | 2 | 358388 | NA | 2.75 | 360 | NA |
| 1 | 2 | 209000 | NA | 2.5 | 360 | NA |
| 1 | 2 | 244925 | NA | 3.75 | 360 | NA |


| 1 | 2 | 299475 | 20211014 | NA | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 337138.09 | NA | 2.5 | 360 | NA |
| 31 | 2 | 249805.47 | NA | 2.75 | 300 | NA |
| 2 | 2 | 250000 | 20210409 | NA | 30 | NA |
| 1 | 2 | 316220 | NA | 3.625 | 360 | NA |
| 31 | 2 | 362673 | NA | 2.75 | 360 | NA |
| 1 | 2 | 471306 | NA | 2.75 | 360 | NA |
| 1 | 2 | 288000 | 20210507 | 2.875 | 360 | NA |
| 2 | 1 | 85000 | 20210113 | NA | 360 | NA |
| 1 | 2 | 256500 | NA | 3.375 | 360 | NA |
| 31 | 2 | 267500 | NA | 3.5 | 240 | NA |
| 31 | 2 | 248758.93 | 20210127 | NA | 240 | NA |
| 31 | 2 | 206000 | 20201221 | NA | 360 | NA |
| 1 | 2 | 594000 | 20210315 | 3.125 | 360 | NA |
| 31 | 2 | 140000 | 20210825 | 2.99 | 360 | NA |
| 1 | 2 | 683100 | 20210929 | 3 | 360 | NA |
| 31 | 2 | 649400 | 20210117 | 3.625 | 360 | NA |
| 31 | 2 | 548000 | 20210111 | 3.125 | 360 | NA |
| 1 | 2 | 409448 | NA | 3.5 | 360 | NA |
| 31 | 2 | 650001 | 20210720 | NA | 360 | NA |
| 2 | 1 | 58000 | 20210316 | 3.45 | 360 | NA |
| 2 | 1 | 25000 | 20210916 | NA | 360 | NA |
| 32 | 2 | 367000 | NA | 3.125 | 360 | NA |
| 1 | 2 | 398194.65 | NA | 3.625 | 360 | NA |
| 1 | 2 | 325460.66 | NA | 4.5 | 360 | NA |
| 2 | 1 | 35000 | 20210121 | NA | 360 | NA |
| 32 | 2 | 232500 | 20210913 | NA | 360 | NA |
| 31 | 1 | 110000 | 20210227 | 3.45 | 360 | NA |
| 31 | 2 | 264200 | 20210401 | 4.125 | 360 | NA |
| 1 | 2 | 431300 | NA | 2.75 | 360 | NA |
| 2 | 1 | 350000 | 20211112 | NA | 360 | NA |
| 31 | 2 | 244000 | NA | 2.75 | 360 | NA |
| 31 | 2 | 117800 | NA | 2.75 | 360 | NA |
| 1 | 1 | 90000 | 20210326 | NA | 360 | NA |


| 31 | 2 | 343000 | NA | 2.625 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 222500 | 20210222 | 3.375 | 360 | NA |
| 1 | 2 | 389500 | NA | 3.5 | 360 | NA |
| 1 | 2 | 281300 | NA | 3.25 | 360 | NA |
| 31 | 1 | 100000 | 20210622 | NA | 360 | NA |
| 1 | 2 | 308750 | 20211006 | 3.125 | 360 | NA |
| 31 | 2 | 193000 | 20210806 | 3.125 | 360 | NA |
| 32 | 2 | 240000 | 20210513 | 2.875 | 180 | NA |
| 32 | 2 | 194000 | NA | 3.375 | 240 | NA |
| 1 | 2 | 126400 | 20210415 | 2.25 | 180 | NA |
| 31 | 2 | 412500 | NA | 3.125 | 360 | NA |
| 1 | 2 | 740000 | 20210503 | 2.875 | 360 | NA |
| 1 | 2 | 430000 | NA | 2.5 | 360 | NA |
| 31 | 2 | 342500 | NA | 2.625 | 240 | NA |
| 31 | 2 | 430298.98 | NA | 3.5 | 300 | NA |
| 31 | 2 | 234638 | 20210723 | 3.04 | 240 | NA |
| 1 | 2 | 498750 | NA | 3.625 | 360 | NA |
| 1 | 2 | 545144.1 | NA | 2.625 | 360 | NA |
| 1 | 2 | 543750 | NA | 2.99 | 360 | NA |
| 1 | 2 | 164751.48 | NA | 3.75 | 360 | NA |
| 1 | 2 | 174600 | NA | 3.75 | 360 | NA |
| 31 | 2 | 140000 | 20210924 | NA | 240 | NA |
| 1 | 2 | 144400 | NA | 3.75 | 360 | NA |
| 1 | 2 | 106403 | NA | 3.625 | 360 | NA |
| 1 | 2 | 385600 | 20210113 | 2.625 | 360 | NA |
| 31 | 2 | 170000 | 20200915 | 2.5 | 180 | NA |
| 1 | 2 | 427450 | NA | 2.625 | 360 | NA |
| 1 | 2 | 437000 | NA | 3.25 | 360 | NA |
| 2 | 2 | 80000 | 20211109 | 3.09 | 180 | NA |
| 31 | 2 | 433444 | NA | 2.75 | 360 | NA |
| 1 | 2 | 400000 | NA | 3.375 | 360 | NA |
| 1 | 2 | 588000 | 20210701 | 2.875 | 360 | NA |
| 1 | 2 | 520000 | NA | 2.75 | 360 | NA |
| 1 | 2 | 548250 | 20210514 | 2.875 | 360 | NA |


| 1 | 2 | 108000 | NA | 3.625 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 327172.74 | NA | 2.75 | 240 | NA |
| 31 | 2 | 180000 | 20201216 | 3.125 | 360 | NA |
| 1 | 2 | 697500 | 20201221 | 2.625 | 360 | NA |
| 1 | 2 | 248104.88 | NA | 2.25 | 360 | NA |
| 2 | 1 | 250000 | 20210730 | NA | 360 | NA |
| 1 | 2 | 552500 | 20211018 | 3 | 360 | NA |
| 1 | 2 | 184500 | NA | 3.625 | 360 | NA |
| 1 | 2 | 668100 | 20210323 | 2.875 | 360 | NA |
| 1 | 2 | 180500 | NA | 3.75 | 360 | NA |
| 2 | 1 | 100000 | 20210514 | 3.65 | 360 | NA |
| 32 | 2 | 125000 | 20201217 | 2.5 | 180 | NA |
| 31 | 2 | 148800 | 20210623 | 2.75 | 180 | NA |
| 31 | 2 | 130000 | 20210617 | 2.59 | 120 | NA |
| 1 | 2 | 149873.92 | NA | 3.75 | 360 | NA |
| 2 | 1 | 125000 | 20211105 | NA | 360 | NA |
| 1 | 2 | 935000 | 20210715 | 2.625 | 360 | NA |
| 31 | 2 | 509000 | 20210802 | 2.625 | 360 | NA |
| 1 | 2 | 292125 | NA | 3.75 | 360 | NA |
| 31 | 2 | 101000 | 20200928 | 3.5 | 360 | NA |
| 1 | 2 | 356250 | NA | 3.25 | 360 | NA |
| 2 | 1 | 50000 | 20210621 | 4.45 | 360 | NA |
| 31 | 2 | 884500 | 20210428 | 3.875 | 360 | NA |
| 31 | 2 | 508168.86 | NA | 2.625 | 360 | NA |
| 31 | 1 | 130000 | 20201212 | 3.45 | 360 | NA |
| 1 | 2 | 137792.15 | NA | 3.75 | 360 | NA |
| 1 | 2 | 800000 | NA | 2.875 | 360 | NA |
| 1 | 1 | 200000 | 20211214 | NA | 360 | NA |
| 1 | 2 | 531250 | NA | 3.125 | 360 | NA |
| 1 | 2 | 496000 | 20210208 | 3.5 | 360 | NA |
| 1 | 2 | 396781.48 | NA | 3.75 | 360 | NA |
| 1 | 2 | 414452.72 | NA | 3.125 | 360 | NA |
| 2 | 1 | 100000 | 20211214 | NA | 360 | NA |
| 31 | 2 | 389344.97 | NA | 3.125 | 360 | NA |


| 32 | 2 | 216000 | 20201207 | 2.75 | 180 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 464416 | 20210326 | 2.5 | 360 | NA |
| 31 | 2 | 118000 | 20210329 | 3.09 | 180 | NA |
| 1 | 2 | 1097000 | 20210729 | 3.25 | 360 | NA |
| 1 | 2 | 144641.97 | NA | 3.375 | 360 | NA |
| 2 | 1 | 80000 | 20210514 | NA | 360 | NA |
| 31 | 1 | 191300 | 20210308 | 3.95 | 360 | NA |
| 1 | 2 | 328000 | 20211007 | 3.125 | 360 | NA |
| 31 | 2 | 258500 | 20210211 | 2.375 | 180 | NA |
| 31 | 2 | 149000 | 20210313 | NA | 180 | NA |
| 1 | 2 | 461250 | 20201112 | NA | 360 | NA |
| 2 | 2 | 60000 | 20211221 | NA | 240 | NA |
| 31 | 2 | 509000 | NA | 2.625 | 360 | NA |
| 31 | 2 | 208500 | NA | 3.125 | 240 | NA |
| 32 | 2 | 70000 | 20210114 | 3.375 | 360 | NA |
| 31 | 2 | 385000 | 20210111 | 2.99 | 360 | NA |
| 31 | 2 | 679200 | NA | 3.375 | 360 | NA |
| 31 | 2 | 173500 | 20201211 | 2.75 | 180 | NA |
| 31 | 2 | 448000 | NA | 2.875 | 360 | NA |
| 31 | 2 | 271000 | 20211110 | 2.5 | 180 | NA |
| 31 | 2 | 667746 | 20200929 | 3 | 360 | NA |
| 1 | 2 | 787500 | 20210524 | 2.5 | 360 | NA |
| 1 | 2 | 370500 | 20210603 | 2.99 | 360 | NA |
| 31 | 2 | 548250 | 20210212 | 2.99 | 360 | NA |
| 31 | 2 | 860700 | 20210511 | 3.25 | 360 | NA |
| 1 | 2 | 512050 | NA | 2.99 | 360 | NA |
| 31 | 1 | 39300 | 20210512 | 5.9 | 360 | NA |
| 1 | 2 | 1242500 | 20211007 | 2.25 | 360 | NA |
| 31 | 2 | 471000 | 20210210 | 2.875 | 360 | NA |
| 31 | 2 | 380000 | NA | 2.99 | 360 | NA |
| 31 | 2 | 242200 | 20210828 | NA | 240 | NA |
| 1 | 2 | 287626.62 | NA | 3.375 | 360 | NA |
| 1 | 2 | 392333.19 | NA | 3.75 | 360 | NA |
| 31 | 2 | 284000 | NA | 2.75 | 300 | NA |


| 1 | 2 | 215340 | NA | 3.75 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | 2 | 65000 | 20210123 | 2.5 | 180 | NA |
| 31 | 1 | 30364 | 20211012 | 4.4 | 360 | NA |
| 31 | 2 | 225000 | 20210819 | 2.625 | 180 | NA |
| 1 | 2 | 293584 | NA | 3.5 | 360 | NA |
| 1 | 2 | 517500 | NA | 2.875 | 360 | NA |
| 31 | 2 | 162145 | 20201019 | NA | 360 | NA |
| 31 | 1 | 60000 | 20211115 | 3.65 | 360 | NA |
| 1 | 2 | 290511.24 | NA | 3.125 | 360 | NA |
| 31 | 2 | 198000 | 20210416 | 3.5 | 360 | NA |
| 32 | 2 | 217500 | 20201227 | 2.75 | 180 | NA |
| 1 | 2 | 358388 | NA | 2.625 | 360 | NA |
| 1 | 2 | 475695 | NA | 2.625 | 360 | NA |
| 1 | 2 | 369455 | NA | 3 | 360 | NA |
| 1 | 2 | 287199.3 | NA | 3 | 360 | NA |
| 31 | 2 | 199000 | 20201014 | NA | 360 | NA |
| 1 | 2 | 527250 | NA | 3.5 | 360 | NA |
| 2 | 1 | 200000 | 20210513 | 4.15 | 360 | NA |
| 31 | 2 | 132276.49 | 20210901 | 3.04 | 192 | NA |
| 31 | 2 | 25000 | 20210209 | 3.14 | 120 | NA |
| 31 | 2 | 445000 | NA | 2.625 | 360 | NA |
| 32 | 2 | 195000 | 20210726 | 2.375 | 120 | NA |
| 1 | 2 | 373117 | NA | 3.125 | 360 | NA |
| 2 | 1 | 23341 | 20210308 | 5.85 | 360 | NA |
| 2 | 1 | 80000 | 20210426 | NA | 360 | NA |
| 1 | 2 | 249683.49 | NA | 3.25 | 360 | NA |
| 1 | 2 | 229500 | 20210923 | 3.5 | 360 | NA |
| 31 | 2 | 208000 | 20210220 | 3.25 | 312 | NA |
| 1 | 2 | 240936.56 | NA | 3.75 | 360 | NA |
| 31 | 2 | 73000 | 20211018 | NA | 180 | NA |
| 2 | 2 | 30000 | 20210820 | 4.3 | 240 | NA |
| 1 | 2 | 242500 | NA | 3.75 | 360 | NA |
| 1 | 2 | 375250 | NA | 3.125 | 360 | NA |
| 2 | 1 | 70000 | 20210304 | NA | 360 | NA |


| 31 | 2 | 170000 | 20201113 | 2.875 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 305550 | NA | 3.625 | 360 | NA |
| 31 | 1 | 32814 | 20210628 | NA | 360 | NA |
| 1 | 2 | 309430 | NA | 3.25 | 360 | NA |
| 1 | 2 | 283500 | NA | 3.5 | 360 | NA |
| 1 | 2 | 285000 | NA | 3.75 | 360 | NA |
| 31 | 2 | 258000 | 20211006 | NA | 240 | NA |
| 31 | 2 | 204500 | 20210820 | 2.625 | 240 | NA |
| 2 | 1 | 75000 | 20210228 | 3.45 | 360 | NA |
| 31 | 2 | 165000 | 20201210 | 2.375 | 180 | NA |
| 32 | 2 | 180100 | 20210722 | 2.875 | 240 | NA |
| 1 | 2 | 246627.97 | NA | 3.75 | 360 | NA |
| 31 | 2 | 219000 | 20211006 | 3.29 | 240 | NA |
| 31 | 2 | 219000 | 20211004 | NA | 240 | NA |
| 31 | 2 | 79000 | 20210225 | NA | 15 | NA |
| 1 | 2 | 244588.5 | NA | 3.125 | 360 | NA |
| 1 | 2 | 215366.05 | NA | 4 | 360 | NA |
| 2 | 2 | 280000 | 20210414 | 3.375 | 360 | NA |
| 32 | 2 | 326000 | 20201118 | 3.125 | 240 | NA |
| 31 | 2 | 266000 | 20210420 | 3.25 | 360 | NA |
| 31 | 2 | 298500 | NA | 3.25 | 360 | NA |
| 31 | 2 | 123500 | 20210120 | 2.375 | 180 | NA |
| 1 | 2 | 253831.87 | NA | 3.75 | 360 | NA |
| 2 | 1 | 165000 | 20211119 | NA | 360 | NA |
| 31 | 2 | 241801.6 | 20211116 | NA | 240 | NA |
| 1 | 2 | 284255 | NA | 3.125 | 360 | NA |
| 32 | 2 | 170000 | 20210712 | 3.375 | 360 | NA |
| 1 | 2 | 377636.8 | NA | 2.875 | 360 | NA |
| 1 | 2 | 137750 | NA | 3.875 | 360 | NA |
| 31 | 2 | 311200 | NA | 2.875 | 240 | NA |
| 2 | 2 | 60000 | 20210927 | NA | 72 | NA |
| 2 | 2 | 50000 | 20210918 | NA | 240 | NA |
| 1 | 2 | 204000 | 20211020 | 3.125 | 360 | NA |
| 1 | 2 | 261900 | NA | 3.75 | 360 | NA |


| 2 | 1 | 72700 | 20210111 | 3.95 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 32 | 2 | 308800 | NA | 3.625 | 360 | NA |
| 32 | 2 | 155000 | 20210412 | 2.75 | 180 | NA |
| 1 | 2 | 206167.85 | NA | 3.375 | 360 | NA |
| 31 | 2 | 223000 | 20211115 | 3.25 | 360 | NA |
| 31 | 2 | 125999.31 | 20210901 | 2.79 | 180 | NA |
| 1 | 2 | 372875 | NA | 3.125 | 360 | NA |
| 32 | 2 | 296000 | 20210823 | NA | 360 | NA |
| 31 | 2 | 218000 | 20201228 | 2.375 | 180 | NA |
| 1 | 2 | 350870.55 | NA | 2.75 | 360 | NA |
| 32 | 2 | 298000 | 20210804 | 2.5 | 180 | NA |
| 1 | 2 | 313222 | 20211118 | 3.125 | 360 | NA |
| 31 | 2 | 175000 | 20210326 | 3.14 | 180 | NA |
| 1 | 2 | 374409.83 | NA | 3.5 | 360 | NA |
| 31 | 2 | 200600 | 20201214 | NA | 180 | NA |
| 1 | 2 | 333584.35 | NA | 4.5 | 360 | NA |
| 2 | 1 | 66455 | 20211109 | NA | 360 | NA |
| 31 | 2 | 108000 | 20211107 | 2.375 | 180 | NA |
| 1 | 2 | 297993.78 | NA | 3.75 | 360 | NA |
| 31 | 1 | 173727 | 20211108 | 3.65 | 360 | NA |
| 31 | 2 | 108000 | 20210929 | NA | 180 | NA |
| 31 | 1 | 175000 | 20211108 | NA | 360 | NA |
| 31 | 2 | 233500 | NA | 3.5 | 360 | NA |
| 1 | 2 | 285000 | NA | 3.625 | 360 | NA |
| 1 | 2 | 357407 | NA | 2.75 | 360 | NA |
| 1 | 2 | 279346.42 | NA | 2.875 | 360 | NA |
| 2 | 1 | 46000 | 20210201 | 4.7 | 360 | NA |
| 31 | 2 | 347000 | 20201222 | 2.99 | 360 | NA |
| 1 | 2 | 290122.04 | NA | 3.75 | 360 | NA |
| 31 | 1 | 229000 | 20210603 | 3.65 | 360 | NA |
| 1 | 2 | 270750 | NA | 3.75 | 360 | NA |
| 2 | 1 | 190000 | 20211016 | 5.15 | 360 | NA |
| 1 | 2 | 450181.11 | NA | 2.625 | 360 | NA |
| 31 | 2 | 50000 | 20210728 | NA | 240 | NA |


| 31 | 2 | 162000 | 20210219 | 2.625 | 180 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 32 | 2 | 173000 | 20201118 | 2.5 | 180 | NA |
| 31 | 2 | 155000 | 20211104 | 3.09 | 180 | NA |
| 1 | 2 | 280250 | NA | 3.75 | 360 | NA |
| 32 | 2 | 320000 | NA | 3.5 | 360 | NA |
| 2 | 2 | 70000 | 20210626 | NA | 150 | NA |
| 1 | 2 | 356000 | NA | 2.75 | 360 | NA |
| 1 | 2 | 386141 | 20210629 | 3.125 | 360 | NA |
| 2 | 1 | 75000 | 20210702 | NA | 360 | NA |
| 1 | 2 | 285000 | 20210802 | 2.875 | 360 | NA |
| 31 | 2 | 207877 | 20210122 | 2.5 | 180 | NA |
| 2 | 2 | 300000 | 20210219 | NA | 60 | NA |
| 32 | 2 | 200000 | 20210824 | 3.375 | 360 | NA |
| 32 | 2 | 318750 | 20210910 | 3.75 | 360 | NA |
| 1 | 2 | 357548.45 | NA | 3.125 | 360 | NA |
| 32 | 2 | 181000 | 20210416 | NA | 360 | NA |
| 1 | 2 | 332500 | 20210406 | NA | 360 | NA |
| 1 | 2 | 343406 | NA | 2.75 | 360 | NA |
| 1 | 2 | 363165 | NA | 2.625 | 360 | NA |
| 31 | 2 | 240000 | 20211112 | NA | 240 | NA |
| 31 | 2 | 228500 | NA | 2.875 | 240 | NA |
| 31 | 2 | 247500 | 20210202 | 3.625 | 360 | NA |
| 1 | 2 | 299524.17 | NA | 2.625 | 360 | NA |
| 1 | 2 | 261505.54 | NA | 3.75 | 360 | NA |
| 1 | 2 | 245000 | NA | 3.125 | 360 | NA |
| 2 | 1 | 73604 | 20210316 | 3.95 | 360 | NA |
| 1 | 2 | 242037.9 | NA | 3.75 | 360 | NA |
| 1 | 2 | 225000 | 20210503 | 3.375 | 120 | NA |
| 31 | 2 | 271000 | 20210318 | 3.875 | 360 | NA |
| 1 | 2 | 175277.02 | NA | 2.875 | 360 | NA |
| 31 | 2 | 157572.12 | 20201231 | 3.29 | 240 | NA |
| 1 | 2 | 294027.23 | NA | 2.625 | 360 | NA |
| 31 | 2 | 238585.74 | NA | 2.875 | 360 | NA |
| 31 | 2 | 118500 | 20201128 | 3.59 | 180 | NA |


| 1 | 2 | 540000 | 20211013 | 3.84 | 61 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 475362.22 | NA | 2.75 | 360 | NA |
| 31 | 2 | 244000 | NA | 2.625 | 360 | NA |
| 31 | 2 | 335198.67 | NA | 2.75 | 360 | NA |
| 2 | 2 | 30000 | 20210416 | NA | 180 | NA |
| 1 | 2 | 336183.9 | NA | 2.75 | 360 | NA |
| 2 | 2 | 114000 | 20211020 | 4.7 | 360 | NA |
| 31 | 2 | 146000 | 20211020 | 3.24 | 240 | NA |
| 31 | 2 | 308481.01 | NA | 3.125 | 360 | NA |
| 2 | 1 | 16000 | 20210326 | NA | 360 | NA |
| 2 | 1 | 15000 | 20210222 | NA | 360 | NA |
| 31 | 2 | 70000 | 20210225 | NA | 240 | NA |
| 31 | 2 | 295000 | 20210219 | NA | 60 | NA |
| 32 | 2 | 276000 | 20210301 | 3.625 | 240 | NA |
| 1 | 2 | 313797 | NA | 3.375 | 360 | NA |
| 31 | 2 | 249900 | NA | 3.25 | 360 | NA |
| 1 | 2 | 192032.43 | NA | 4 | 360 | NA |
| 31 | 2 | 272656 | NA | 2.5 | 360 | NA |
| 1 | 2 | 462074.53 | NA | 2.25 | 360 | NA |
| 1 | 2 | 300000 | 20201104 | 2.625 | 360 | NA |
| 1 | 2 | 291900 | 20210409 | 2.99 | 360 | NA |
| 2 | 1 | 60000 | 20210726 | NA | 360 | NA |
| 1 | 2 | 536000 | NA | 3.125 | 360 | NA |
| 1 | 2 | 347971.84 | NA | 3 | 360 | NA |
| 1 | 2 | 360000 | NA | 3.25 | 360 | NA |
| 1 | 2 | 439613.49 | NA | 3 | 360 | NA |
| 1 | 2 | 270019 | NA | 3 | 360 | NA |
| 1 | 2 | 315733.12 | NA | 3.625 | 360 | NA |
| 1 | 2 | 284050 | NA | 2.875 | 360 | NA |
| 31 | 2 | 175000 | 20210708 | NA | 240 | NA |
| 31 | 2 | 160000 | 20210319 | NA | 180 | NA |
| 1 | 2 | 174600 | NA | 3.625 | 360 | NA |
| 31 | 1 | 75000 | 20211004 | 4.15 | 360 | NA |
| 31 | 2 | 107500 | 20210913 | 2.89 | 144 | NA |


| 31 | 2 | 128600 | 20210119 | 2.5 | 180 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 192000 | 20211013 | 3.125 | 360 | NA |
| 2 | 1 | 75000 | 20210222 | 3.95 | 360 | NA |
| 31 | 2 | 60000 | 20210121 | 3.29 | 240 | NA |
| 31 | 2 | 146000 | 20211112 | NA | 180 | NA |
| 1 | 2 | 222888.23 | NA | 3.5 | 360 | NA |
| 32 | 2 | 215000 | 20210408 | 2.375 | 180 | NA |
| 31 | 2 | 240000 | 20210225 | NA | 240 | NA |
| 1 | 2 | 255290 | NA | 3.5 | 360 | NA |
| 31 | 2 | 238000 | 20210721 | NA | 240 | NA |
| 31 | 2 | 35869.89 | 20211025 | 3.19 | 108 | NA |
| 31 | 2 | 192000 | 20210327 | NA | 240 | NA |
| 1 | 2 | 285154 | NA | 2.625 | 360 | NA |
| 2 | 1 | 250000 | 20210422 | NA | 360 | NA |
| 1 | 2 | 13900 | 20210401 | NA | 48 | NA |
| 32 | 2 | 207950 | NA | 3.5 | 360 | NA |
| 2 | 1 | 15000 | 20210928 | NA | 360 | NA |
| 1 | 2 | 391500 | 20211012 | 2.75 | 240 | NA |
| 1 | 2 | 275500 | NA | 3.125 | 360 | NA |
| 32 | 2 | 293000 | NA | 3.5 | 360 | NA |
| 31 | 2 | 244750 | NA | 2.75 | 180 | NA |
| 1 | 2 | 256636.54 | NA | 3.375 | 360 | NA |
| 31 | 2 | 235000 | 20210818 | NA | 240 | NA |
| 31 | 2 | 30000 | 20210320 | 4.05 | 48 | NA |
| 32 | 2 | 115000 | 20210105 | 2.625 | 180 | NA |
| 31 | 2 | 233000 | 20210528 | 3.125 | 360 | NA |
| 32 | 2 | 262000 | NA | 3.125 | 240 | NA |
| 2 | 1 | 75000 | 20201219 | NA | 360 | NA |
| 31 | 2 | 186000 | 20201219 | NA | 240 | NA |
| 1 | 2 | 372924.32 | NA | 2.625 | 360 | NA |
| 32 | 2 | 225725.99 | NA | 3.625 | 360 | NA |
| 31 | 2 | 386670 | 20201217 | 2.99 | 360 | NA |
| 31 | 2 | 363500 | 20211105 | NA | 240 | NA |
| 31 | 2 | 203000 | 20210512 | 2.5 | 180 | NA |


| 1 | 2 | 348000 | 20210111 | 2.5 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 440400 | 20210428 | 3.125 | 360 | NA |
| 1 | 2 | 405000 | 20210211 | 2.99 | 360 | NA |
| 31 | 2 | 265644 | 20210125 | 2.75 | 360 | NA |
| 31 | 2 | 166500 | 20210122 | 2.875 | 360 | NA |
| 1 | 2 | 511100 | 20210201 | 3.375 | 360 | NA |
| 1 | 2 | 106500 | NA | 3.75 | 360 | NA |
| 1 | 2 | 189000 | NA | 2.875 | 360 | NA |
| 31 | 2 | 456500 | 20210831 | 2.5 | 240 | NA |
| 31 | 2 | 243000 | 20210212 | NA | 240 | NA |
| 1 | 2 | 512545 | NA | 2.75 | 360 | NA |
| 1 | 2 | 142500 | 20210108 | 2.75 | 360 | NA |
| 31 | 2 | 213000 | 20211103 | NA | 240 | NA |
| 31 | 2 | 80000 | 20210105 | 2.74 | 61 | NA |
| 1 | 2 | 193604.45 | NA | 3.625 | 360 | NA |
| 1 | 2 | 246977.45 | NA | 3.75 | 360 | NA |
| 1 | 2 | 432000 | NA | 3 | 360 | NA |
| 1 | 2 | 334000 | NA | 3.375 | 360 | NA |
| 31 | 2 | 160000 | 20201109 | 4.09 | 240 | NA |
| 1 | 2 | 534375 | 20210316 | 2.99 | 360 | NA |
| 31 | 2 | 157500 | 20210413 | NA | 240 | NA |
| 2 | 1 | 55000 | 20211013 | NA | 360 | NA |
| 1 | 2 | 733500 | 20211123 | 2.5 | 360 | NA |
| 31 | 2 | 109844 | 20211101 | 3.24 | 240 | NA |
| 2 | 2 | 93540 | 20210210 | 3.45 | 60 | NA |
| 31 | 2 | 380000 | NA | 2.875 | 360 | NA |
| 2 | 1 | 100000 | 20210828 | 3.45 | 360 | NA |
| 31 | 2 | 109843.84 | 20210811 | NA | 120 | NA |
| 2 | 1 | 100000 | 20210811 | NA | 360 | NA |
| 31 | 1 | 200000 | 20210608 | NA | 360 | NA |
| 31 | 2 | 197928 | 20210608 | NA | 240 | NA |
| 31 | 2 | 187258.88 | 20210805 | 2.59 | 120 | NA |
| 1 | 2 | 157262.78 | NA | 3.75 | 360 | NA |
| 32 | 2 | 267000 | 20210505 | 3.625 | 360 | NA |


| 32 | 2 | 440000 | NA | 3.125 | 300 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | 1 | 69031 | 20210207 | 3.95 | 360 | NA |
| 1 | 2 | 680000 | 20210914 | 2.625 | 360 | NA |
| 31 | 2 | 208200 | 20210727 | 2.25 | 180 | NA |
| 31 | 2 | 509542.74 | NA | 3.125 | 360 | NA |
| 1 | 2 | 388000 | 20210121 | 2.75 | 360 | NA |
| 1 | 2 | 223000 | NA | 3.375 | 360 | NA |
| 31 | 2 | 610300 | 20210217 | 2.875 | 360 | NA |
| 31 | 2 | 345000 | NA | 2.75 | 360 | NA |
| 31 | 2 | 132632.77 | 20210205 | NA | 360 | NA |
| 1 | 2 | 1119200 | 20210831 | 2.25 | 360 | NA |
| 1 | 2 | 266500 | 20210401 | 3.25 | 360 | NA |
| 31 | 2 | 995000 | 20210211 | 3.25 | 360 | NA |
| 2 | 1 | 124000 | 20210215 | 4.35 | 360 | NA |
| 31 | 2 | 927000 | 20200928 | 3.5 | 360 | NA |
| 2 | 2 | 50000 | 20211014 | NA | 180 | NA |
| 1 | 2 | 485450 | NA | 2.75 | 360 | NA |
| 1 | 2 | 783000 | 20211105 | 2.75 | 360 | NA |
| 31 | 2 | 219900 | 20201206 | 2.875 | 240 | NA |
| 1 | 2 | 528438 | NA | 2.99 | 360 | NA |
| 2 | 1 | 125000 | 20210614 | NA | 360 | NA |
| 1 | 2 | 481500 | NA | 3.125 | 360 | NA |
| 1 | 2 | 494500 | NA | 2.75 | 360 | NA |
| 1 | 2 | 548250 | NA | 2.875 | 360 | NA |
| 2 | 1 | 100000 | 20201219 | 3.95 | 360 | NA |
| 1 | 2 | 351500 | 20210520 | 2.875 | 360 | NA |
| 31 | 2 | 180000 | 20210305 | 3.375 | 360 | NA |
| 31 | 2 | 478000 | 20210128 | 2.75 | 360 | NA |
| 31 | 2 | 225000 | 20210111 | 3.5 | 240 | NA |
| 31 | 2 | 740800 | 20201029 | 2.75 | 360 | NA |
| 1 | 2 | 256953 | NA | 3.75 | 360 | NA |
| 1 | 2 | 597526 | NA | 3.25 | 360 | NA |
| 31 | 2 | 334200 | 20200723 | 3.375 | 360 | NA |
| 31 | 2 | 548250 | NA | 2.875 | 360 | NA |


| 31 | 2 | 112000 | 20210730 | 2.25 | 180 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 32 | 2 | 340000 | 20211008 | 3.625 | 360 | NA |
| 31 | 2 | 579000 | 20211115 | 2.875 | 360 | NA |
| 1 | 2 | 392000 | 20210909 | 3.5 | 360 | NA |
| 31 | 2 | 548250 | 20210128 | 2.75 | 360 | NA |
| 31 | 2 | 452566 | 20210413 | NA | 180 | NA |
| 31 | 2 | 448000 | 20201229 | NA | 180 | NA |
| 1 | 2 | 855000 | 20201216 | 2.99 | 360 | NA |
| 32 | 2 | 311100 | 20211110 | 3.375 | 240 | NA |
| 2 | 1 | 50000 | 20210509 | NA | 360 | NA |
| 31 | 1 | 35000 | 20210917 | NA | 360 | NA |
| 31 | 2 | 222000 | 20210427 | 2.625 | 180 | NA |
| 1 | 2 | 358625 | NA | 3.125 | 360 | NA |
| 31 | 2 | 446000 | NA | 2.99 | 360 | NA |
| 1 | 2 | 573600 | NA | 3.25 | 360 | NA |
| 1 | 2 | 648000 | 20210322 | 2.875 | 360 | NA |
| 31 | 2 | 458500 | 20210128 | 3.625 | 360 | NA |
| 1 | 2 | 152950 | NA | 3.75 | 360 | NA |
| 1 | 2 | 391500 | NA | 3.125 | 360 | NA |
| 1 | 2 | 194000 | NA | 3.75 | 360 | NA |
| 31 | 2 | 502000 | NA | 2.75 | 360 | NA |
| 31 | 2 | 476912 | NA | 2.375 | 360 | NA |
| 1 | 2 | 552500 | 20210522 | 2.99 | 360 | NA |
| 1 | 2 | 451250 | NA | 2.99 | 360 | NA |
| 1 | 2 | 1224800 | 20210217 | 2.5 | 360 | NA |
| 2 | 1 | 174190 | 20210510 | 3.65 | 360 | NA |
| 31 | 2 | 521500 | 20210517 | 3.25 | 360 | NA |
| 1 | 2 | 548000 | 20210517 | 2.99 | 360 | NA |
| 1 | 2 | 624000 | 20201217 | 2.375 | 360 | NA |
| 31 | 2 | 357500 | 20201211 | 3.375 | 360 | NA |
| 1 | 2 | 600000 | 20210312 | NA | 360 | NA |
| 1 | 2 | 216725.84 | NA | 3.375 | 360 | NA |
| 1 | 2 | 956000 | 20210510 | 2.625 | 360 | NA |
| 1 | 2 | 1220000 | 20210312 | 2.5 | 360 | NA |


| 1 | 2 | 471188.64 | NA | 2.99 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 614000 | 20210428 | 2.875 | 360 | NA |
| 1 | 2 | 910000 | 20210113 | NA | 360 | NA |
| 31 | 2 | 470000 | NA | 3.125 | 360 | NA |
| 1 | 2 | 493905 | NA | 3.25 | 360 | NA |
| 31 | 2 | 476500 | 20210610 | 2.25 | 180 | NA |
| 1 | 1 | 80000 | 20210224 | NA | 360 | NA |
| 31 | 2 | 624500 | 20210803 | 3 | 360 | NA |
| 1 | 2 | 696000 | 20211014 | 2.25 | 360 | NA |
| 2 | 2 | 723200 | 20201023 | 3.375 | 360 | NA |
| 1 | 2 | 400000 | 20210225 | 2.875 | 360 | NA |
| 1 | 2 | 1690000 | 20211206 | 2.97 | 60 | NA |
| 31 | 2 | 291500 | 20201029 | 3.625 | 360 | NA |
| 2 | 1 | 25000 | 20210922 | 5.8 | 360 | NA |
| 31 | 2 | 555000 | 20210112 | 3.5 | 360 | NA |
| 31 | 2 | 153000 | 20210112 | 2.99 | 360 | NA |
| 1 | 2 | 2360000 | 20211206 | 2.97 | 60 | NA |
| 1 | 2 | 569494 | NA | 2.625 | 360 | NA |
| 1 | 2 | 174600 | NA | 3.75 | 360 | NA |
| 1 | 2 | 93500 | NA | 3 | 360 | NA |
| 31 | 2 | 228000 | 20210629 | 2.99 | 240 | NA |
| 1 | 2 | 328932 | NA | 3.5 | 360 | NA |
| 1 | 2 | 376200 | NA | 3.75 | 360 | NA |
| 1 | 2 | 282150 | NA | 3.375 | 360 | NA |
| 31 | 1 | 500 | 20210422 | NA | 360 | NA |
| 1 | 2 | 274737.73 | NA | 3 | 360 | NA |
| 31 | 2 | 222000 | 20211115 | NA | 120 | NA |
| 2 | 2 | 75000 | 20210731 | 3.04 | 240 | NA |
| 2 | 2 | 120000 | 20210304 | NA | 240 | NA |
| 31 | 2 | 266000 | 20210320 | NA | 240 | NA |
| 31 | 2 | 154000 | 20210224 | 2.625 | 180 | NA |
| 1 | 2 | 236185.79 | NA | 3.625 | 360 | NA |
| 31 | 2 | 851000 | 20210825 | 2.75 | 60 | NA |
| 1 | 2 | 473563.92 | NA | 3.25 | 360 | NA |


| 2 | 1 | 130000 | 20211006 | 3.25 | 59 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 284747 | NA | 3.125 | 360 | NA |
| 31 | 1 | 216000 | 20210827 | NA | 360 | NA |
| 1 | 2 | 311600 | NA | 3.125 | 360 | NA |
| 1 | 2 | 190399.06 | NA | 4.625 | 360 | NA |
| 32 | 2 | 156000 | 20210930 | NA | 360 | NA |
| 1 | 2 | 407483 | NA | 3.5 | 360 | NA |
| 1 | 2 | 338182.03 | NA | 3.125 | 360 | NA |
| 31 | 2 | 33800 | 20210116 | NA | 240 | NA |
| 1 | 2 | 174732.93 | NA | 2.875 | 360 | NA |
| 2 | 2 | 150000 | 20210709 | NA | 360 | NA |
| 2 | 2 | 25000 | 20211001 | 3.9 | 60 | NA |
| 31 | 2 | 124000 | 20210916 | 2.89 | 120 | NA |
| 2 | 1 | 100000 | 20210708 | NA | 360 | NA |
| 1 | 2 | 455842.61 | NA | 3.375 | 360 | NA |
| 1 | 2 | 405000 | NA | 3.125 | 360 | NA |
| 31 | 2 | 548250 | NA | 2.75 | 360 | NA |
| 31 | 2 | 510400 | NA | 2.25 | 300 | NA |
| 1 | 2 | 1720000 | 20210201 | 2.25 | 360 | NA |
| 31 | 2 | 1068000 | 20210225 | 3 | 360 | NA |
| 31 | 2 | 1343500 | 20210609 | 2.375 | 360 | NA |
| 1 | 2 | 785250 | 20201218 | 2.99 | 360 | NA |
| 1 | 2 | 461347.36 | NA | 2.75 | 360 | NA |
| 2 | 1 | 267480 | 20210426 | 3.65 | 360 | NA |
| 31 | 2 | 321595.82 | NA | 3.125 | 240 | NA |
| 31 | 2 | 258133.71 | NA | 3.25 | 240 | NA |
| 1 | 2 | 475000 | NA | 3.125 | 360 | NA |
| 32 | 2 | 535200 | NA | 2.875 | 360 | NA |
| 31 | 2 | 353500 | 20210119 | 3.25 | 360 | NA |
| 1 | 2 | 422750 | NA | 2.875 | 360 | NA |
| 1 | 2 | 279775 | NA | 3.125 | 360 | NA |
| 31 | 2 | 284000 | NA | 3.5 | 240 | NA |
| 1 | 2 | 472000 | 20210121 | 2.625 | 360 | NA |
| 31 | 1 | 384500 | 20210723 | 3.95 | 360 | NA |


| 1 | 2 | 342000 | 20210810 | 2.99 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 588987.54 | NA | 3 | 360 | NA |
| 1 | 2 | 240000 | 20211025 | 3.375 | 360 | NA |
| 31 | 2 | 345000 | NA | 2.625 | 240 | NA |
| 1 | 2 | 720000 | 20210419 | 2.5 | 360 | NA |
| 1 | 2 | 506400 | NA | 3.125 | 360 | NA |
| 1 | 2 | 510400 | NA | 2.875 | 360 | NA |
| 31 | 2 | 516750 | 20210113 | 2.99 | 360 | NA |
| 31 | 2 | 840000 | NA | 3.625 | 360 | NA |
| 32 | 2 | 548250 | 20210111 | 2.875 | 360 | NA |
| 31 | 2 | 138000 | 20201106 | 2.99 | 360 | NA |
| 31 | 2 | 360000 | NA | 3.625 | 360 | NA |
| 1 | 2 | 728000 | 20210310 | 2.875 | 360 | NA |
| 31 | 2 | 131500 | 20210114 | 2.375 | 180 | NA |
| 2 | 2 | 150000 | 20210130 | NA | 60 | NA |
| 2 | 1 | 100000 | 20210412 | 3.65 | 360 | NA |
| 1 | 2 | 471250 | 20210120 | 2.5 | 360 | NA |
| 1 | 2 | 417375 | NA | 3.25 | 360 | NA |
| 31 | 2 | 532000 | NA | 3.125 | 360 | NA |
| 1 | 2 | 475000 | NA | 3.5 | 360 | NA |
| 31 | 2 | 503000 | 20210126 | 2.875 | 360 | NA |
| 31 | 2 | 438000 | 20201026 | 2.99 | 180 | NA |
| 31 | 2 | 565500 | NA | 2.625 | 360 | NA |
| 31 | 2 | 800000 | 20210617 | 2.75 | 360 | NA |
| 1 | 2 | 384117.57 | NA | 3.25 | 360 | NA |
| 1 | 2 | 348750 | 20210407 | 2.99 | 360 | NA |
| 31 | 2 | 539500 | 20210119 | 2.25 | 180 | NA |
| 31 | 2 | 485583 | NA | 2.75 | 360 | NA |
| 31 | 2 | 302000 | 20200519 | NA | 360 | NA |
| 31 | 2 | 510400 | NA | 2.75 | 360 | NA |
| 1 | 2 | 487500 | 20210709 | 2.375 | 360 | NA |
| 31 | 2 | 462481 | NA | 3.125 | 240 | NA |
| 31 | 2 | 346500 | 20210525 | 2.875 | 240 | NA |
| 1 | 2 | 712000 | 20210318 | 2.5 | 360 | NA |


| 31 | 2 | 1081920 | 20211104 | 3.125 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | 1 | 202424 | 20210512 | 4.15 | 360 | NA |
| 1 | 2 | 885500 | 20201215 | 2.75 | 360 | NA |
| 31 | 2 | 457109 | 20211108 | 2.875 | 360 | NA |
| 31 | 2 | 467500 | NA | 3.25 | 360 | NA |
| 1 | 2 | 265905 | NA | 3.75 | 360 | NA |
| 2 | 1 | 100000 | 20211203 | NA | 360 | NA |
| 31 | 2 | 317418.37 | NA | 2.625 | 360 | NA |
| 1 | 2 | 548000 | 20210729 | 2.75 | 360 | NA |
| 1 | 2 | 230943.87 | NA | 3.625 | 360 | NA |
| 1 | 2 | 927000 | 20210902 | 2.5 | 360 | NA |
| 1 | 2 | 1000000 | 20210909 | 2.75 | 360 | NA |
| 1 | 2 | 394400 | 20210909 | 2.75 | 360 | NA |
| 1 | 2 | 499900 | NA | 2.75 | 360 | NA |
| 1 | 2 | 535500 | 20210617 | 3.25 | 360 | NA |
| 1 | 2 | 773500 | 20210629 | 2.75 | 360 | NA |
| 1 | 2 | 588080 | NA | 2.75 | 360 | NA |
| 32 | 2 | 712500 | 20210810 | 2.625 | 360 | NA |
| 1 | 2 | 358700 | NA | 3 | 360 | NA |
| 1 | 2 | 255000 | NA | 3.625 | 360 | NA |
| 1 | 2 | 488000 | NA | 3 | 360 | NA |
| 1 | 2 | 353600 | 20210920 | 2.5 | 240 | NA |
| 1 | 2 | 547268.23 | NA | 2.75 | 360 | NA |
| 2 | 1 | 100000 | 20210804 | NA | 360 | NA |
| 31 | 2 | 526290.12 | NA | 2.5 | 360 | NA |
| 1 | 2 | 514315.9 | NA | 3 | 360 | NA |
| 31 | 2 | 324000 | NA | 2.875 | 240 | NA |
| 1 | 2 | 464000 | NA | 2.625 | 360 | NA |
| 1 | 2 | 351920 | 20210426 | 2.125 | 180 | NA |
| 2 | 1 | 75000 | 20210803 | NA | 360 | NA |
| 1 | 2 | 607500 | 20210628 | 2.375 | 360 | NA |
| 31 | 2 | 183961.93 | NA | 2.25 | 360 | NA |
| 1 | 2 | 176000 | 20210405 | 3 | 360 | NA |
| 31 | 2 | 507000 | 20210201 | 2.875 | 360 | NA |


| 1 | 2 | 277500 | NA | 3.125 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 430000 | 20210113 | 2.99 | 360 | NA |
| 31 | 2 | 516000 | 20210105 | 2.99 | 360 | NA |
| 1 | 2 | 468000 | 20210223 | 3.125 | 360 | NA |
| 31 | 2 | 500570.91 | NA | 2.875 | 360 | NA |
| 31 | 2 | 781000 | 20210414 | 2.8 | 61 | NA |
| 1 | 2 | 548250 | NA | 2.875 | 360 | NA |
| 1 | 2 | 291000 | NA | 3.625 | 360 | NA |
| 1 | 2 | 416000 | 20210601 | 2.625 | 360 | NA |
| 1 | 2 | 548000 | 20210717 | 2.875 | 360 | NA |
| 1 | 2 | 498750 | NA | 3.125 | 360 | NA |
| 1 | 2 | 378750 | NA | 2.875 | 360 | NA |
| 1 | 2 | 624750 | 20210303 | 2.625 | 360 | NA |
| 1 | 2 | 572000 | 20210125 | 2.375 | 360 | NA |
| 2 | 1 | 90700 | 20210414 | 4.55 | 360 | NA |
| 1 | 2 | 860000 | 20210825 | 3.07 | 60 | NA |
| 31 | 2 | 380000 | NA | 2.625 | 360 | NA |
| 31 | 2 | 510400 | NA | 2.625 | 360 | NA |
| 1 | 2 | 430000 | 20210225 | 2.875 | 360 | NA |
| 1 | 2 | 543750 | NA | 3 | 360 | NA |
| 1 | 2 | 480000 | NA | 3.125 | 360 | NA |
| 1 | 2 | 556750 | 20210905 | 2.375 | 360 | NA |
| 2 | 1 | 208900 | 20210624 | NA | 360 | NA |
| 1 | 2 | 720000 | 20210826 | 2.375 | 360 | NA |
| 31 | 2 | 491200 | 20210630 | 2.75 | 360 | NA |
| 2 | 1 | 126800 | 20210120 | 3.95 | 360 | NA |
| 1 | 2 | 598500 | 20210405 | 2.375 | 360 | NA |
| 31 | 2 | 407390 | NA | 2.875 | 360 | NA |
| 1 | 2 | 548250 | NA | 3.5 | 360 | NA |
| 1 | 2 | 326400 | NA | 3.125 | 360 | NA |
| 31 | 2 | 383000 | 20210108 | 2.75 | 180 | NA |
| 1 | 2 | 638000 | 20210609 | 2.75 | 360 | NA |
| 1 | 2 | 517750 | NA | 3.125 | 360 | NA |
| 1 | 2 | 548300 | 20210323 | 2.875 | 360 | NA |


| 31 | 2 | 417000 | 20210304 | 3.375 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 541300 | NA | 2.75 | 360 | NA |
| 1 | 2 | 210000 | NA | 3.75 | 360 | NA |
| 32 | 2 | 537684 | NA | 2.25 | 360 | NA |
| 1 | 2 | 398000 | NA | 3.25 | 360 | NA |
| 31 | 2 | 45261 | 20210105 | NA | 84 | NA |
| 1 | 2 | 558000 | 20210617 | 3 | 360 | NA |
| 31 | 2 | 952000 | NA | 3.125 | 360 | NA |
| 31 | 2 | 699000 | 20210820 | 3 | 240 | NA |
| 1 | 2 | 283628 | NA | 2.99 | 360 | NA |
| 31 | 2 | 752000 | 20210225 | 3.5 | 360 | NA |
| 1 | 2 | 548250 | NA | 3.125 | 360 | NA |
| 1 | 2 | 403750 | NA | 3.5 | 360 | NA |
| 1 | 2 | 758625 | 20210924 | 2.625 | 360 | NA |
| 1 | 2 | 408000 | 20210922 | 2.625 | 360 | NA |
| 1 | 2 | 463250 | 20210607 | 2.99 | 360 | NA |
| 1 | 2 | 650001 | 20210518 | 2.75 | 360 | NA |
| 1 | 2 | 412000 | 20210806 | 2.99 | 360 | NA |
| 31 | 2 | 562000 | 20201021 | 3.99 | 360 | NA |
| 1 | 2 | 176700 | NA | 3.75 | 360 | NA |
| 1 | 2 | 316220 | NA | 3.75 | 360 | NA |
| 31 | 2 | 428000 | 20211005 | 3.25 | 360 | NA |
| 1 | 2 | 289800 | NA | 2.875 | 240 | NA |
| 1 | 2 | 400500 | 20210713 | 2.375 | 360 | NA |
| 1 | 2 | 586186 | 20210827 | 3.125 | 360 | NA |
| 1 | 2 | 586110 | NA | 2.25 | 360 | NA |
| 31 | 2 | 325400 | 20210729 | 3.25 | 360 | NA |
| 31 | 2 | 235500 | 20211108 | 2.625 | 360 | NA |
| 31 | 2 | 720970 | 20210329 | 3.625 | 360 | NA |
| 31 | 2 | 208500 | 20201201 | 3.25 | 360 | NA |
| 31 | 2 | 490000 | NA | 2.75 | 360 | NA |
| 1 | 2 | 548250 | NA | 2.625 | 360 | NA |
| 31 | 2 | 97788 | 20210805 | NA | 180 | NA |
| 1 | 2 | 847500 | 20210909 | 3.625 | 360 | NA |


| 31 | 2 | 826000 | 20210625 | 2.5 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 1140000 | 20210518 | NA | 360 | NA |
| 1 | 2 | 926500 | 20210322 | 2.875 | 360 | NA |
| 1 | 2 | 248499.65 | NA | 3.375 | 360 | NA |
| 1 | 2 | 760000 | NA | 2.875 | 360 | NA |
| 1 | 2 | 451250 | 20210215 | 2.75 | 360 | NA |
| 2 | 2 | 25000 | 20210616 | NA | 36 | NA |
| 2 | 1 | 250000 | 20210514 | NA | 360 | NA |
| 31 | 2 | 677696 | 20210712 | 2.25 | 360 | NA |
| 1 | 2 | 892000 | 20211115 | 3.25 | 60 | NA |
| 32 | 2 | 700895.21 | NA | 3.5 | 360 | NA |
| 31 | 2 | 548250 | NA | 2.99 | 360 | NA |
| 31 | 2 | 230000 | 20210105 | 2.875 | 360 | NA |
| 31 | 2 | 682500 | 20201215 | 2.875 | 360 | NA |
| 31 | 2 | 453300.99 | NA | 3.625 | 360 | NA |
| 1 | 2 | 1087500 | 20210816 | 2.625 | 360 | NA |
| 32 | 2 | 100000 | 20210831 | 2.625 | 180 | NA |
| 31 | 2 | 510400 | NA | 2.75 | 360 | NA |
| 1 | 2 | 202500 | NA | 3.125 | 360 | NA |
| 2 | 1 | 76849 | 20210316 | 3.45 | 360 | NA |
| 31 | 2 | 621427 | 20211006 | 3 | 360 | NA |
| 1 | 2 | 600000 | 20210605 | 2.875 | 360 | NA |
| 1 | 2 | 548250 | NA | 3.125 | 360 | NA |
| 31 | 2 | 445000 | NA | 2.875 | 360 | NA |
| 31 | 2 | 478178.02 | NA | 3 | 360 | NA |
| 31 | 2 | 610000 | 20210908 | 2.375 | 360 | NA |
| 1 | 2 | 488250 | NA | 2.99 | 360 | NA |
| 31 | 2 | 685000 | 20201216 | 3.625 | 360 | NA |
| 32 | 2 | 395000 | NA | 2.5 | 360 | NA |
| 1 | 2 | 492300 | NA | 2.625 | 360 | NA |
| 31 | 1 | 300000 | 20211214 | NA | 360 | NA |
| 31 | 2 | 605000 | 20210812 | NA | 360 | NA |
| 1 | 2 | 369000 | 20210206 | 2.99 | 360 | NA |
| 1 | 2 | 248000 | NA | 3.625 | 360 | NA |


| 2 | 1 | 134000 | 20210503 | 4.55 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 510400 | 20201122 | 2.875 | 360 | NA |
| 31 | 2 | 495000 | 20210224 | NA | 60 | NA |
| 31 | 2 | 209900 | 20210802 | 2.125 | 180 | NA |
| 1 | 2 | 493200 | NA | 3 | 360 | NA |
| 31 | 1 | 604800 | 20210212 | 3.95 | 360 | NA |
| 1 | 2 | 450317.15 | NA | 2.75 | 360 | NA |
| 31 | 2 | 430000 | NA | 3.125 | 240 | NA |
| 31 | 2 | 477677.46 | NA | 2.99 | 360 | NA |
| 1 | 2 | 526250 | NA | 2.75 | 360 | NA |
| 31 | 2 | 250000 | NA | 2.625 | 360 | NA |
| 1 | 2 | 473100 | NA | 3.125 | 360 | NA |
| 31 | 2 | 116967 | 20210720 | 2.79 | 130 | NA |
| 31 | 2 | 198000 | 20201221 | 2.99 | 240 | NA |
| 2 | 2 | 75000 | 20211209 | NA | 120 | NA |
| 31 | 2 | 185000 | 20210513 | NA | 360 | NA |
| 31 | 2 | 92595 | 20210607 | 2.99 | 180 | NA |
| 31 | 2 | 91000 | 20210306 | NA | 180 | NA |
| 31 | 2 | 231000 | 20210114 | NA | 180 | NA |
| 1 | 2 | 274668.82 | NA | 3.75 | 360 | NA |
| 2 | 1 | 20000 | 20210401 | NA | 360 | NA |
| 1 | 2 | 270733.35 | NA | 3.5 | 360 | NA |
| 31 | 2 | 256500 | 20201102 | 2.875 | 360 | NA |
| 32 | 2 | 305250 | NA | 2.375 | 360 | NA |
| 32 | 2 | 169600 | 20210816 | NA | 360 | NA |
| 31 | 2 | 221000 | 20210512 | NA | 180 | NA |
| 1 | 2 | 191250 | 20210607 | 4.125 | 360 | NA |
| 31 | 2 | 82000 | 20201230 | NA | 120 | NA |
| 2 | 2 | 50000 | 20201209 | NA | 240 | NA |
| 1 | 2 | 280321 | NA | 2.75 | 360 | NA |
| 32 | 2 | 193200 | 20200916 | 4 | 360 | NA |
| 31 | 2 | 208500 | 20200916 | 4 | 360 | NA |
| 31 | 2 | 163579 | 20210522 | 2.99 | 180 | NA |
| 31 | 2 | 226050 | 20210526 | 3.375 | 360 | NA |


| 31 | 2 | 153805.7 | 20211104 | 3.69 | 240 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 143500 | 20210803 | 2.75 | 360 | NA |
| 31 | 2 | 64850.41 | 20210809 | 3.04 | 240 | NA |
| 31 | 2 | 145000 | 20210723 | 2.79 | 180 | NA |
| 31 | 2 | 201136 | 20210329 | NA | 240 | NA |
| 1 | 2 | 249444.66 | NA | 2.5 | 360 | NA |
| 2 | 1 | 70000 | 20210420 | NA | 360 | NA |
| 31 | 2 | 31000 | 20210408 | NA | 120 | NA |
| 31 | 2 | 205000 | 20210325 | NA | 240 | NA |
| 1 | 2 | 290749 | NA | 2.875 | 360 | NA |
| 31 | 2 | 165000 | 20210306 | NA | 216 | NA |
| 1 | 2 | 377377.29 | NA | 3 | 360 | NA |
| 1 | 2 | 358388 | NA | 3.625 | 360 | NA |
| 31 | 2 | 199822 | 20210209 | NA | 240 | NA |
| 1 | 2 | 186558 | NA | 3.5 | 360 | NA |
| 32 | 2 | 121000 | 20200916 | 3.375 | 240 | NA |
| 31 | 1 | 115709 | 20210106 | 3.45 | 360 | NA |
| 2 | 1 | 145500 | 20201211 | 3.45 | 360 | NA |
| 32 | 2 | 295000 | NA | 3 | 360 | NA |
| 2 | 1 | 125000 | 20210318 | 3.95 | 360 | NA |
| 31 | 2 | 116150.82 | 20210225 | 3.14 | 240 | NA |
| 1 | 2 | 318455.23 | NA | 3.125 | 360 | NA |
| 32 | 2 | 309000 | NA | 3.125 | 360 | NA |
| 31 | 2 | 234200 | 20201216 | 2.375 | 120 | NA |
| 31 | 2 | 266000 | 20211109 | 3.125 | 360 | NA |
| 31 | 2 | 167575.32 | 20210401 | 3.99 | 240 | NA |
| 1 | 2 | 220826.9 | NA | 3.75 | 360 | NA |
| 1 | 2 | 93750 | 20210217 | 3.25 | 360 | NA |
| 2 | 2 | 150000 | 20210411 | 2.84 | 120 | NA |
| 2 | 2 | 55000 | 20211214 | NA | 240 | NA |
| 2 | 2 | 38868 | 20211102 | 6.05 | 360 | NA |
| 32 | 2 | 257600 | 20210729 | 3.25 | 360 | NA |
| 2 | 1 | 30636 | 20210504 | 4.4 | 360 | NA |
| 2 | 1 | 125000 | 20210927 | 3.65 | 360 | NA |


| 31 | 2 | 206400 | 20210921 | 3.29 | 240 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 119310 | NA | 3.75 | 360 | NA |
| 2 | 2 | 30000 | 20210810 | NA | 72 | NA |
| 1 | 2 | 168261 | NA | 3.75 | 360 | NA |
| 31 | 2 | 81000 | 20210315 | 3.09 | 180 | NA |
| 1 | 2 | 93120 | NA | 3.75 | 360 | NA |
| 31 | 2 | 39000 | 20210622 | NA | 144 | NA |
| 31 | 2 | 38000 | 20210607 | NA | 240 | NA |
| 1 | 2 | 422000 | 20211013 | 3 | 360 | NA |
| 1 | 2 | 189500 | 20210920 | 2.875 | 360 | NA |
| 31 | 2 | 224000 | 20210224 | NA | 240 | NA |
| 31 | 2 | 116000 | 20210211 | NA | 180 | NA |
| 2 | 1 | 98000 | 20210205 | NA | 360 | NA |
| 31 | 2 | 194000 | 20210322 | NA | 360 | NA |
| 31 | 2 | 200000 | 20210427 | NA | 168 | NA |
| 1 | 2 | 244451.38 | NA | 4.625 | 360 | NA |
| 31 | 2 | 117651.64 | 20201110 | 3.49 | 240 | NA |
| 31 | 2 | 197500 | 20210910 | NA | 180 | NA |
| 31 | 2 | 226000 | 20210803 | NA | 240 | NA |
| 2 | 1 | 15000 | 20210608 | 5.15 | 360 | NA |
| 32 | 2 | 190000 | 20210714 | NA | 240 | NA |
| 2 | 2 | 185000 | 20210427 | NA | 240 | NA |
| 1 | 2 | 265877.1 | NA | 3.75 | 360 | NA |
| 31 | 2 | 352080 | NA | 3.25 | 360 | NA |
| 31 | 2 | 137802 | 20210820 | NA | 240 | NA |
| 31 | 2 | 112419.86 | 20210719 | 2.59 | 120 | NA |
| 32 | 2 | 86000 | 20211004 | 2.875 | 240 | NA |
| 31 | 2 | 75540 | 20210316 | NA | 240 | NA |
| 1 | 2 | 276420 | 20210604 | 2.99 | 360 | NA |
| 1 | 2 | 152192 | NA | 2.75 | 360 | NA |
| 1 | 2 | 402573 | NA | 3.5 | 360 | NA |
| 31 | 2 | 220000 | 20210424 | 2.99 | 360 | NA |
| 32 | 2 | 137900 | 20211105 | 3.25 | 360 | NA |
| 1 | 2 | 370500 | NA | 3.5 | 360 | NA |


| 1 | 2 | 299475 | NA | 2.625 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 177800 | NA | 2.75 | 240 | NA |
| 1 | 2 | 327950 | NA | 3.5 | 360 | NA |
| 31 | 2 | 200000 | 20210702 | 3.04 | 180 | NA |
| 1 | 2 | 279360 | 20210423 | 3.625 | 360 | NA |
| 1 | 2 | 228000 | NA | 3.875 | 360 | NA |
| 1 | 2 | 342678 | NA | 2.625 | 360 | NA |
| 1 | 2 | 136000 | NA | 3.625 | 360 | NA |
| 32 | 2 | 215000 | 20201223 | NA | 360 | NA |
| 1 | 2 | 188218.19 | NA | 4.125 | 360 | NA |
| 2 | 1 | 50000 | 20210920 | NA | 360 | NA |
| 2 | 2 | 100000 | 20210908 | NA | 60 | NA |
| 31 | 2 | 78000 | 20210529 | NA | 120 | NA |
| 31 | 2 | 250000 | 20210807 | NA | 240 | NA |
| 2 | 2 | 46000 | 20210720 | NA | 120 | NA |
| 2 | 1 | 180000 | 20210529 | NA | 360 | NA |
| 31 | 2 | 170000 | 20210503 | 3.49 | 180 | NA |
| 1 | 2 | 245058.71 | NA | 3.125 | 360 | NA |
| 1 | 2 | 233533.35 | NA | 2.75 | 360 | NA |
| 1 | 2 | 97000 | 20201229 | NA | 180 | NA |
| 1 | 2 | 331390.6 | NA | 2.625 | 360 | NA |
| 1 | 2 | 60000 | 20210914 | NA | 240 | NA |
| 31 | 2 | 271218.79 | 20210826 | 3.79 | 240 | NA |
| 31 | 2 | 136403.84 | 20210513 | NA | 240 | NA |
| 1 | 2 | 331390.6 | NA | 2.625 | 360 | NA |
| 1 | 2 | 312173.93 | NA | 3.375 | 360 | NA |
| 31 | 2 | 92500 | 20211208 | NA | 180 | NA |
| 31 | 2 | 75600 | 20211019 | 2.79 | 84 | NA |
| 2 | 2 | 50000 | 20210903 | 2.79 | 180 | NA |
| 31 | 2 | 87000 | 20210813 | NA | 240 | NA |
| 1 | 2 | 270019 | NA | 2.625 | 360 | NA |
| 31 | 2 | 80000 | 20210910 | 2.79 | 144 | NA |
| 1 | 2 | 74000 | 20210821 | NA | 240 | NA |
| 2 | 1 | 40000 | 20210805 | NA | 360 | NA |


| 2 | 1 | 192500 | 20210713 | NA | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 258240 | NA | 3.625 | 360 | NA |
| 1 | 2 | 280880 | 20210413 | 3.75 | 360 | NA |
| 32 | 2 | 139769.88 | NA | 3.25 | 360 | NA |
| 2 | 1 | 30000 | 20210611 | NA | 360 | NA |
| 2 | 2 | 25000 | 20210614 | NA | 120 | NA |
| 1 | 2 | 340714 | NA | 2.875 | 360 | NA |
| 1 | 2 | 159588.8 | NA | 4 | 360 | NA |
| 2 | 1 | 55669 | 20211115 | 5.15 | 360 | NA |
| 1 | 2 | 134518 | NA | 2.625 | 360 | NA |
| 31 | 2 | 160000 | 20211007 | NA | 240 | NA |
| 2 | 2 | 15000 | 20210814 | NA | 60 | NA |
| 1 | 2 | 129530.89 | NA | 3 | 360 | NA |
| 31 | 2 | 138000 | 20210617 | 3.29 | 240 | NA |
| 1 | 2 | 194784.3 | NA | 3.25 | 360 | NA |
| 31 | 2 | 179000 | 20210413 | 3.29 | 240 | NA |
| 31 | 2 | 190000 | 20210225 | NA | 240 | NA |
| 1 | 2 | 303905.97 | NA | 3.5 | 360 | NA |
| 31 | 2 | 73450 | 20210208 | NA | 360 | NA |
| 2 | 1 | 80000 | 20210203 | NA | 360 | NA |
| 31 | 2 | 69000 | 20210609 | NA | 360 | NA |
| 1 | 2 | 310065.85 | NA | 2.625 | 360 | NA |
| 1 | 2 | 201286 | NA | 2.625 | 360 | NA |
| 1 | 2 | 60000 | 20210405 | NA | 120 | NA |
| 32 | 2 | 140000 | 20201217 | 3.5 | 360 | NA |
| 2 | 2 | 15000 | 20211130 | NA | 72 | NA |
| 31 | 2 | 165605.39 | 20211026 | NA | 240 | NA |
| 1 | 2 | 269525.14 | NA | 2.625 | 360 | NA |
| 31 | 2 | 135300 | 20210920 | NA | 240 | NA |
| 2 | 1 | 65000 | 20210918 | NA | 360 | NA |
| 2 | 1 | 60000 | 20210805 | NA | 360 | NA |
| 2 | 2 | 120000 | 20210707 | NA | 360 | NA |
| 2 | 1 | 20000 | 20210430 | NA | 360 | NA |
| 2 | 1 | 20000 | 20210414 | NA | 360 | NA |


| 32 | 2 | 115000 | 20211115 | 4.125 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 294566 | NA | 3.5 | 360 | NA |
| 31 | 2 | 146000 | 20211018 | 3.24 | 240 | NA |
| 2 | 1 | 50000 | 20211018 | 4.15 | 360 | NA |
| 2 | 1 | 15000 | 20211013 | NA | 360 | NA |
| 2 | 1 | 50000 | 20210818 | NA | 360 | NA |
| 1 | 2 | 256930.9 | NA | 2.875 | 360 | NA |
| 31 | 2 | 234000 | NA | 3.625 | 360 | NA |
| 31 | 2 | 96910 | 20210326 | 3.5 | 180 | NA |
| 1 | 2 | 566250 | 20200910 | 2.67 | 60 | NA |
| 31 | 2 | 73000 | 20210824 | 2.59 | 120 | NA |
| 2 | 1 | 15000 | 20210424 | NA | 360 | NA |
| 1 | 1 | 15000 | 20210414 | NA | 360 | NA |
| 32 | 2 | 250000 | 20210820 | NA | 360 | NA |
| 31 | 2 | 110400 | 20201209 | 2.375 | 180 | NA |
| 2 | 1 | 70000 | 20211202 | NA | 360 | NA |
| 31 | 2 | 251772 | NA | 2.75 | 360 | NA |
| 32 | 2 | 227494.27 | NA | 2.5 | 360 | NA |
| 1 | 2 | 162475 | 20210607 | NA | 360 | NA |
| 31 | 2 | 206000 | 20210220 | NA | 180 | NA |
| 2 | 2 | 100000 | 20210618 | NA | 360 | NA |
| 1 | 2 | 283009.64 | NA | 5.375 | 360 | NA |
| 1 | 2 | 181428.61 | NA | 4.625 | 360 | NA |
| 1 | 2 | 57000 | 20201208 | 3.125 | 360 | NA |
| 1 | 2 | 304385 | NA | 3 | 360 | NA |
| 2 | 1 | 102000 | 20210921 | NA | 360 | NA |
| 31 | 2 | 253740 | 20210913 | NA | 240 | NA |
| 2 | 1 | 150000 | 20210825 | NA | 360 | NA |
| 31 | 2 | 33000 | 20210824 | NA | 72 | NA |
| 31 | 2 | 97000 | 20210823 | NA | 120 | NA |
| 31 | 2 | 105500 | 20210807 | NA | 240 | NA |
| 2 | 2 | 15000 | 20210725 | NA | 50 | NA |
| 31 | 2 | 125000 | 20210505 | NA | 240 | NA |
| 1 | 2 | 153900 | 20210722 | 2.125 | 180 | NA |


| 2 | 2 | 50000 | 20210316 | NA | 60 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 170000 | 20210116 | NA | 15 | NA |
| 1 | 2 | 240191.61 | NA | 3.625 | 360 | NA |
| 31 | 2 | 175000 | 20210226 | 3.64 | 240 | NA |
| 1 | 2 | 63750 | 20210813 | 4.125 | 360 | NA |
| 31 | 2 | 61138.23 | 20210628 | 3.04 | 168 | NA |
| 31 | 2 | 220005 | 20210512 | 3.54 | 240 | NA |
| 31 | 2 | 179422 | 20210520 | NA | 240 | NA |
| 31 | 2 | 50000 | 20210716 | NA | 60 | NA |
| 31 | 2 | 120000 | 20210517 | 2.99 | 240 | NA |
| 31 | 2 | 175267 | 20210423 | NA | 240 | NA |
| 1 | 2 | 206196 | NA | 3 | 360 | NA |
| 1 | 2 | 313500 | NA | 3.625 | 360 | NA |
| 1 | 2 | 173699.76 | NA | 3.125 | 360 | NA |
| 1 | 2 | 225834 | NA | 2.875 | 360 | NA |
| 31 | 2 | 198581 | 20210929 | NA | 240 | NA |
| 2 | 1 | 30000 | 20210813 | NA | 360 | NA |
| 2 | 2 | 86435.08 | 20210810 | NA | 180 | NA |
| 31 | 2 | 203111.86 | 20210729 | NA | 180 | NA |
| 1 | 2 | 184970.99 | NA | 3.75 | 360 | NA |
| 1 | 1 | 100000 | 20210218 | NA | 360 | NA |
| 1 | 2 | 328379.53 | NA | 3.125 | 360 | NA |
| 31 | 2 | 48691.76 | 20210614 | 3.09 | 120 | NA |
| 2 | 1 | 50000 | 20210201 | NA | 360 | NA |
| 1 | 2 | 218148.55 | NA | 3.375 | 360 | NA |
| 1 | 2 | 97000 | NA | 3.625 | 360 | NA |
| 31 | 2 | 89000 | 20210622 | NA | 240 | NA |
| 1 | 2 | 260200 | NA | 3.5 | 360 | NA |
| 31 | 2 | 125956.46 | 20210709 | NA | 240 | NA |
| 31 | 2 | 126000 | 20210707 | NA | 360 | NA |
| 1 | 2 | 237689.57 | NA | 2.875 | 360 | NA |
| 1 | 2 | 167187.23 | NA | 5.375 | 360 | NA |
| 2 | 1 | 100000 | 20210430 | NA | 360 | NA |
| 31 | 2 | 70000 | 20210216 | 2.64 | 84 | NA |


| 31 | 2 | 109000 | 20210702 | NA | 180 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 39000 | 20201218 | NA | 60 | NA |
| 31 | 2 | 119603.81 | 20211022 | NA | 240 | NA |
| 32 | 2 | 152000 | 20210428 | 2.875 | 180 | NA |
| 31 | 2 | 67000 | 20210422 | NA | 228 | NA |
| 1 | 2 | 239820.1 | NA | 3.625 | 360 | NA |
| 1 | 2 | 274928 | NA | 3.5 | 360 | NA |
| 1 | 2 | 367627.53 | NA | 3.5 | 360 | NA |
| 31 | 2 | 172000 | 20210929 | 3.04 | 180 | NA |
| 31 | 2 | 179200 | 20210210 | 3.625 | 360 | NA |
| 1 | 2 | 435000 | 20210519 | 3.44 | 60 | NA |
| 31 | 2 | 497000 | 20210422 | 3.44 | 60 | NA |
| 31 | 2 | 160000 | 20210422 | 3.44 | 60 | NA |
| 2 | 2 | 86000 | 20210428 | NA | 180 | NA |
| 31 | 2 | 112625.54 | 20210809 | 3.04 | 180 | NA |
| 31 | 2 | 135000 | 20210706 | NA | 240 | NA |
| 1 | 2 | 242598.97 | NA | 3 | 360 | NA |
| 31 | 2 | 289375.99 | NA | 2.875 | 337 | NA |
| 1 | 2 | 768000 | 20210621 | 2.625 | 360 | NA |
| 1 | 2 | 408500 | NA | 3.125 | 360 | NA |
| 1 | 2 | 288750 | 20210324 | 3.25 | 360 | NA |
| 1 | 2 | 228000 | NA | 3 | 360 | NA |
| 31 | 2 | 346600 | 20201208 | 2.875 | 360 | NA |
| 1 | 2 | 382500 | 20210819 | 3 | 360 | NA |
| 31 | 2 | 149333.35 | 20211022 | 3.24 | 240 | NA |
| 31 | 2 | 125000 | 20210302 | 2.99 | 240 | NA |
| 2 | 1 | 110656 | 20210519 | 5.15 | 360 | NA |
| 1 | 2 | 460000 | NA | 2.875 | 360 | NA |
| 1 | 2 | 251620.45 | NA | 3.75 | 360 | NA |
| 1 | 2 | 189525 | 20210222 | 2.875 | 360 | NA |
| 32 | 2 | 203000 | 20210129 | 2.99 | 180 | NA |
| 1 | 2 | 324950 | NA | 3.625 | 360 | NA |
| 1 | 2 | 100000 | 20211021 | 2.375 | 180 | NA |
| 1 | 2 | 420180 | NA | 2.75 | 360 | NA |


| 1 | 2 | 185919.55 | NA | 3.75 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 225000 | 20211005 | 2.99 | 360 | NA |
| 31 | 2 | 246232 | 20210108 | 2.5 | 120 | NA |
| 1 | 2 | 184000 | 20210426 | 3.25 | 360 | NA |
| 1 | 2 | 266000 | 20210106 | NA | 360 | NA |
| 1 | 2 | 407150 | NA | 3.125 | 360 | NA |
| 31 | 2 | 208500 | 20201222 | 2.375 | 180 | NA |
| 31 | 2 | 250000 | NA | 2.625 | 300 | NA |
| 31 | 2 | 203000 | 20210831 | 2.99 | 360 | NA |
| 1 | 2 | 219971 | NA | 3.375 | 360 | NA |
| 1 | 2 | 405000 | NA | 2.875 | 360 | NA |
| 1 | 2 | 532500 | NA | 3.125 | 360 | NA |
| 1 | 2 | 261250 | NA | 3.125 | 360 | NA |
| 1 | 2 | 198884.74 | NA | 3.625 | 360 | NA |
| 1 | 2 | 504840 | NA | 3.125 | 360 | NA |
| 1 | 2 | 493600 | 20210224 | 3.25 | 360 | NA |
| 31 | 2 | 176000 | 20211126 | 3.25 | 360 | NA |
| 31 | 2 | 156000 | 20210929 | NA | 360 | NA |
| 31 | 2 | 456000 | NA | 3.5 | 360 | NA |
| 1 | 2 | 432000 | 20210817 | 2.625 | 240 | NA |
| 1 | 2 | 232352.52 | NA | 3.75 | 360 | NA |
| 31 | 2 | 279100 | 20210805 | 2.25 | 180 | NA |
| 1 | 2 | 530000 | NA | 2.375 | 360 | NA |
| 31 | 2 | 372000 | NA | 2.875 | 240 | NA |
| 31 | 2 | 221500 | 20210205 | 2.875 | 360 | NA |
| 1 | 2 | 335000 | 20211123 | 2.99 | 360 | NA |
| 31 | 2 | 155500 | 20201215 | 3.5 | 240 | NA |
| 31 | 2 | 400500 | 20210717 | 2.99 | 360 | NA |
| 1 | 2 | 262500 | 20210514 | 3.25 | 360 | NA |
| 1 | 2 | 256040.67 | NA | 2.75 | 360 | NA |
| 31 | 2 | 222000 | 20210425 | 2.375 | 180 | NA |
| 31 | 2 | 218573 | 20210126 | NA | 360 | NA |
| 31 | 2 | 287700 | NA | 2.99 | 360 | NA |
| 1 | 2 | 246627.97 | NA | 3.75 | 360 | NA |


| 1 | 2 | 237650 | NA | 3.5 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 246969.16 | NA | 3.625 | 360 | NA |
| 31 | 2 | 274000 | 20210105 | NA | 360 | NA |
| 1 | 2 | 211105 | NA | 3.5 | 360 | NA |
| 1 | 2 | 239590 | 20211104 | 3.625 | 360 | NA |
| 1 | 2 | 230387.73 | NA | 3.625 | 360 | NA |
| 1 | 2 | 294566 | NA | 2.625 | 360 | NA |
| 1 | 2 | 228750 | NA | 3.375 | 360 | NA |
| 31 | 2 | 42000 | 20211011 | NA | 60 | NA |
| 31 | 2 | 145980.44 | 20210505 | 3.04 | 180 | NA |
| 31 | 2 | 123000 | 20210426 | NA | 240 | NA |
| 31 | 2 | 106000 | 20211011 | NA | 60 | NA |
| 1 | 2 | 199820 | NA | 3.625 | 360 | NA |
| 2 | 1 | 160000 | 20210522 | NA | 360 | NA |
| 31 | 2 | 36500 | 20211011 | NA | 60 | NA |
| 1 | 2 | 286711 | NA | 3.375 | 360 | NA |
| 1 | 2 | 302871.1 | NA | 2.875 | 360 | NA |
| 1 | 2 | 181649 | NA | 3 | 360 | NA |
| 1 | 2 | 252200 | NA | 3.625 | 360 | NA |
| 1 | 2 | 127718.25 | NA | 5.125 | 360 | NA |
| 1 | 2 | 303403 | NA | 2.875 | 360 | NA |
| 1 | 2 | 196061.13 | NA | 3.375 | 360 | NA |
| 1 | 2 | 156550.52 | NA | 2.875 | 360 | NA |
| 1 | 2 | 293928.42 | NA | 2.625 | 360 | NA |
| 31 | 2 | 62000 | 20210319 | NA | 240 | NA |
| 32 | 2 | 230000 | NA | 3.25 | 360 | NA |
| 31 | 2 | 143000 | 20210302 | 2.99 | 360 | NA |
| 1 | 2 | 381954 | NA | 2.5 | 360 | NA |
| 31 | 2 | 63000 | 20210302 | 2.84 | 120 | NA |
| 31 | 2 | 25000 | 20201008 | 3.44 | 120 | NA |
| 2 | 2 | 40000 | 20210324 | NA | 240 | NA |
| 31 | 2 | 98000 | 20210713 | NA | 120 | NA |
| 1 | 2 | 133000 | NA | 3.375 | 360 | NA |
| 32 | 2 | 155000 | 20210715 | 3.125 | 180 | NA |


| 31 | 2 | 154000 | 20210623 | NA | 180 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 350000 | 20210205 | 3.35 | 61 | NA |
| 1 | 2 | 206196 | NA | 3.125 | 360 | NA |
| 31 | 2 | 128719 | 20210416 | 3.625 | 240 | NA |
| 31 | 2 | 154000 | 20210720 | NA | 180 | NA |
| 31 | 2 | 183375 | 20210802 | 3.125 | 360 | NA |
| 1 | 2 | 287131.1 | NA | 3.75 | 360 | NA |
| 1 | 2 | 392755 | NA | 2.75 | 360 | NA |
| 31 | 2 | 179000 | 20210604 | NA | 240 | NA |
| 31 | 2 | 118801 | NA | 3.125 | 240 | NA |
| 1 | 2 | 176460.85 | NA | 3.5 | 360 | NA |
| 31 | 2 | 110000 | 20210920 | 2.59 | 120 | NA |
| 31 | 2 | 146872 | 20201103 | NA | 240 | NA |
| 31 | 2 | 180000 | 20210507 | NA | 360 | NA |
| 1 | 2 | 251750 | NA | 3.375 | 360 | NA |
| 1 | 2 | 208550 | NA | 3.75 | 360 | NA |
| 1 | 2 | 309294 | NA | 3.5 | 360 | NA |
| 1 | 2 | 214707.18 | NA | 2.625 | 360 | NA |
| 31 | 2 | 220000 | 20210503 | 3.375 | 360 | NA |
| 31 | 2 | 220000 | 20210312 | NA | 360 | NA |
| 32 | 2 | 152345.85 | NA | 2.625 | 360 | NA |
| 1 | 2 | 235554 | NA | 3.375 | 360 | NA |
| 31 | 2 | 470000 | NA | 2.99 | 360 | NA |
| 31 | 2 | 507000 | 20210728 | 3 | 360 | NA |
| 31 | 2 | 506000 | 20210505 | NA | 360 | NA |
| 31 | 2 | 198000 | 20210212 | 2.99 | 360 | NA |
| 31 | 2 | 332740.19 | NA | 3.125 | 360 | NA |
| 1 | 1 | 175000 | 20210420 | NA | 360 | NA |
| 1 | 2 | 320000 | 20210224 | NA | 360 | NA |
| 31 | 2 | 41945 | NA | 2.875 | 180 | NA |
| 1 | 2 | 140650 | NA | 3.375 | 360 | NA |
| 1 | 2 | 303462.25 | NA | 3.75 | 360 | NA |
| 31 | 2 | 240000 | 20210723 | 2.89 | 180 | NA |
| 32 | 2 | 150000 | NA | 2.625 | 360 | NA |


| 2 | 1 | 300000 | 20210127 | NA | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 64000 | 20210106 | NA | 108 | NA |
| 31 | 2 | 151900 | 20210226 | 2.625 | 180 | NA |
| 31 | 2 | 442000 | 20210216 | 2.875 | 360 | NA |
| 1 | 2 | 875000 | 20210216 | 2.75 | 360 | NA |
| 31 | 2 | 182680 | 20210114 | NA | 240 | NA |
| 1 | 2 | 481500 | NA | 3.125 | 360 | NA |
| 1 | 2 | 450000 | NA | 2.625 | 240 | NA |
| 1 | 2 | 1087177 | 20201227 | NA | 360 | NA |
| 1 | 2 | 254571.7 | NA | 3.125 | 360 | NA |
| 1 | 2 | 750000 | 20201221 | 2.75 | 360 | NA |
| 1 | 2 | 1400000 | 20201218 | 2.125 | 360 | NA |
| 1 | 2 | 980276 | 20201001 | NA | 360 | NA |
| 1 | 2 | 324000 | 20210707 | 2.875 | 360 | NA |
| 31 | 2 | 515075.98 | NA | 2.75 | 360 | NA |
| 31 | 1 | 264000 | 20210331 | 3.45 | 360 | NA |
| 31 | 1 | 200000 | 20210820 | NA | 360 | NA |
| 2 | 1 | 150000 | 20210521 | NA | 360 | NA |
| 31 | 2 | 151000 | 20201117 | 2.99 | 360 | NA |
| 1 | 2 | 401250 | 20211116 | 2.875 | 360 | NA |
| 1 | 2 | 339150 | 20210914 | 2.875 | 360 | NA |
| 1 | 2 | 250000 | 20210915 | NA | 360 | NA |
| 1 | 2 | 475000 | 20210831 | 2.5 | 360 | NA |
| 1 | 2 | 1448000 | 20210824 | 2.25 | 360 | NA |
| 1 | 2 | 652400 | 20210818 | 2.25 | 360 | NA |
| 31 | 2 | 317000 | 20210317 | NA | 360 | NA |
| 1 | 2 | 1025000 | 20210201 | 2.375 | 360 | NA |
| 2 | 2 | 300000 | 20210527 | NA | 180 | NA |
| 2 | 1 | 116700 | 20201109 | 3.45 | 360 | NA |
| 1 | 2 | 270019 | NA | 3.125 | 360 | NA |
| 1 | 2 | 445000 | 20210523 | 1.99 | 180 | NA |
| 31 | 2 | 297000 | NA | 3.125 | 360 | NA |
| 31 | 2 | 444000 | 20201118 | 2.5 | 180 | NA |
| 1 | 2 | 200966.86 | NA | 3.75 | 360 | NA |


| 31 | 2 | 106000 | 20210914 | 2.59 | 120 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 149000 | 20210825 | NA | 84 | NA |
| 32 | 2 | 250000 | 20201214 | 2.99 | 360 | NA |
| 31 | 2 | 175000 | 20210917 | 2.125 | 120 | NA |
| 31 | 2 | 130000 | 20210719 | 2.375 | 120 | NA |
| 1 | 2 | 445482.91 | NA | 2.99 | 360 | NA |
| 31 | 2 | 390750 | 20210626 | 2.75 | 240 | NA |
| 1 | 2 | 368000 | 20210623 | 3.125 | 360 | NA |
| 31 | 2 | 366500 | NA | 2.875 | 360 | NA |
| 31 | 2 | 230000 | 20210108 | NA | 180 | NA |
| 1 | 2 | 327175.42 | NA | 2.875 | 360 | NA |
| 1 | 2 | 255600 | 20210525 | 3.625 | 240 | NA |
| 1 | 2 | 365000 | 20210526 | 2.99 | 360 | NA |
| 1 | 2 | 272000 | 20210510 | 2.875 | 360 | NA |
| 1 | 2 | 254600 | 20211021 | 3.25 | 360 | NA |
| 1 | 1 | 46000 | 20210624 | 6.2 | 360 | NA |
| 1 | 2 | 328000 | 20210426 | 2.875 | 360 | NA |
| 1 | 2 | 228800 | NA | 3.99 | 360 | NA |
| 1 | 2 | 548250 | NA | 2.875 | 360 | NA |
| 31 | 2 | 250001 | 20210216 | 2.99 | 360 | NA |
| 31 | 2 | 145000 | 20210212 | 2.5 | 180 | NA |
| 31 | 2 | 290001.49 | NA | 3 | 360 | NA |
| 31 | 2 | 222500 | 20210207 | 3.125 | 360 | NA |
| 32 | 2 | 392394.91 | NA | 3.625 | 360 | NA |
| 1 | 2 | 304000 | NA | 3.75 | 360 | NA |
| 1 | 2 | 548250 | NA | 2.875 | 360 | NA |
| 32 | 2 | 547288.87 | NA | 2.875 | 360 | NA |
| 31 | 2 | 88618 | 20210726 | 2.375 | 120 | NA |
| 31 | 2 | 420000 | 20210126 | 2.875 | 360 | NA |
| 1 | 2 | 308000 | NA | 3.125 | 360 | NA |
| 1 | 2 | 446500 | NA | 3.125 | 360 | NA |
| 32 | 2 | 470000 | 20201201 | 2.75 | 360 | NA |
| 31 | 2 | 890000 | 20210106 | 2.875 | 360 | NA |
| 31 | 2 | 323100 | 20210107 | NA | 360 | NA |


| 31 | 2 | 177800 | 20210106 | 2.99 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 295000 | NA | 3.375 | 360 | NA |
| 1 | 2 | 303750 | NA | 3.125 | 360 | NA |
| 1 | 2 | 414000 | NA | 3.125 | 360 | NA |
| 32 | 2 | 240000 | 20201219 | NA | 360 | NA |
| 32 | 2 | 386450 | 20201207 | 2.5 | 180 | NA |
| 1 | 2 | 399200 | NA | 3.125 | 360 | NA |
| 1 | 2 | 548250 | NA | 2.875 | 360 | NA |
| 1 | 2 | 456000 | NA | 2.75 | 180 | NA |
| 31 | 2 | 187000 | 20210714 | NA | 180 | NA |
| 1 | 2 | 208160 | NA | 2.25 | 360 | NA |
| 1 | 2 | 246254.79 | NA | 3.75 | 360 | NA |
| 1 | 2 | 208550 | NA | 3.625 | 360 | NA |
| 1 | 2 | 225040 | NA | 3.375 | 360 | NA |
| 1 | 2 | 458375 | NA | 2.75 | 360 | NA |
| 1 | 2 | 1240000 | 20210817 | 2.25 | 360 | NA |
| 2 | 1 | 50000 | 20210909 | 3.65 | 360 | NA |
| 1 | 2 | 209190.26 | NA | 3.5 | 360 | NA |
| 31 | 2 | 81846.04 | 20210602 | NA | 180 | NA |
| 1 | 2 | 650001 | 20210318 | 3 | 360 | NA |
| 1 | 2 | 230860 | NA | 3.75 | 360 | NA |
| 1 | 2 | 606000 | 20201209 | 3.25 | 360 | NA |
| 1 | 2 | 208164.64 | NA | 3.375 | 360 | NA |
| 32 | 2 | 225000 | 20211118 | NA | 180 | NA |
| 31 | 2 | 370000 | 20210208 | 2.25 | 180 | NA |
| 1 | 2 | 280576.78 | NA | 3.75 | 360 | NA |
| 31 | 2 | 326400 | 20200930 | 2.99 | 360 | NA |
| 31 | 2 | 253000 | 20200805 | NA | 240 | NA |
| 31 | 2 | 486500 | 20211130 | 2.25 | 180 | NA |
| 31 | 2 | 311000 | 20211114 | 2.375 | 360 | NA |
| 31 | 2 | 174000 | 20211018 | 3.25 | 360 | NA |
| 31 | 2 | 450000 | 20200820 | 3.125 | 360 | NA |
| 31 | 2 | 673500 | 20210928 | 3.125 | 360 | NA |
| 31 | 2 | 896200 | 20210826 | 2.5 | 360 | NA |


| 1 | 2 | 281600 | 20210813 | 2.875 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 257000 | 20201027 | - 3 | 360 | NA |
| 31 | 2 | 355462.31 | NA | 2.75 | 360 | NA |
| 1 | 2 | 460000 | 20210316 | NA | 360 | NA |
| 31 | 2 | 225000 | 20211003 | 3.625 | 240 | NA |
| 31 | 2 | 284500 | 20210915 | 2.25 | 180 | NA |
| 32 | 2 | 533000 | NA | 2.75 | 360 | NA |
| 31 | 2 | 451000 | 20210722 | 2.99 | 360 | NA |
| 31 | 2 | 210300 | 20210615 | 2.875 | 240 | NA |
| 32 | 1 | 110000 | 20210615 | 3.45 | 360 | NA |
| 31 | 2 | 450000 | 20210228 | NA | 360 | NA |
| 2 | 1 | 100000 | 20210603 | NA | 360 | NA |
| 31 | 2 | 217800 | 20210110 | 3.375 | 240 | NA |
| 32 | 2 | 433125 | 20211112 | 3.5 | 360 | NA |
| 31 | 2 | 246000 | 20201128 | 2.99 | 180 | NA |
| 1 | 2 | 73454 | NA | 3.5 | 360 | NA |
| 1 | 2 | 284905 | 20210708 | NA | 360 | NA |
| 1 | 2 | 242250 | NA | 3.625 | 360 | NA |
| 2 | 1 | 50000 | 20210303 | NA | 360 | NA |
| 1 | 2 | 284905 | 20210811 | NA | 360 | NA |
| 32 | 2 | 411200 | 20201113 | 3.25 | 360 | NA |
| 1 | 2 | 500000 | NA | 3 | 360 | NA |
| 31 | 2 | 78400 | 20200601 | 3.75 | 360 | NA |
| 31 | 2 | 784350 | 20210804 | 3.375 | 360 | NA |
| 1 | 2 | 426781.97 | NA | 3.125 | 360 | NA |
| 1 | 2 | 219668.65 | NA | 3.75 | 360 | NA |
| 1 | 2 | 223200 | 20210420 | 2.875 | 360 | NA |
| 1 | 2 | 236709.98 | NA | 3.625 | 360 | NA |
| 1 | 2 | 548000 | NA | 3.375 | 360 | NA |
| 31 | 2 | 250000 | NA | 3.125 | 360 | NA |
| 1 | 2 | 820000 | 20210616 | NA | 60 | NA |
| 31 | 2 | 226600 | 20210601 | 3.125 | 360 | NA |
| 1 | 2 | 187210 | NA | 3.75 | 360 | NA |
| 1 | 2 | 229520.24 | NA | 3.375 | 360 | NA |


| 1 | 2 | 171690 | NA | 3.125 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 281300 | NA | 3.5 | 360 | NA |
| 1 | 2 | 657000 | 20210516 | 3.375 | 360 | NA |
| 2 | 1 | 40000 | 20211108 | NA | 360 | NA |
| 31 | 2 | 305000 | 20210106 | 3.375 | 240 | NA |
| 31 | 2 | 301000 | 20211209 | NA | 240 | NA |
| 31 | 2 | 107000 | 20210723 | NA | 360 | NA |
| 1 | 2 | 166250 | NA | 3.625 | 360 | NA |
| 31 | 2 | 242000 | 20210205 | 2.375 | 180 | NA |
| 1 | 2 | 243290 | NA | 3.625 | 360 | NA |
| 1 | 2 | 235319.13 | NA | 3.625 | 360 | NA |
| 1 | 2 | 249633.05 | NA | 3.625 | 360 | NA |
| 1 | 2 | 247019.41 | NA | 3.125 | 360 | NA |
| 31 | 2 | 245000 | NA | 3.125 | 240 | NA |
| 31 | 2 | 261250 | 20201214 | 2.99 | 360 | NA |
| 2 | 1 | 55000 | 20211025 | NA | 360 | NA |
| 31 | 2 | 231000 | NA | 3.125 | 240 | NA |
| 32 | 2 | 290000 | 20210713 | 2.625 | 180 | NA |
| 1 | 2 | 166903.61 | NA | 3.75 | 360 | NA |
| 31 | 1 | 310000 | 20210303 | 3.45 | 360 | NA |
| 31 | 2 | 739260 | 20210222 | 3 | 360 | NA |
| 31 | 2 | 132000 | 20201201 | 2.75 | 180 | NA |
| 1 | 2 | 289313.59 | NA | 3.75 | 360 | NA |
| 31 | 2 | 200000 | 20211029 | NA | 240 | NA |
| 31 | 2 | 477500 | 20200625 | NA | 120 | NA |
| 1 | 2 | 180500 | NA | 3.375 | 360 | NA |
| 2 | 2 | 15000 | 20201223 | NA | 120 | NA |
| 1 | 2 | 299250 | NA | 2.75 | 360 | NA |
| 1 | 2 | 361000 | 20201118 | 2.75 | 360 | NA |
| 31 | 2 | 999500 | 20210721 | 2.375 | 360 | NA |
| 32 | 2 | 1000000 | NA | 3 | 360 | NA |
| 31 | 1 | 109880 | 20210520 | NA | 360 | NA |
| 31 | 2 | 192500 | 20210519 | 2.25 | 120 | NA |
| 1 | 2 | 112410 | 20210322 | 3 | 360 | NA |


| 2 | 2 | 30000 | 20210515 | NA | 60 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 151320 | NA | 3.875 | 360 | NA |
| 1 | 2 | 126100 | NA | 3.375 | 360 | NA |
| 1 | 2 | 486000 | 20211103 | NA | 60 | NA |
| 2 | 2 | 50000 | 20211107 | NA | 360 | NA |
| 1 | 2 | 345889.79 | NA | 3.5 | 360 | NA |
| 1 | 2 | 114000 | NA | 3.375 | 360 | NA |
| 31 | 2 | 70000 | 20210115 | NA | 156 | NA |
| 1 | 2 | 281203 | 20210422 | NA | 360 | NA |
| 1 | 2 | 144000 | 20210127 | 2.875 | 360 | NA |
| 1 | 2 | 725400 | 20200624 | 3.375 | 360 | NA |
| 31 | 2 | 129000 | 20200624 | 2.625 | 180 | NA |
| 1 | 2 | 242500 | NA | 3.75 | 360 | NA |
| 1 | 2 | 280866.89 | NA | 3.625 | 360 | NA |
| 31 | 2 | 120000 | 20201210 | NA | 240 | NA |
| 1 | 2 | 543900 | NA | 2.75 | 360 | NA |
| 1 | 2 | 159565 | NA | 3.75 | 360 | NA |
| 31 | 2 | 258000 | NA | 2.875 | 360 | NA |
| 2 | 1 | 100000 | 20210420 | NA | 360 | NA |
| 2 | 1 | 80000 | 20210303 | NA | 360 | NA |
| 31 | 2 | 285000 | NA | 3 | 240 | NA |
| 32 | 2 | 115000 | 20210123 | 2.99 | 360 | NA |
| 31 | 2 | 167225 | 20201205 | 2.875 | 360 | NA |
| 31 | 2 | 833000 | 20201119 | 3.125 | 360 | NA |
| 1 | 2 | 105405.94 | NA | 3.75 | 360 | NA |
| 31 | 2 | 64000 | 20201220 | NA | 120 | NA |
| 31 | 2 | 64600 | 20200923 | NA | 120 | NA |
| 1 | 2 | 535325 | NA | 2.625 | 360 | NA |
| 1 | 2 | 126155.46 | NA | 3.625 | 360 | NA |
| 1 | 2 | 292911.93 | NA | 2.5 | 360 | NA |
| 1 | 2 | 196377 | NA | 3.375 | 360 | NA |
| 1 | 2 | 183658 | NA | 2.875 | 360 | NA |
| 1 | 2 | 179985.27 | NA | 5.5 | 360 | NA |
| 1 | 2 | 432030 | NA | 2.625 | 360 | NA |


| 1 | 2 | 71200 | 20210128 | 3.5 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 261883.25 | NA | 3 | 360 | NA |
| 1 | 2 | 400610 | NA | 2.625 | 360 | NA |
| 2 | 2 | 40000 | 20210219 | NA | 180 | NA |
| 1 | 2 | 168531.67 | NA | 4.5 | 360 | NA |
| 2 | 1 | 40000 | 20210219 | NA | 360 | NA |
| 32 | 2 | 202000 | 20210521 | 4.125 | 360 | NA |
| 1 | 2 | 675000 | 20210726 | NA | 60 | NA |
| 1 | 2 | 400000 | 20210512 | 3.1 | 61 | NA |
| 1 | 2 | 156755.92 | NA | 3.5 | 360 | NA |
| 31 | 2 | 248000 | 20210513 | NA | 360 | NA |
| 1 | 2 | 420000 | 20210618 | 3.25 | 60 | NA |
| 2 | 2 | 100000 | 20210728 | NA | 180 | NA |
| 1 | 2 | 106352 | 20210518 | 3.75 | 360 | NA |
| 31 | 2 | 280000 | 20210408 | 2.5 | 180 | NA |
| 1 | 2 | 600000 | 20210114 | 2.5 | 360 | NA |
| 1 | 2 | 115000 | 20210610 | NA | 48 | NA |
| 2 | 1 | 200000 | 20211210 | NA | 360 | NA |
| 2 | 1 | 79496 | 20210715 | 4.95 | 360 | NA |
| 1 | 2 | 684000 | 20211101 | 3.39 | 61 | NA |
| 1 | 2 | 70000 | 20210426 | NA | 240 | NA |
| 1 | 2 | 430000 | 20211014 | 3.31 | 61 | NA |
| 1 | 2 | 260200 | NA | 2.875 | 360 | NA |
| 1 | 2 | 171535.62 | NA | 3 | 360 | NA |
| 1 | 2 | 314881.57 | NA | 3.25 | 360 | NA |
| 31 | 2 | 35000 | 20211011 | NA | 60 | NA |
| 1 | 2 | 225834 | NA | 2.625 | 360 | NA |
| 32 | 2 | 199300 | NA | 2.875 | 180 | NA |
| 1 | 2 | 289313.59 | NA | 3.75 | 360 | NA |
| 1 | 2 | 684000 | 20211104 | NA | 60 | NA |
| 31 | 2 | 99000 | 20210911 | NA | 240 | NA |
| 31 | 2 | 99000 | 20210802 | NA | 240 | NA |
| 31 | 2 | 85000 | 20210419 | NA | 240 | NA |
| 1 | 2 | 135510.61 | NA | 4.625 | 360 | NA |


| 31 | 2 | 96000 | 20210203 | 3.14 | 180 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 97610 | 20201114 | NA | 15 | NA |
| 31 | 2 | 85050 | 20211116 | NA | 240 | NA |
| 31 | 2 | 15000 | 20210927 | NA | 60 | NA |
| 31 | 2 | 135000 | NA | 2.625 | 360 | NA |
| 1 | 2 | 166547.79 | NA | 3.25 | 360 | NA |
| 1 | 2 | 221500 | NA | 3.625 | 360 | NA |
| 1 | 2 | 127107.7 | NA | 3 | 360 | NA |
| 1 | 2 | 166836.21 | NA | 5 | 361 | NA |
| 1 | 2 | 163930 | 20210503 | 2.99 | 360 | NA |
| 31 | 1 | 15000 | 20210420 | NA | 360 | NA |
| 31 | 2 | 174000 | 20201203 | 3.375 | 360 | NA |
| 1 | 2 | 327750 | NA | 3.75 | 360 | NA |
| 1 | 2 | 219448.93 | NA | 3.625 | 360 | NA |
| 1 | 2 | 294467 | NA | 3.125 | 360 | NA |
| 1 | 2 | 320000 | 20210311 | 2.99 | 61 | NA |
| 31 | 1 | 15000 | 20210911 | NA | 360 | NA |
| 1 | 2 | 360000 | 20211208 | NA | 60 | NA |
| 31 | 2 | 136800.42 | NA | 5.375 | 360 | NA |
| 1 | 2 | 408000 | 20210325 | 3.2 | 60 | NA |
| 1 | 2 | 180809 | NA | 3.125 | 360 | NA |
| 31 | 2 | 76350 | 20210113 | 3.25 | 360 | NA |
| 31 | 2 | 185000 | 20211219 | NA | 60 | NA |
| 32 | 2 | 160000 | 20210520 | 3.625 | 360 | NA |
| 31 | 2 | 125000 | 20210429 | 3.75 | 360 | NA |
| 31 | 2 | 120000 | 20210326 | NA | 360 | NA |
| 31 | 2 | 110500 | 20210623 | NA | 360 | NA |
| 31 | 2 | 368660.48 | NA | 2.625 | 360 | NA |
| 31 | 2 | 110500 | 20210622 | NA | 360 | NA |
| 31 | 1 | 240000 | 20210401 | NA | 360 | NA |
| 1 | 2 | 152000 | 20210720 | 2.99 | 360 | NA |
| 1 | 2 | 254861.22 | NA | 3.125 | 360 | NA |
| 1 | 2 | 317775 | 20210517 | NA | 360 | NA |
| 1 | 2 | 243470 | NA | 3.5 | 360 | NA |


| 1 | 2 | 142040.94 | NA | 3.375 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | 2 | 10000 | 20210215 | NA | 12 | NA |
| 2 | 2 | 30000 | 20210322 | 3.99 | 360 | NA |
| 31 | 2 | 205000 | 20210725 | NA | 360 | NA |
| 1 | 2 | 105061 | 20210505 | NA | 180 | NA |
| 31 | 2 | 163000 | 20210113 | 2.5 | 180 | NA |
| 1 | 2 | 122802.54 | NA | 3 | 360 | NA |
| 1 | 2 | 231920.31 | NA | 4.25 | 360 | NA |
| 1 | 2 | 87912 | NA | 3.125 | 360 | NA |
| 31 | 2 | 134500 | 20210624 | NA | 360 | NA |
| 31 | 2 | 163950 | 20210409 | 3.375 | 360 | NA |
| 1 | 2 | 249538.83 | NA | 3.125 | 360 | NA |
| 1 | 2 | 166250 | NA | 3.75 | 360 | NA |
| 1 | 2 | 194904 | NA | 2.875 | 360 | NA |
| 1 | 2 | 222130 | NA | 3.25 | 360 | NA |
| 1 | 2 | 164800.96 | NA | 3.625 | 369 | NA |
| 31 | 2 | 140000 | 20210720 | NA | 240 | NA |
| 1 | 2 | 167620.61 | NA | 5.125 | 360 | NA |
| 31 | 2 | 196500 | 20200714 | NA | 360 | NA |
| 31 | 2 | 151000 | 20210303 | NA | 240 | NA |
| 1 | 2 | 111848.67 | NA | 3.5 | 360 | NA |
| 2 | 2 | 81000 | 20211030 | NA | 360 | NA |
| 1 | 2 | 355000 | 20210803 | 2.75 | 61 | NA |
| 1 | 2 | 147283 | NA | 2.625 | 360 | NA |
| 2 | 1 | 50000 | 20210429 | NA | 360 | NA |
| 31 | 2 | 161000 | 20210618 | NA | 180 | NA |
| 31 | 2 | 97000 | 20210813 | NA | 360 | NA |
| 2 | 2 | 25000 | 20210706 | NA | 80 | NA |
| 1 | 2 | 142285.37 | NA | 3.75 | 360 | NA |
| 1 | 2 | 168280.82 | NA | 5.125 | 360 | NA |
| 1 | 2 | 163359 | NA | 3.125 | 360 | NA |
| 1 | 2 | 279827.9 | NA | 3.75 | 360 | NA |
| 1 | 2 | 736000 | 20210909 | 3.25 | 61 | NA |
| 1 | 2 | 163153.9 | NA | 3.75 | 360 | NA |


| 1 | 2 | 311100.81 | NA | 3.75 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 132000 | 20210511 | 2.375 | 180 | NA |
| 1 | 2 | 222888 | NA | 3.5 | 360 | NA |
| 31 | 2 | 115000 | 20210609 | NA | 180 | NA |
| 2 | 1 | 25000 | 20210503 | 4.4 | 360 | NA |
| 1 | 2 | 148854.75 | NA | 4.125 | 360 | NA |
| 1 | 2 | 89251.51 | NA | 4.125 | 360 | NA |
| 2 | 1 | 60000 | 20201223 | NA | 360 | NA |
| 31 | 2 | 192409 | 20210313 | NA | 360 | NA |
| 1 | 2 | 113905 | 20210316 | 3.25 | 360 | NA |
| 31 | 2 | 184000 | 20201217 | 3.5 | 360 | NA |
| 1 | 2 | 206524.95 | NA | 3.5 | 360 | NA |
| 1 | 2 | 207178 | NA | 3.5 | 360 | NA |
| 1 | 2 | 213750 | 20210217 | NA | 360 | NA |
| 1 | 2 | 320861 | NA | 2.625 | 360 | NA |
| 31 | 2 | 154571.29 | 20210920 | 3.04 | 240 | NA |
| 2 | 1 | 40000 | 20210920 | 4.9 | 360 | NA |
| 1 | 2 | 212087 | NA | 3.5 | 360 | NA |
| 1 | 2 | 153560.04 | NA | 4.125 | 360 | NA |
| 1 | 2 | 181982.15 | NA | 3.5 | 360 | NA |
| 31 | 2 | 160000 | 20210401 | NA | 240 | NA |
| 1 | 2 | 165682.51 | NA | 3.625 | 360 | NA |
| 1 | 2 | 225470.76 | NA | 3.375 | 360 | NA |
| 1 | 2 | 247926 | NA | 2.625 | 360 | NA |
| 31 | 2 | 147000 | 20211103 | 3.24 | 240 | NA |
| 31 | 2 | 147000 | 20211001 | NA | 240 | NA |
| 1 | 2 | 240157.95 | NA | 3.125 | 360 | NA |
| 31 | 2 | 64102.95 | 20210116 | 2.89 | 180 | NA |
| 2 | 2 | 60000 | 20210917 | NA | 15 | NA |
| 1 | 2 | 200676.7 | NA | 3.375 | 360 | NA |
| 1 | 2 | 152329.22 | NA | 3.5 | 360 | NA |
| 1 | 2 | 112917 | NA | 3.125 | 360 | NA |
| 1 | 2 | 204771 | NA | 3.125 | 360 | NA |
| 2 | 2 | 30000 | 20211012 | NA | 240 | NA |


| 2 | 1 | 65000 | 20210616 | NA | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 32 | 2 | 150000 | 20210517 | NA | 360 | NA |
| 1 | 2 | 159900 | NA | 3.375 | 360 | NA |
| 31 | 2 | 122500 | 20201207 | 3.5 | 360 | NA |
| 31 | 2 | 67500 | 20210824 | 2.5 | 180 | NA |
| 31 | 2 | 200000 | 20211130 | NA | 240 | NA |
| 1 | 2 | 132554 | NA | 3.625 | 360 | NA |
| 1 | 2 | 178703 | NA | 3 | 360 | NA |
| 32 | 2 | 80500 | 20210803 | 3.75 | 360 | NA |
| 1 | 2 | 179450 | NA | 3.375 | 360 | NA |
| 1 | 2 | 228000 | NA | 3.25 | 360 | NA |
| 1 | 2 | 215081 | NA | 3.375 | 360 | NA |
| 2 | 1 | 15000 | 20211022 | NA | 360 | NA |
| 1 | 2 | 134684.4 | NA | 3.125 | 360 | NA |
| 1 | 2 | 242198.61 | NA | 3.125 | 360 | NA |
| 1 | 2 | 82300 | 20210602 | 2.99 | 360 | NA |
| 1 | 2 | 244143.51 | NA | 3.25 | 360 | NA |
| 1 | 2 | 117640.57 | NA | 3.5 | 360 | NA |
| 1 | 2 | 279356.79 | NA | 3 | 360 | NA |
| 31 | 2 | 49515 | 20210226 | NA | 240 | NA |
| 1 | 2 | 140000 | 20210817 | 2.875 | 360 | NA |
| 1 | 2 | 195395 | 20210203 | 2.75 | 360 | NA |
| 1 | 2 | 247568.37 | NA | 2.625 | 360 | NA |
| 1 | 2 | 172873 | NA | 3 | 360 | NA |
| 1 | 2 | 175848.58 | NA | 3.625 | 360 | NA |
| 1 | 2 | 240537 | NA | 2.875 | 360 | NA |
| 2 | 1 | 40000 | 20211021 | 5.8 | 360 | NA |
| 2 | 1 | 60000 | 20210806 | NA | 360 | NA |
| 2 | 1 | 40000 | 20210610 | NA | 360 | NA |
| 1 | 2 | 78419.07 | NA | 3.125 | 360 | NA |
| 31 | 2 | 252000 | 20211108 | 3 | 360 | NA |
| 1 | 2 | 154800 | NA | 3.125 | 360 | NA |
| 1 | 2 | 265109 | NA | 3.875 | 360 | NA |
| 1 | 2 | 189827.28 | NA | 3.625 | 360 | NA |


| 1 | 2 | 111409.47 | NA | 5.5 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | 1 | 125000 | 20210628 | NA | 360 | NA |
| 1 | 2 | 103990.37 | NA | 5.375 | 360 | NA |
| 1 | 2 | 157998.8 | NA | 3.625 | 360 | NA |
| 1 | 2 | 180667 | NA | 3 | 360 | NA |
| 1 | 2 | 186558 | NA | 2.625 | 360 | NA |
| 1 | 2 | 147299.69 | NA | 3.375 | 360 | NA |
| 1 | 2 | 95882.29 | NA | 5.25 | 360 | NA |
| 2 | 1 | 40000 | 20210524 | NA | 360 | NA |
| 31 | 2 | 195600 | 20210501 | 3.625 | 360 | NA |
| 1 | 2 | 199550.28 | NA | 3 | 360 | NA |
| 1 | 2 | 164900 | 20210430 | NA | 360 | NA |
| 1 | 2 | 200594.31 | NA | 3 | 360 | NA |
| 1 | 2 | 294467 | 20210205 | NA | 360 | NA |
| 1 | 2 | 171116.11 | NA | 3.625 | 360 | NA |
| 1 | 2 | 160571.09 | NA | 3.25 | 360 | NA |
| 31 | 2 | 173000 | 20210908 | 3 | 360 | NA |
| 1 | 2 | 158667.37 | NA | 3.25 | 360 | NA |
| 2 | 2 | 25000 | 20210712 | NA | 48 | NA |
| 2 | 1 | 100000 | 20211108 | NA | 360 | NA |
| 2 | 1 | 22000 | 20210610 | NA | 360 | NA |
| 2 | 1 | 40000 | 20210708 | NA | 360 | NA |
| 31 | 1 | 76000 | 20210119 | NA | 360 | NA |
| 31 | 1 | 76000 | 20210111 | NA | 360 | NA |
| 1 | 2 | 204429.05 | NA | 3.5 | 360 | NA |
| 31 | 2 | 25000 | 20210922 | NA | 60 | NA |
| 31 | 2 | 138506.72 | 20210331 | 3.49 | 240 | NA |
| 1 | 2 | 225501.3 | NA | 3.875 | 360 | NA |
| 31 | 2 | 68235.16 | 20210126 | NA | 120 | NA |
| 1 | 2 | 260101 | NA | 3.5 | 360 | NA |
| 2 | 1 | 50000 | 20210112 | 3.45 | 360 | NA |
| 1 | 2 | 160613.98 | NA | 3 | 360 | NA |
| 1 | 2 | 161454.28 | NA | 3 | 360 | NA |
| 1 | 2 | 252200 | NA | 3.25 | 360 | NA |


| 1 | 2 | 121250 | NA | 3.25 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 149000 | 20210428 | 3.64 | 240 | NA |
| 1 | 2 | 274485.78 | NA | 3.375 | 360 | NA |
| 1 | 2 | 276450 | NA | 3.875 | 360 | NA |
| 31 | 2 | 180530 | 20210921 | NA | 20 | NA |
| 2 | 1 | 25000 | 20210819 | NA | 360 | NA |
| 1 | 2 | 145169.13 | NA | 3.375 | 360 | NA |
| 1 | 2 | 60000 | 20210220 | NA | 360 | NA |
| 32 | 2 | 170000 | NA | 3.5 | 240 | NA |
| 31 | 2 | 145000 | 20210614 | 3.34 | 240 | NA |
| 2 | 2 | 10000 | 20210423 | NA | 24 | NA |
| 31 | 2 | 120500 | 20210104 | 2.99 | 360 | NA |
| 2 | 1 | 65000 | 20210915 | NA | 360 | NA |
| 1 | 2 | 238280 | NA | 2.75 | 360 | NA |
| 32 | 2 | 196000 | 20210907 | 3 | 240 | NA |
| 31 | 2 | 174000 | 20210406 | 3.625 | 360 | NA |
| 1 | 2 | 93941.92 | NA | 3.5 | 360 | NA |
| 2 | 1 | 20000 | 20210402 | NA | 360 | NA |
| 2 | 1 | 30000 | 20210330 | NA | 360 | NA |
| 2 | 2 | 80000 | 20210306 | NA | 120 | NA |
| 1 | 2 | 273946 | 20210915 | 3.125 | 360 | NA |
| 2 | 2 | 75000 | 20210211 | NA | 240 | NA |
| 1 | 2 | 115650.09 | NA | 2.625 | 360 | NA |
| 1 | 2 | 205871.5 | NA | 3.5 | 360 | NA |
| 1 | 2 | 90900 | NA | 3.125 | 360 | NA |
| 1 | 2 | 251750 | NA | 3.125 | 360 | NA |
| 31 | 2 | 104500 | 20210830 | 2.75 | 360 | NA |
| 1 | 2 | 218882.47 | NA | 3.625 | 360 | NA |
| 1 | 2 | 189804.91 | NA | 3 | 360 | NA |
| 1 | 2 | 191139.43 | NA | 3 | 360 | NA |
| 31 | 2 | 133000 | 20210511 | 3.125 | 324 | NA |
| 1 | 2 | 222842.92 | NA | 3.75 | 360 | NA |
| 1 | 2 | 168780 | 20210720 | 2.75 | 360 | NA |
| 1 | 2 | 168150 | NA | 3.5 | 360 | NA |


| 1 | 2 | 216015 | NA | 3.5 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 175994.14 | NA | 2.625 | 360 | NA |
| 1 | 2 | 132240 | NA | 3.625 | 360 | NA |
| 1 | 2 | 229890 | NA | 3.75 | 360 | NA |
| 31 | 2 | 82000 | 20210920 | NA | 240 | NA |
| 31 | 2 | 126462 | 20210330 | 3.25 | 240 | NA |
| 31 | 2 | 49837 | 20210621 | NA | 360 | NA |
| 1 | 2 | 120218.66 | NA | 3.75 | 360 | NA |
| 31 | 2 | 111500 | 20210731 | 2.99 | 360 | NA |
| 1 | 2 | 185850 | NA | 3.25 | 360 | NA |
| 2 | 2 | 20000 | 20210831 | NA | 120 | NA |
| 31 | 2 | 62000 | 20210820 | 3.39 | 240 | NA |
| 1 | 2 | 200962.24 | NA | 3.375 | 360 | NA |
| 1 | 2 | 188802.23 | NA | 2.625 | 360 | NA |
| 31 | 2 | 93152.68 | 20210515 | NA | 180 | NA |
| 1 | 2 | 188871.35 | NA | 3.875 | 360 | NA |
| 31 | 2 | 130000 | 20210205 | NA | 240 | NA |
| 32 | 2 | 69000 | 20210617 | 3.5 | 360 | NA |
| 32 | 2 | 188500 | 20210916 | NA | 360 | NA |
| 1 | 2 | 151607.84 | NA | 2.875 | 360 | NA |
| 1 | 2 | 166920 | 20210303 | 3.125 | 360 | NA |
| 1 | 2 | 279837 | NA | 3.125 | 360 | NA |
| 1 | 2 | 198000.64 | NA | 3 | 360 | NA |
| 1 | 2 | 231420 | NA | 3.75 | 360 | NA |
| 1 | 2 | 97360 | NA | 3.375 | 360 | NA |
| 1 | 2 | 147046.1 | NA | 3.375 | 360 | NA |
| 1 | 2 | 208160 | NA | 2.625 | 360 | NA |
| 1 | 2 | 171565.44 | NA | 3.625 | 360 | NA |
| 1 | 2 | 180912.68 | NA | 2.875 | 360 | NA |
| 1 | 2 | 130469.07 | NA | 3.125 | 360 | NA |
| 31 | 2 | 89750 | 20210524 | NA | 220 | NA |
| 31 | 2 | 137600 | 20211007 | 3.25 | 360 | NA |
| 1 | 2 | 151607.84 | NA | 2.875 | 360 | NA |
| 31 | 2 | 119000 | 20211011 | NA | 60 | NA |


| 1 | 2 | 220552.94 | NA | 3.125 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 142384.11 | NA | 3.625 | 360 | NA |
| 1 | 2 | 249960.46 | NA | 3.125 | 360 | NA |
| 1 | 2 | 188000 | 20210119 | NA | 60 | NA |
| 31 | 2 | 193325 | 20210312 | 4.125 | 360 | NA |
| 1 | 2 | 206196 | NA | 2.75 | 360 | NA |
| 1 | 2 | 152192 | 20210121 | 3.5 | 360 | NA |
| 1 | 2 | 1392000 | 20210311 | 2.65 | 60 | NA |
| 1 | 2 | 338400 | 20210225 | 3.15 | 60 | NA |
| 1 | 2 | 174400 | 20210212 | 3.22 | 60 | NA |
| 2 | 1 | 20000 | 20211217 | NA | 360 | NA |
| 1 | 2 | 175861 | NA | 3.625 | 360 | NA |
| 1 | 2 | 133536 | NA | 3.5 | 360 | NA |
| 2 | 1 | 50000 | 20210514 | NA | 360 | NA |
| 31 | 2 | 131000 | 20210615 | 2.875 | 240 | NA |
| 1 | 2 | 200976.08 | NA | 3.625 | 360 | NA |
| 1 | 2 | 139906 | NA | 3.125 | 360 | NA |
| 1 | 2 | 141000 | 20210720 | NA | 360 | NA |
| 2 | 1 | 70000 | 20210204 | NA | 360 | NA |
| 1 | 2 | 135475.07 | NA | 3.125 | 360 | NA |
| 2 | 1 | 120000 | 20210310 | NA | 360 | NA |
| 1 | 2 | 210822.49 | NA | 3.625 | 360 | NA |
| 32 | 2 | 124320 | 20210302 | NA | 360 | NA |
| 32 | 2 | 146520 | 20210209 | NA | 360 | NA |
| 1 | 2 | 237500 | NA | 3.875 | 360 | NA |
| 1 | 2 | 134721 | NA | 3.375 | 360 | NA |
| 1 | 2 | 130000 | 20210923 | NA | 360 | NA |
| 2 | 1 | 15000 | 20210406 | NA | 360 | NA |
| 2 | 1 | 15000 | 20210726 | NA | 360 | NA |
| 1 | 2 | 143055.13 | NA | 5.125 | 360 | NA |
| 2 | 1 | 15000 | 20210524 | NA | 360 | NA |
| 32 | 2 | 60000 | 20210802 | 2.625 | 240 | NA |
| 2 | 1 | 50000 | 20210511 | NA | 360 | NA |
| 32 | 2 | 112000 | 20210518 | NA | 360 | NA |


| 31 | 2 | 118500 | 20211012 | 3.25 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 222673.87 | NA | 3.5 | 360 | NA |
| 1 | 2 | 136247.8 | NA | 3 | 360 | NA |
| 1 | 2 | 83460 | NA | 3.5 | 360 | NA |
| 1 | 2 | 95045.76 | NA | 3.625 | 360 | NA |
| 1 | 2 | 245373 | NA | 3.125 | 360 | NA |
| 1 | 2 | 93279 | NA | 2.875 | 360 | NA |
| 1 | 2 | 156448.4 | NA | 3.5 | 360 | NA |
| 1 | 2 | 182845 | NA | 3.75 | 360 | NA |
| 2 | 1 | 40000 | 20210114 | NA | 360 | NA |
| 1 | 2 | 207839.5 | NA | 3.625 | 360 | NA |
| 32 | 2 | 160000 | 20210421 | NA | 360 | NA |
| 1 | 2 | 175757 | NA | 3.5 | 360 | NA |
| 32 | 2 | 83000 | 20210406 | 2.625 | 120 | NA |
| 1 | 2 | 285000 | 20210301 | 3.375 | 360 | NA |
| 1 | 2 | 135800 | 20210514 | 3.875 | 360 | NA |
| 32 | 2 | 130000 | 20201125 | 3.125 | 360 | NA |
| 1 | 2 | 294566 | 20201130 | NA | 360 | NA |
| 1 | 2 | 126172 | NA | 3.375 | 360 | NA |
| 2 | 1 | 65000 | 20210909 | NA | 360 | NA |
| 31 | 2 | 163752 | 20210909 | NA | 240 | NA |
| 1 | 2 | 156839 | NA | 2.75 | 360 | NA |
| 2 | 1 | 25000 | 20210426 | NA | 360 | NA |
| 2 | 1 | 20000 | 20210419 | NA | 360 | NA |
| 31 | 2 | 150000 | 20210311 | NA | 240 | NA |
| 1 | 2 | 161082.38 | NA | 4.625 | 360 | NA |
| 32 | 2 | 75000 | 20210824 | NA | 120 | NA |
| 1 | 2 | 185305.42 | NA | 3.625 | 360 | NA |
| 32 | 2 | 163250 | 20210726 | 3.5 | 240 | NA |
| 2 | 1 | 100000 | 20210121 | NA | 360 | NA |
| 1 | 2 | 209770.08 | NA | 3.125 | 360 | NA |
| 31 | 2 | 234000 | 20201231 | 2.875 | 360 | NA |
| 2 | 1 | 50000 | 20211014 | NA | 360 | NA |
| 1 | 2 | 217992.36 | NA | 3 | 360 | NA |


| 2 | 2 | 41000 | 20210514 | NA | 180 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 191468 | NA | 3.125 | 360 | NA |
| 2 | 1 | 60000 | 20210302 | NA | 360 | NA |
| 31 | 2 | 75100 | 20211026 | NA | 180 | NA |
| 1 | 2 | 162378 | NA | 3.625 | 360 | NA |
| 2 | 2 | 30000 | 20210608 | NA | 72 | NA |
| 2 | 1 | 30000 | 20210605 | NA | 360 | NA |
| 1 | 2 | 63097.54 | NA | 5.625 | 360 | NA |
| 1 | 2 | 235282.13 | NA | 3.5 | 360 | NA |
| 2 | 1 | 20000 | 20211028 | NA | 360 | NA |
| 1 | 2 | 220924 | NA | 2.875 | 360 | NA |
| 1 | 2 | 196377 | 20210503 | 3.375 | 360 | NA |
| 1 | 2 | 227247 | NA | 3.625 | 360 | NA |
| 1 | 2 | 210750.43 | NA | 3.125 | 360 | NA |
| 1 | 2 | 201246.15 | NA | 3.125 | 360 | NA |
| 2 | 1 | 15000 | 20210505 | NA | 360 | NA |
| 2 | 1 | 15000 | 20210420 | NA | 360 | NA |
| 1 | 2 | 179164.11 | NA | 4 | 360 | NA |
| 1 | 2 | 225834 | NA | 3.125 | 360 | NA |
| 2 | 1 | 36255 | 20210630 | 4.2 | 360 | NA |
| 1 | 2 | 166405.22 | NA | 3.625 | 360 | NA |
| 1 | 2 | 162011 | NA | 2.625 | 360 | NA |
| 31 | 2 | 122500 | 20210830 | NA | 360 | NA |
| 2 | 1 | 300000 | 20210202 | NA | 360 | NA |
| 31 | 2 | 85000 | 20210126 | NA | 180 | NA |
| 1 | 2 | 161165.07 | NA | 5.625 | 360 | NA |
| 31 | 2 | 72000 | 20211202 | 2.5 | 180 | NA |
| 31 | 2 | 126000 | 20211123 | 3.375 | 360 | NA |
| 1 | 2 | 110000 | 20211013 | NA | 240 | NA |
| 31 | 2 | 95000 | 20210728 | NA | 180 | NA |
| 1 | 2 | 157900 | 20210324 | 3.25 | 360 | NA |
| 2 | 2 | 35000 | 20210407 | 4.55 | 120 | NA |
| 2 | 1 | 300000 | 20210401 | NA | 360 | NA |
| 1 | 2 | 116000 | 20210105 | 3.625 | 360 | NA |


| 1 | 2 | 157102 | NA | 2.625 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | 1 | 50000 | 20210920 | NA | 360 | NA |
| 31 | 2 | 71492 | 20210824 | 2.25 | 180 | NA |
| 2 | 2 | 80000 | 20210405 | NA | 180 | NA |
| 1 | 2 | 163400 | NA | 3.25 | 360 | NA |
| 2 | 1 | 20000 | 20201109 | 4.95 | 360 | NA |
| 31 | 2 | 77798 | 20201030 | 2.99 | 145 | NA |
| 1 | 2 | 195657.86 | NA | 2.625 | 360 | NA |
| 31 | 2 | 148000 | 20210416 | 2.375 | 180 | NA |
| 1 | 2 | 138963.78 | NA | 4.625 | 360 | NA |
| 1 | 2 | 175750 | 20210420 | 2.99 | 360 | NA |
| 31 | 2 | 68000 | 20210908 | 3.39 | 120 | NA |
| 2 | 1 | 20000 | 20210415 | NA | 360 | NA |
| 31 | 2 | 100000 | 20210204 | NA | 240 | NA |
| 1 | 2 | 100000 | 20210426 | 4.125 | 360 | NA |
| 1 | 2 | 94762.06 | NA | 3.75 | 360 | NA |
| 1 | 2 | 81456.42 | NA | 4.625 | 360 | NA |
| 31 | 2 | 63568 | 20210922 | NA | 360 | NA |
| 1 | 2 | 191468 | NA | 3.625 | 360 | NA |
| 1 | 2 | 121754 | NA | 3.625 | 360 | NA |
| 31 | 2 | 66730 | 20210825 | 2.84 | 180 | NA |
| 31 | 2 | 15000 | 20210621 | 3.84 | 24 | NA |
| 31 | 2 | 85000 | 20210526 | NA | 360 | NA |
| 1 | 2 | 171000 | 20210922 | NA | 360 | NA |
| 32 | 2 | 77000 | 20211126 | 2.875 | 240 | NA |
| 1 | 2 | 140650 | 20211005 | 3.625 | 360 | NA |
| 1 | 2 | 107837.02 | NA | 3.5 | 360 | NA |
| 1 | 2 | 123015 | 20210518 | NA | 360 | NA |
| 31 | 2 | 70400 | 20201217 | 2.5 | 120 | NA |
| 1 | 2 | 127645 | 20210331 | NA | 360 | NA |
| 31 | 2 | 204303.98 | 20210826 | NA | 180 | NA |
| 31 | 2 | 110000 | 20210401 | NA | 360 | NA |
| 1 | 2 | 157102 | NA | 3.5 | 360 | NA |
| 1 | 2 | 161029 | NA | 3.125 | 360 | NA |


| 31 | 2 | 60000 | 20211123 | NA | 180 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 1 | 89818 | 20211025 | NA | 360 | NA |
| 31 | 1 | 68800 | 20211019 | NA | 360 | NA |
| 31 | 2 | 30000 | 20210309 | NA | 60 | NA |
| 1 | 2 | 132554 | NA | 3.5 | 360 | NA |
| 31 | 2 | 120000 | 20210125 | NA | 180 | NA |
| 2 | 1 | 80000 | 20210123 | NA | 360 | NA |
| 31 | 2 | 80000 | 20210123 | 2.99 | 180 | NA |
| 31 | 1 | 100000 | 20210121 | NA | 360 | NA |
| 1 | 2 | 108000 | 20210707 | 4.125 | 360 | NA |
| 2 | 2 | 50000 | 20210608 | NA | 360 | NA |
| 1 | 2 | 182000 | 20210212 | 2.625 | 360 | NA |
| 2 | 1 | 80000 | 20210123 | NA | 360 | NA |
| 2 | 1 | 50000 | 20210920 | NA | 360 | NA |
| 2 | 2 | 15000 | 20210622 | NA | 60 | NA |
| 2 | 2 | 20000 | 20210330 | NA | 120 | NA |
| 31 | 2 | 70000 | 20210203 | NA | 180 | NA |
| 31 | 2 | 54000 | 20210713 | NA | 360 | NA |
| 31 | 2 | 56000 | 20210610 | NA | 360 | NA |
| 32 | 2 | 67663 | 20211001 | 3.25 | 180 | NA |
| 1 | 2 | 177000 | 20210108 | 3.125 | 360 | NA |
| 31 | 2 | 71000 | 20211001 | NA | 180 | NA |
| 1 | 2 | 158072.91 | NA | 3.25 | 360 | NA |
| 1 | 2 | 210475.43 | NA | 3.625 | 360 | NA |
| 31 | 2 | 106000 | 20210813 | 2.89 | 180 | NA |
| 31 | 2 | 120000 | 20210601 | 3.54 | 240 | NA |
| 31 | 2 | 122500 | 20201209 | 2.5 | 180 | NA |
| 1 | 2 | 160000 | 20210126 | NA | 12 | NA |
| 31 | 2 | 200000 | 20210119 | 2.375 | 180 | NA |
| 31 | 2 | 95000 | 20211208 | NA | 120 | NA |
| 31 | 2 | 77171.19 | 20211102 | NA | 144 | NA |
| 32 | 2 | 180000 | NA | 2.625 | 240 | NA |
| 1 | 2 | 214051 | NA | 3.375 | 360 | NA |
| 31 | 2 | 105000 | 20210803 | NA | 180 | NA |


| 2 | 1 | 100000 | 20210512 | NA | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 1 | 115000 | 20210423 | 4.65 | 360 | NA |
| 2 | 1 | 100000 | 20210713 | 3.95 | 360 | NA |
| 31 | 2 | 56038 | 20210324 | 2.84 | 120 | NA |
| 31 | 2 | 88245 | 20201027 | 3.04 | 180 | NA |
| 1 | 2 | 62400 | 20210208 | 1.99 | 120 | NA |
| 1 | 2 | 161490 | NA | 3.25 | 360 | NA |
| 31 | 2 | 50974.6 | 20210212 | 2.74 | 180 | NA |
| 1 | 2 | 126750 | 20210628 | 4.125 | 360 | NA |
| 1 | 2 | 196816 | 20210610 | NA | 360 | NA |
| 1 | 2 | 123714.8 | NA | 3.625 | 360 | NA |
| 1 | 2 | 216015 | NA | 3.5 | 360 | NA |
| 1 | 2 | 214322.28 | NA | 3.5 | 360 | NA |
| 1 | 2 | 240140.28 | NA | 2.875 | 360 | NA |
| 1 | 2 | 78413.3 | NA | 2.875 | 360 | NA |
| 1 | 2 | 161912 | NA | 2.625 | 360 | NA |
| 1 | 2 | 52725 | 20201109 | 3.125 | 360 | NA |
| 1 | 2 | 139422 | NA | 2.875 | 360 | NA |
| 1 | 2 | 180164.97 | NA | 3.375 | 360 | NA |
| 31 | 2 | 86000 | 20210809 | NA | 120 | NA |
| 31 | 2 | 68500 | 20210521 | NA | 180 | NA |
| 1 | 2 | 181649 | NA | 2.75 | 360 | NA |
| 1 | 2 | 129400.53 | NA | 3.375 | 360 | NA |
| 1 | 2 | 144503 | 20210407 | 4.25 | 360 | NA |
| 31 | 2 | 38500 | 20210601 | NA | 240 | NA |
| 1 | 2 | 186558 | NA | 3.5 | 360 | NA |
| 2 | 1 | 50000 | 20211015 | NA | 360 | NA |
| 1 | 2 | 112917 | NA | 3.125 | 360 | NA |
| 31 | 1 | 60000 | 20210113 | NA | 360 | NA |
| 31 | 2 | 94448.45 | 20210720 | 2.69 | 120 | NA |
| 1 | 2 | 111813 | NA | 3.125 | 360 | NA |
| 1 | 2 | 224387.49 | NA | 3.125 | 360 | NA |
| 1 | 2 | 197261.59 | NA | 3.5 | 360 | NA |
| 31 | 2 | 115000 | 20210813 | 2.99 | 360 | NA |


| 1 | 2 | 212657 | NA | 3.375 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 129980 | NA | 3.625 | 360 | NA |
| 1 | 2 | 147987 | NA | 3.125 | 360 | NA |
| 1 | 2 | 133000 | NA | 3.375 | 360 | NA |
| 1 | 2 | 205832.59 | NA | 3.625 | 360 | NA |
| 1 | 2 | 242250 | NA | 3.375 | 360 | NA |
| 1 | 2 | 165938 | NA | 2.625 | 360 | NA |
| 31 | 2 | 126480 | 20210719 | NA | 180 | NA |
| 1 | 2 | 130950 | NA | 3.375 | 360 | NA |
| 1 | 2 | 136860.46 | NA | 2.625 | 360 | NA |
| 32 | 2 | 108000 | 20211201 | 2.75 | 180 | NA |
| 1 | 2 | 208328.75 | NA | 3.625 | 360 | NA |
| 1 | 2 | 202638.41 | NA | 2.875 | 360 | NA |
| 1 | 2 | 86276.45 | NA | 5.125 | 360 | NA |
| 31 | 2 | 75000 | 20210128 | NA | 360 | NA |
| 31 | 2 | 15000 | 20210628 | NA | 15 | NA |
| 31 | 2 | 114000 | 20210830 | 2.375 | 180 | NA |
| 1 | 2 | 207000 | NA | 3.375 | 360 | NA |
| 1 | 2 | 206196 | NA | 3.5 | 360 | NA |
| 31 | 2 | 92500 | 20210731 | 2.875 | 360 | NA |
| 1 | 2 | 77805 | NA | 3.75 | 360 | NA |
| 1 | 2 | 207170 | 20210604 | 3.5 | 360 | NA |
| 31 | 2 | 188835.13 | NA | 2.375 | 360 | NA |
| 31 | 2 | 109000 | 20210202 | 2.625 | 180 | NA |
| 32 | 2 | 86000 | 20210804 | 2.375 | 180 | NA |
| 1 | 2 | 181024.79 | NA | 3 | 360 | NA |
| 1 | 2 | 68552.43 | NA | 5.375 | 360 | NA |
| 1 | 2 | 237142.29 | NA | 3.75 | 360 | NA |
| 1 | 2 | 142855 | NA | 3.125 | 360 | NA |
| 1 | 2 | 164900 | NA | 3.875 | 360 | NA |
| 1 | 2 | 157003 | NA | 3 | 360 | NA |
| 1 | 2 | 202268 | NA | 3.5 | 360 | NA |
| 1 | 2 | 222888 | NA | 3.125 | 360 | NA |
| 31 | 2 | 49000 | 20210316 | NA | 60 | NA |


| 31 | 2 | 90000 | 20210708 | NA | 180 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 150228 | NA | 2.875 | 360 | NA |
| 1 | 2 | 93833.41 | NA | 5 | 360 | NA |
| 1 | 2 | 109034.63 | NA | 5.5 | 360 | NA |
| 2 | 1 | 15000 | 20210423 | NA | 360 | NA |
| 31 | 1 | 100000 | 20210412 | NA | 360 | NA |
| 1 | 2 | 105668.86 | NA | 3.75 | 360 | NA |
| 1 | 2 | 141225.48 | NA | 2.625 | 360 | NA |
| 1 | 2 | 200435.18 | NA | 3 | 360 | NA |
| 2 | 1 | 50000 | 20211224 | NA | 360 | NA |
| 1 | 2 | 160775.65 | NA | 5.5 | 360 | NA |
| 1 | 2 | 186430.15 | NA | 3.625 | 360 | NA |
| 1 | 2 | 194000 | NA | 3.875 | 360 | NA |
| 2 | 1 | 88000 | 20210603 | 4.15 | 360 | NA |
| 1 | 2 | 184685.45 | NA | 3.5 | 360 | NA |
| 31 | 2 | 88000 | 20210920 | 3.25 | 360 | NA |
| 1 | 1 | 15000 | 20210507 | NA | 360 | NA |
| 31 | 2 | 57000 | 20210331 | NA | 180 | NA |
| 1 | 1 | 15000 | 20210205 | NA | 360 | NA |
| 1 | 1 | 64000 | 20210202 | NA | 360 | NA |
| 1 | 2 | 82284.35 | NA | 5.375 | 386 | NA |
| 31 | 2 | 105600 | 20210713 | 3.29 | 180 | NA |
| 1 | 2 | 251250 | NA | 3.125 | 360 | NA |
| 31 | 2 | 99000 | 20210427 | 2.375 | 180 | NA |
| 1 | 2 | 106863.18 | NA | 4 | 360 | NA |
| 1 | 2 | 247350 | 20210119 | 2.625 | 360 | NA |
| 1 | 2 | 242589.97 | NA | 2.875 | 360 | NA |
| 2 | 1 | 25000 | 20211026 | NA | 360 | NA |
| 1 | 2 | 252200 | NA | 3.625 | 360 | NA |
| 1 | 2 | 169592.78 | NA | 3.375 | 360 | NA |
| 2 | 2 | 162000 | 20210927 | 3.09 | 240 | NA |
| 1 | 2 | 176917 | NA | 3.125 | 360 | NA |
| 31 | 2 | 65305.24 | 20210715 | 2.69 | 120 | NA |
| 1 | 2 | 265109 | NA | 3.5 | 360 | NA |


| 1 | 2 | 284648 | NA | 2.875 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 120000 | 20210608 | NA | 360 | NA |
| 31 | 2 | 154000 | 20210106 | 3.125 | 360 | NA |
| 31 | 2 | 145300 | 20201203 | 2.99 | 360 | NA |
| 2 | 1 | 60000 | 20210517 | 3.65 | 360 | NA |
| 31 | 2 | 173000 | 20210916 | NA | 360 | NA |
| 1 | 2 | 128351.21 | NA | 5.125 | 360 | NA |
| 1 | 2 | 164900 | NA | 3.75 | 360 | NA |
| 1 | 2 | 152262.91 | NA | 4.125 | 360 | NA |
| 1 | 2 | 131803.75 | NA | 5 | 360 | NA |
| 31 | 2 | 92600 | 20210920 | 2.375 | 180 | NA |
| 31 | 2 | 126000 | 20210325 | 2.75 | 180 | NA |
| 1 | 2 | 158070.91 | NA | 3.625 | 360 | NA |
| 31 | 2 | 136000 | 20210406 | NA | 180 | NA |
| 1 | 2 | 181390 | 20211005 | 3.75 | 360 | NA |
| 1 | 2 | 146269.05 | NA | 4.625 | 360 | NA |
| 1 | 2 | 298178 | NA | 3.375 | 360 | NA |
| 1 | 2 | 256504.45 | NA | 3.625 | 360 | NA |
| 1 | 2 | 245040.67 | NA | 2.875 | 360 | NA |
| 1 | 2 | 329650 | 20210502 | 2.99 | 360 | NA |
| 2 | 2 | 248000 | 20210207 | 3.5 | 360 | NA |
| 1 | 2 | 322050 | NA | 2.75 | 360 | NA |
| 32 | 2 | 304000 | NA | 2.99 | 360 | NA |
| 31 | 2 | 222200 | NA | 3 | 360 | NA |
| 1 | 2 | 308460 | NA | 3.75 | 360 | NA |
| 31 | 2 | 152652 | 20210701 | 2.59 | 120 | NA |
| 31 | 2 | 235000 | 20210628 | 3.54 | 240 | NA |
| 31 | 2 | 50000 | 20210419 | 2.94 | 120 | NA |
| 1 | 2 | 279386.89 | NA | 3.375 | 360 | NA |
| 1 | 2 | 258236 | NA | 2.625 | 360 | NA |
| 1 | 2 | 196213.89 | NA | 5.375 | 360 | NA |
| 31 | 2 | 262006 | NA | 2.375 | 360 | NA |
| 1 | 2 | 309320 | NA | 3.375 | 360 | NA |
| 1 | 2 | 276450 | NA | 3.75 | 360 | NA |


| 31 | 2 | 333192 | NA | 2.25 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 199067 | 20210428 | 2.375 | 180 | NA |
| 1 | 2 | 285000 | NA | 3.75 | 360 | NA |
| 31 | 2 | 197567 | 20210208 | NA | 180 | NA |
| 1 | 2 | 338318 | NA | 3.5 | 360 | NA |
| 1 | 2 | 271600 | NA | 3.375 | 360 | NA |
| 32 | 2 | 205000 | NA | 2.375 | 180 | NA |
| 1 | 2 | 157500 | NA | 3.375 | 360 | NA |
| 1 | 2 | 298927.26 | NA | 2.625 | 360 | NA |
| 31 | 2 | 200000 | 20210402 | NA | 360 | NA |
| 1 | 2 | 194000 | NA | 3.75 | 360 | NA |
| 1 | 2 | 288660.64 | NA | 3 | 360 | NA |
| 31 | 2 | 212000 | 20210615 | NA | 360 | NA |
| 1 | 2 | 305550 | NA | 3.125 | 360 | NA |
| 31 | 2 | 170000 | 20210617 | NA | 240 | NA |
| 31 | 2 | 217350 | 20210404 | NA | 360 | NA |
| 31 | 2 | 393600 | NA | 2.75 | 360 | NA |
| 1 | 2 | 226800 | 20210405 | - 3 | 360 | NA |
| 1 | 2 | 247350 | 20210430 | 2.875 | 360 | NA |
| 31 | 2 | 134754 | NA | 2.75 | 120 | NA |
| 31 | 2 | 220000 | 20210113 | 2.99 | 360 | NA |
| 32 | 2 | 202500 | 20201229 | 2.625 | 180 | NA |
| 31 | 2 | 164000 | 20201201 | 2.875 | 324 | NA |
| 31 | 2 | 170000 | 20210614 | NA | 240 | NA |
| 1 | 2 | 291000 | NA | 3 | 360 | NA |
| 31 | 2 | 65000 | 20210922 | 2.59 | 120 | NA |
| 32 | 2 | 280000 | NA | 3.125 | 360 | NA |
| 31 | 2 | 143000 | NA | 2.375 | 180 | NA |
| 32 | 2 | 112000 | NA | 2.625 | 240 | NA |
| 32 | 2 | 198200 | NA | 2.375 | 180 | NA |
| 31 | 2 | 170000 | 20210622 | 3.44 | 240 | NA |
| 1 | 2 | 279837 | NA | 3.5 | 360 | NA |
| 31 | 2 | 171000 | 20210708 | NA | 360 | NA |
| 1 | 2 | 229966.88 | NA | 3.125 | 360 | NA |


| 31 | 2 | 242000 | 20210408 | 2.875 | 180 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 234889 | NA | 3.125 | 360 | NA |
| 32 | 2 | 140000 | 20201228 | 2.5 | 180 | NA |
| 32 | 2 | 182132 | 20200814 | NA | 360 | NA |
| 31 | 2 | 227200 | NA | 3.25 | 240 | NA |
| 31 | 2 | 174000 | 20210605 | 2.99 | 360 | NA |
| 1 | 2 | 280330 | NA | 3.75 | 360 | NA |
| 1 | 2 | 308231.43 | NA | 3.125 | 360 | NA |
| 31 | 2 | 215000 | 20210806 | 3.04 | 180 | NA |
| 1 | 2 | 172000 | NA | 2.875 | 360 | NA |
| 1 | 2 | 330896 | NA | 2.875 | 360 | NA |
| 31 | 2 | 249999 | 20210515 | 3.44 | 240 | NA |
| 32 | 2 | 192000 | 20210702 | 2.99 | 180 | NA |
| 2 | 1 | 50000 | 20210503 | NA | 360 | NA |
| 2 | 2 | 29000 | 20210419 | NA | 60 | NA |
| 31 | 2 | 215000 | 20201208 | 2.5 | 180 | NA |
| 31 | 2 | 105000 | 20210204 | NA | 180 | NA |
| 31 | 2 | 250000 | 20210128 | NA | 240 | NA |
| 31 | 2 | 466145.85 | NA | 2.625 | 360 | NA |
| 31 | 2 | 215500 | NA | 2.625 | 360 | NA |
| 1 | 2 | 371925 | NA | 3 | 360 | NA |
| 31 | 2 | 242000 | 20210120 | NA | 360 | NA |
| 1 | 2 | 295850 | NA | 2.75 | 360 | NA |
| 31 | 2 | 404274.75 | NA | 2.75 | 360 | NA |
| 1 | 2 | 509446.63 | NA | 2.5 | 360 | NA |
| 2 | 2 | 80000 | 20210922 | NA | 72 | NA |
| 1 | 2 | 253502.82 | NA | 3.5 | 360 | NA |
| 1 | 2 | 296817.52 | NA | 2.75 | 360 | NA |
| 31 | 2 | 140000 | 20210723 | 3.04 | 240 | NA |
| 1 | 2 | 203300 | NA | 3.75 | 360 | NA |
| 1 | 2 | 280000 | NA | 3.25 | 360 | NA |
| 31 | 2 | 275534 | NA | 2.875 | 360 | NA |
| 31 | 2 | 376794 | 20210401 | 3.625 | 360 | NA |
| 31 | 2 | 229850 | NA | 2.75 | 360 | NA |


| 1 | 2 | 265109 | NA | 3.375 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 278850.76 | NA | 3.375 | 360 | NA |
| 32 | 2 | 194000 | 20210122 | 2.5 | 180 | NA |
| 31 | 2 | 117500 | 20201211 | 2.875 | 360 | NA |
| 1 | 2 | 287323.52 | NA | 2.625 | 360 | NA |
| 2 | 1 | 50000 | 20211018 | NA | 360 | NA |
| 1 | 2 | 252200 | NA | 3.75 | 360 | NA |
| 1 | 2 | 243200 | NA | 3.25 | 360 | NA |
| 32 | 2 | 225000 | NA | 2.375 | 240 | NA |
| 31 | 2 | 222000 | NA | 2.125 | 180 | NA |
| 1 | 2 | 241326.56 | NA | 3.375 | 360 | NA |
| 31 | 2 | 161800 | 20200909 | 2.5 | 180 | NA |
| 31 | 2 | 162000 | 20210329 | 3.09 | 180 | NA |
| 31 | 2 | 220900 | 20211014 | 3 | 240 | NA |
| 31 | 2 | 137000 | 20211001 | 2.375 | 180 | NA |
| 1 | 2 | 181343.9 | NA | 3.125 | 360 | NA |
| 31 | 2 | 200000 | 20210804 | NA | 180 | NA |
| 1 | 2 | 373117 | NA | 2.625 | 360 | NA |
| 1 | 2 | 246905 | 20210802 | 2.875 | 360 | NA |
| 1 | 2 | 224000 | 20210925 | 3.125 | 360 | NA |
| 1 | 2 | 231000 | 20210404 | 3.25 | 360 | NA |
| 1 | 2 | 309708.5 | NA | 2.625 | 360 | NA |
| 1 | 2 | 318588.46 | NA | 3.25 | 360 | NA |
| 1 | 2 | 264034.73 | NA | 3.99 | 378 | NA |
| 1 | 2 | 286438.54 | NA | 3.375 | 360 | NA |
| 1 | 2 | 351500 | NA | 3.125 | 360 | NA |
| 1 | 2 | 212800 | NA | 3.625 | 360 | NA |
| 31 | 2 | 168000 | 20211103 | 2.875 | 240 | NA |
| 2 | 1 | 39182 | 20210609 | 4.9 | 360 | NA |
| 1 | 2 | 249883.07 | NA | 3.75 | 360 | NA |
| 2 | 1 | 75000 | 20201125 | NA | 360 | NA |
| 1 | 2 | 682411 | NA | 2.375 | 360 | NA |
| 1 | 2 | 390288 | 20210519 | NA | 360 | NA |
| 1 | 2 | 243508 | NA | 3.5 | 360 | NA |


| 2 | 1 | 75000 | 20210810 | NA | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 240183.41 | NA | 3.5 | 360 | NA |
| 1 | 2 | 296000 | 20210616 | 2.5 | 360 | NA |
| 2 | 2 | 30000 | 20211029 | NA | 84 | NA |
| 32 | 2 | 256000 | 20210805 | 3.25 | 360 | NA |
| 31 | 2 | 126500 | 20210927 | 2.79 | 120 | NA |
| 31 | 2 | 179000 | 20210713 | 3.25 | 360 | NA |
| 31 | 2 | 60000 | 20210722 | 2.59 | 120 | NA |
| 32 | 2 | 168000 | 20210910 | 3.25 | 360 | NA |
| 1 | 2 | 249884 | NA | 3.125 | 360 | NA |
| 1 | 2 | 192065.44 | NA | 3.625 | 360 | NA |
| 31 | 2 | 150000 | 20210825 | 3.625 | 360 | NA |
| 32 | 2 | 163000 | 20210410 | 2.99 | 180 | NA |
| 1 | 2 | 267073 | NA | 2.625 | 360 | NA |
| 1 | 2 | 223250 | NA | 3.75 | 360 | NA |
| 1 | 2 | 196061.13 | NA | 3.375 | 360 | NA |
| 1 | 2 | 244080 | 20210817 | 2.5 | 360 | NA |
| 1 | 2 | 241656 | NA | 3.625 | 360 | NA |
| 32 | 2 | 135000 | 20210621 | NA | 360 | NA |
| 31 | 2 | 240000 | 20210721 | NA | 240 | NA |
| 1 | 2 | 294566 | NA | 3.125 | 360 | NA |
| 1 | 2 | 125000 | 20210115 | NA | 360 | NA |
| 31 | 2 | 92000 | NA | 2.75 | 180 | NA |
| 1 | 2 | 215252.04 | NA | 2.625 | 360 | NA |
| 1 | 2 | 272208.04 | NA | 3.5 | 360 | NA |
| 31 | 2 | 193000 | 20210607 | NA | 360 | NA |
| 1 | 2 | 251750 | NA | 3.375 | 360 | NA |
| 31 | 2 | 218000 | 20210427 | NA | 360 | NA |
| 32 | 2 | 240000 | 20210209 | NA | 360 | NA |
| 31 | 2 | 170000 | 20211211 | NA | 120 | NA |
| 31 | 2 | 110000 | 20210512 | NA | 120 | NA |
| 1 | 2 | 268000 | 20210729 | 2.99 | 360 | NA |
| 31 | 2 | 287000 | 20210614 | 2.375 | 180 | NA |
| 2 | 1 | 50000 | 20211023 | NA | 360 | NA |


| 1 | 2 | 195000 | 20210707 | NA | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 318000 | 20210209 | 3 | 360 | NA |
| 31 | 2 | 181000 | 20200903 | 2.75 | 180 | NA |
| 31 | 2 | 252000 | 20210906 | 2.375 | 180 | NA |
| 1 | 2 | 211500 | 20210810 | 2.875 | 360 | NA |
| 2 | 2 | 211600 | 20210510 | 3.375 | 360 | NA |
| 1 | 2 | 278800 | 20210302 | 2.99 | 360 | NA |
| 31 | 2 | 240000 | NA | 2.25 | 240 | NA |
| 31 | 2 | 304200 | 20201221 | 2.375 | 180 | NA |
| 31 | 2 | 161000 | 20210808 | 3.125 | 360 | NA |
| 31 | 2 | 205500 | 20210529 | 2.625 | 180 | NA |
| 1 | 2 | 192000 | 20210519 | 3.25 | 360 | NA |
| 31 | 2 | 323000 | 20210107 | 2.875 | 360 | NA |
| 32 | 2 | 258750 | 20201209 | 2.99 | 360 | NA |
| 32 | 2 | 350000 | 20201201 | 2.875 | 180 | NA |
| 32 | 2 | 200000 | 20210819 | NA | 360 | NA |
| 32 | 2 | 237750 | 20210720 | 3.875 | 360 | NA |
| 31 | 2 | 227000 | 20210329 | 3.5 | 180 | NA |
| 31 | 2 | 191500 | NA | 2.625 | 240 | NA |
| 31 | 2 | 266200 | 20210304 | 3.5 | 360 | NA |
| 32 | 2 | 326000 | NA | 2.875 | 360 | NA |
| 1 | 2 | 292000 | 20211207 | NA | 360 | NA |
| 31 | 2 | 95813.95 | 20210421 | 2.84 | 120 | NA |
| 32 | 2 | 143000 | 20210706 | 3.5 | 180 | NA |
| 2 | 2 | 100000 | 20210105 | NA | 240 | NA |
| 1 | 2 | 165938 | NA | 2.5 | 360 | NA |
| 1 | 2 | 255290 | NA | 3.25 | 360 | NA |
| 2 | 2 | 440000 | 20210526 | NA | 360 | NA |
| 1 | 2 | 254400 | 20210315 | 3.375 | 360 | NA |
| 1 | 2 | 288000 | 20201221 | 2.5 | 360 | NA |
| 2 | 2 | 600000 | 20201028 | NA | 360 | NA |
| 1 | 2 | 255290 | NA | 2.625 | 360 | NA |
| 1 | 2 | 279000 | NA | 2.75 | 360 | NA |
| 31 | 2 | 79000 | 20210625 | NA | 120 | NA |


| 32 | 2 | 224000 | 20210810 | 4.125 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 113000 | 20210720 | 2.125 | 180 | NA |
| 31 | 2 | 329000 | 20211103 | 3 | 360 | NA |
| 1 | 2 | 208053 | NA | 3.125 | 360 | NA |
| 1 | 2 | 127432.27 | NA | 5 | 360 | NA |
| 2 | 1 | 180000 | 20210206 | NA | 360 | NA |
| 31 | 2 | 145000 | 20210706 | NA | 240 | NA |
| 1 | 2 | 216015 | NA | 3.125 | 360 | NA |
| 31 | 2 | 81200 | 20210109 | 2.5 | 180 | NA |
| 31 | 2 | 54143 | 20211127 | NA | 180 | NA |
| 1 | 2 | 218170.9 | NA | 3.75 | 360 | NA |
| 2 | 1 | 63000 | 20210309 | NA | 360 | NA |
| 1 | 2 | 160461.26 | NA | 5.125 | 360 | NA |
| 1 | 2 | 83319.82 | NA | 3.125 | 360 | NA |
| 31 | 2 | 131500 | 20210211 | NA | 360 | NA |
| 31 | 2 | 54000 | 20210405 | NA | 180 | NA |
| 1 | 2 | 225832 | NA | 3.375 | 360 | NA |
| 1 | 2 | 221950 | NA | 3.625 | 360 | NA |
| 1 | 2 | 245373 | 20210909 | NA | 360 | NA |
| 32 | 2 | 82000 | 20210413 | 2.75 | 180 | NA |
| 2 | 1 | 37000 | 20211216 | NA | 360 | NA |
| 1 | 2 | 217972 | NA | 3.25 | 360 | NA |
| 1 | 2 | 196377 | NA | 3.5 | 360 | NA |
| 1 | 2 | 181649 | NA | 2.875 | 360 | NA |
| 1 | 2 | 131750 | 20210425 | 3.25 | 360 | NA |
| 1 | 2 | 187384.26 | NA | 4.625 | 360 | NA |
| 1 | 2 | 165672.6 | NA | 3 | 360 | NA |
| 1 | 2 | 254861.22 | NA | 3.125 | 360 | NA |
| 31 | 2 | 75395.39 | 20211006 | 2.59 | 120 | NA |
| 1 | 2 | 275500 | NA | 2.875 | 360 | NA |
| 1 | 2 | 220446.05 | NA | 3 | 360 | NA |
| 1 | 2 | 271600 | NA | 3.75 | 360 | NA |
| 1 | 2 | 172500 | 20211018 | 3.25 | 360 | NA |
| 31 | 2 | 218000 | NA | 3 | 360 | NA |


| 1 | 2 | 314204 | NA | 2.75 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 309750 | 20201203 | 3.5 | 360 | NA |
| 1 | 2 | 218304 | NA | 3.125 | 360 | NA |
| 1 | 2 | 307500 | 20210529 | 4.125 | 360 | NA |
| 1 | 2 | 290030 | NA | 3.125 | 360 | NA |
| 1 | 2 | 351500 | NA | 3.75 | 360 | NA |
| 31 | 2 | 178500 | NA | 3.375 | 240 | NA |
| 1 | 2 | 240000 | NA | 3.25 | 360 | NA |
| 1 | 2 | 245049.76 | NA | 3 | 360 | NA |
| 1 | 2 | 242400 | NA | 2.625 | 360 | NA |
| 1 | 2 | 220047.38 | NA | 2.75 | 360 | NA |
| 1 | 2 | 208050 | NA | 3.75 | 360 | NA |
| 1 | 2 | 254896.94 | NA | 3.625 | 360 | NA |
| 1 | 2 | 237195.3 | NA | 4.625 | 360 | NA |
| 31 | 2 | 93046.96 | 20210603 | 2.99 | 180 | NA |
| 31 | 2 | 248500 | 20210318 | NA | 360 | NA |
| 1 | 2 | 145482 | NA | 3.5 | 360 | NA |
| 1 | 2 | 259724.1 | NA | 2.625 | 360 | NA |
| 1 | 2 | 250671.88 | NA | 3.75 | 360 | NA |
| 1 | 2 | 119623.08 | NA | 4.125 | 360 | NA |
| 2 | 1 | 35000 | 20210728 | NA | 360 | NA |
| 2 | 1 | 30000 | 20210304 | NA | 360 | NA |
| 31 | 2 | 130600 | 20210712 | 3.375 | 120 | NA |
| 1 | 2 | 155200 | NA | 3.375 | 360 | NA |
| 1 | 2 | 200000 | NA | 3.375 | 360 | NA |
| 1 | 2 | 265109 | NA | 3.5 | 360 | NA |
| 1 | 2 | 227950 | NA | 3.25 | 360 | NA |
| 1 | 2 | 221916.37 | NA | 2.625 | 360 | NA |
| 2 | 1 | 30000 | 20210319 | NA | 360 | NA |
| 1 | 2 | 161500 | 20210607 | 3.25 | 360 | NA |
| 1 | 2 | 211500 | NA | 3.375 | 360 | NA |
| 1 | 2 | 361295.32 | NA | 3.625 | 360 | NA |
| 2 | 1 | 100000 | 20210624 | NA | 360 | NA |
| 31 | 2 | 175000 | 20201030 | 2.875 | 240 | NA |


| 1 | 2 | 269548 | NA | 3.125 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 240562 | NA | 3.625 | 360 | NA |
| 1 | 2 | 149380 | NA | 3.75 | 360 | NA |
| 1 | 2 | 242526 | NA | 3.375 | 360 | NA |
| 1 | 2 | 236849.48 | NA | 3.75 | 360 | NA |
| 1 | 2 | 181450 | 20210129 | 3.25 | 360 | NA |
| 1 | 2 | 202417.48 | NA | 4.25 | 360 | NA |
| 1 | 2 | 308274.62 | NA | 3.625 | 360 | NA |
| 31 | 2 | 147000 | 20210820 | 2.5 | 180 | NA |
| 1 | 2 | 229757.75 | NA | 5.375 | 360 | NA |
| 32 | 2 | 167887 | NA | 2.625 | 360 | NA |
| 31 | 2 | 106500 | 20210227 | NA | 180 | NA |
| 32 | 2 | 90000 | NA | 2.75 | 360 | NA |
| 1 | 2 | 252200 | NA | 3.375 | 360 | NA |
| 1 | 2 | 167200 | NA | 3.375 | 360 | NA |
| 31 | 2 | 175584 | 20210618 | NA | 360 | NA |
| 1 | 2 | 274926 | NA | 3.625 | 360 | NA |
| 1 | 2 | 256500 | 20210812 | 2.99 | 360 | NA |
| 1 | 2 | 218322.21 | NA | 5.375 | 360 | NA |
| 31 | 2 | 148000 | 20210701 | NA | 360 | NA |
| 31 | 2 | 183500 | 20210623 | 2.375 | 180 | NA |
| 31 | 2 | 223612 | NA | 2.25 | 360 | NA |
| 31 | 2 | 195000 | 20210215 | 3.25 | 360 | NA |
| 31 | 2 | 77000 | 20210121 | 2.5 | 180 | NA |
| 31 | 2 | 196000 | 20210127 | 2.875 | 360 | NA |
| 31 | 2 | 78530 | 20210110 | 2.5 | 180 | NA |
| 1 | 2 | 227950 | NA | 3.375 | 360 | NA |
| 1 | 2 | 256500 | NA | 3.75 | 360 | NA |
| 1 | 2 | 247000 | NA | 3.625 | 360 | NA |
| 1 | 2 | 314204 | NA | 2.75 | 360 | NA |
| 31 | 2 | 234600 | NA | 2.875 | 360 | NA |
| 32 | 2 | 240000 | NA | 2.75 | 240 | NA |
| 1 | 2 | 230743 | NA | 3 | 360 | NA |
| 1 | 2 | 299250 | NA | 3.125 | 360 | NA |


| 1 | 2 | 296530 | NA | 3.125 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 249986.96 | NA | 3.5 | 360 | NA |
| 1 | 2 | 173735.07 | NA | 5.125 | 360 | NA |
| 1 | 2 | 202010.92 | NA | 5.25 | 360 | NA |
| 31 | 2 | 309740.03 | NA | 3.25 | 360 | NA |
| 1 | 2 | 403750 | NA | 2.875 | 360 | NA |
| 1 | 2 | 142265.77 | NA | 3.25 | 360 | NA |
| 31 | 2 | 197310.58 | 20210714 | 3.44 | 240 | NA |
| 1 | 2 | 285000 | NA | 3.375 | 360 | NA |
| 1 | 2 | 151200 | NA | 3.75 | 360 | NA |
| 32 | 2 | 224500 | 20211105 | 3.5 | 360 | NA |
| 1 | 2 | 164651.63 | NA | 3.75 | 360 | NA |
| 1 | 2 | 92150 | 20201104 | 3.75 | 360 | NA |
| 1 | 2 | 265852.95 | NA | 3.5 | 360 | NA |
| 1 | 2 | 293075 | NA | 3.375 | 360 | NA |
| 1 | 2 | 237500 | NA | 3.375 | 360 | NA |
| 2 | 2 | 40000 | 20210621 | NA | 60 | NA |
| 31 | 2 | 199000 | 20200902 | 2.625 | 180 | NA |
| 31 | 2 | 114000 | 20210208 | 2.64 | 120 | NA |
| 1 | 2 | 261900 | NA | 3.5 | 360 | NA |
| 1 | 2 | 275017.02 | NA | 2.875 | 360 | NA |
| 32 | 2 | 210000 | 20201124 | 3.125 | 360 | NA |
| 1 | 2 | 232560 | NA | 3.75 | 360 | NA |
| 1 | 2 | 226630.83 | NA | 3.625 | 360 | NA |
| 1 | 2 | 102500 | NA | 3.375 | 360 | NA |
| 32 | 2 | 215000 | NA | 2.625 | 360 | NA |
| 2 | 2 | 30000 | 20210421 | NA | 60 | NA |
| 1 | 2 | 318859 | NA | 3.5 | 360 | NA |
| 1 | 2 | 188522 | NA | 3.5 | 360 | NA |
| 1 | 2 | 127639 | NA | 4.5 | 360 | NA |
| 31 | 2 | 263000 | NA | 2.99 | 300 | NA |
| 1 | 2 | 193037.53 | NA | 3.125 | 360 | NA |
| 1 | 2 | 195395 | NA | 3.125 | 360 | NA |
| 1 | 2 | 235653 | NA | 3.5 | 360 | NA |


| 32 | 2 | 100000 | NA | 2.375 | 180 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 179450 | NA | 3.625 | 360 | NA |
| 1 | 2 | 230994.57 | NA | 3.5 | 360 | NA |
| 31 | 2 | 166000 | 20210510 | 3.125 | 360 | NA |
| 1 | 2 | 175757 | NA | 3.375 | 360 | NA |
| 31 | 2 | 169500 | 20200827 | 2.75 | 180 | NA |
| 31 | 2 | 120000 | 20210305 | NA | 180 | NA |
| 1 | 2 | 270019 | NA | 2.625 | 360 | NA |
| 31 | 2 | 224500 | 20210707 | 3.125 | 360 | NA |
| 32 | 2 | 148000 | 20210730 | 2.375 | 180 | NA |
| 32 | 2 | 100000 | 20210708 | 2.375 | 180 | NA |
| 32 | 2 | 212000 | NA | 3.375 | 240 | NA |
| 1 | 2 | 217550 | NA | 3.5 | 360 | NA |
| 32 | 2 | 150000 | NA | 2.5 | 240 | NA |
| 31 | 2 | 218000 | NA | 3.25 | 360 | NA |
| 31 | 2 | 210500 | NA | 2.875 | 360 | NA |
| 31 | 2 | 406491 | NA | 2.5 | 360 | NA |
| 1 | 2 | 199730.83 | NA | 5.375 | 360 | NA |
| 2 | 2 | 75000 | 20210430 | 4.6 | 240 | NA |
| 31 | 2 | 174000 | 20210419 | NA | 240 | NA |
| 31 | 2 | 160100 | NA | 2.625 | 240 | NA |
| 1 | 2 | 284407 | NA | 2.875 | 360 | NA |
| 31 | 2 | 188000 | 20210805 | 2.25 | 180 | NA |
| 1 | 2 | 194750 | 20211123 | 3 | 360 | NA |
| 1 | 2 | 121500 | 20210201 | 3.25 | 360 | NA |
| 1 | 2 | 220190 | NA | 3.75 | 360 | NA |
| 31 | 2 | 222000 | 20201201 | 2.99 | 360 | NA |
| 2 | 1 | 88673 | 20210915 | 4.05 | 360 | NA |
| 1 | 2 | 261250 | NA | 2.75 | 360 | NA |
| 2 | 2 | 25000 | 20210820 | NA | 360 | NA |
| 31 | 2 | 152575.35 | 20210810 | 2.84 | 180 | NA |
| 1 | 2 | 381300 | NA | 3.25 | 360 | NA |
| 1 | 2 | 273946 | NA | 3.375 | 360 | NA |
| 1 | 2 | 308750 | NA | 3.625 | 360 | NA |


| 1 | 2 | 290052.01 | NA | 3.125 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 164500 | 20210813 | 2.25 | 180 | NA |
| 31 | 2 | 165500 | 20210813 | NA | 180 | NA |
| 31 | 2 | 200100 | 20210511 | 2.875 | 240 | NA |
| 31 | 2 | 209900 | 20201201 | 3 | 240 | NA |
| 1 | 2 | 222892 | NA | 3.25 | 360 | NA |
| 31 | 2 | 131000 | 20210330 | NA | 120 | NA |
| 31 | 2 | 165000 | 20210323 | 3.29 | 240 | NA |
| 31 | 2 | 122000 | 20210308 | NA | 180 | NA |
| 1 | 2 | 126493 | NA | 3.75 | 360 | NA |
| 1 | 2 | 276800 | NA | 3.25 | 360 | NA |
| 1 | 2 | 213488.44 | NA | 5.25 | 360 | NA |
| 1 | 2 | 289750 | NA | 3.375 | 360 | NA |
| 31 | 2 | 155000 | 20210707 | 2.375 | 180 | NA |
| 1 | 2 | 223612.74 | NA | 3.375 | 360 | NA |
| 1 | 2 | 225420.95 | NA | 2.625 | 360 | NA |
| 1 | 2 | 231528.18 | NA | 4.625 | 360 | NA |
| 31 | 2 | 228300 | NA | 2.625 | 240 | NA |
| 32 | 2 | 144200 | 20210429 | 2.375 | 180 | NA |
| 31 | 2 | 418000 | 20211219 | NA | 60 | NA |
| 1 | 2 | 213400 | NA | 3.375 | 360 | NA |
| 31 | 2 | 140000 | 20210123 | 3.34 | 240 | NA |
| 1 | 2 | 200000 | 20210626 | NA | 240 | NA |
| 32 | 2 | 150000 | NA | 2.5 | 120 | NA |
| 31 | 2 | 130000 | 20210722 | NA | 240 | NA |
| 1 | 2 | 218148.55 | NA | 3.375 | 360 | NA |
| 1 | 2 | 189572.98 | NA | 5.125 | 360 | NA |
| 2 | 2 | 35000 | 20210412 | NA | 120 | NA |
| 1 | 2 | 242403 | NA | 3.625 | 360 | NA |
| 31 | 2 | 98000 | 20210312 | 3.09 | 180 | NA |
| 31 | 2 | 81313.6 | 20201024 | 2.94 | 120 | NA |
| 1 | 2 | 207802.79 | NA | 3 | 360 | NA |
| 31 | 2 | 240000 | 20210409 | NA | 360 | NA |
| 1 | 2 | 324950 | NA | 2.875 | 360 | NA |


| 1 | 2 | 228000 | NA | 3.375 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 308796.51 | NA | 3.375 | 360 | NA |
| 1 | 2 | 261900 | NA | 2.5 | 360 | NA |
| 31 | 2 | 146000 | 20210918 | NA | 120 | NA |
| 1 | 2 | 255290 | NA | 3.125 | 360 | NA |
| 31 | 2 | 190000 | 20210511 | NA | 96 | NA |
| 1 | 2 | 263393.69 | NA | 2.625 | 360 | NA |
| 31 | 2 | 108500 | 20200826 | 3.375 | 120 | NA |
| 1 | 2 | 274088.97 | NA | 3.5 | 360 | NA |
| 31 | 2 | 103394 | 20210313 | 2.84 | 120 | NA |
| 1 | 2 | 240533 | NA | 3.625 | 360 | NA |
| 1 | 2 | 162000 | NA | 3.25 | 360 | NA |
| 1 | 2 | 263406.32 | NA | 3.25 | 360 | NA |
| 1 | 2 | 264663.73 | NA | 3.125 | 360 | NA |
| 1 | 2 | 248000 | 20210215 | 2.75 | 360 | NA |
| 1 | 2 | 157102 | NA | 3.125 | 360 | NA |
| 32 | 2 | 134130 | 20201213 | 3.125 | 360 | NA |
| 1 | 2 | 208550 | NA | 3.375 | 360 | NA |
| 31 | 1 | 50000 | 20210715 | 3.45 | 360 | NA |
| 31 | 2 | 142386.58 | 20210714 | 3.29 | 240 | NA |
| 32 | 2 | 185000 | NA | 2.875 | 360 | NA |
| 31 | 2 | 150000 | 20210527 | NA | 180 | NA |
| 31 | 2 | 162000 | 20211118 | 2.99 | 240 | NA |
| 32 | 2 | 108750 | NA | 2.875 | 360 | NA |
| 1 | 2 | 188400.78 | NA | 2.625 | 360 | NA |
| 1 | 2 | 232750 | 20210126 | 2.75 | 360 | NA |
| 1 | 2 | 326761.17 | NA | 3.75 | 360 | NA |
| 1 | 2 | 265109 | 20210516 | 2.99 | 360 | NA |
| 1 | 2 | 265109 | NA | 2.75 | 360 | NA |
| 1 | 2 | 217913.97 | NA | 3.625 | 360 | NA |
| 31 | 2 | 143500 | 20201102 | 2.875 | 180 | NA |
| 32 | 2 | 150000 | NA | 2.75 | 360 | NA |
| 2 | 1 | 70000 | 20210722 | NA | 360 | NA |
| 31 | 2 | 151752.15 | 20210716 | 2.59 | 120 | NA |


| 2 | 2 | 15000 | 20210630 | NA | 12 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 324458.12 | NA | 3.125 | 360 | NA |
| 2 | 1 | 50000 | 20210305 | NA | 360 | NA |
| 31 | 2 | 83427.05 | 20210225 | 2.64 | 120 | NA |
| 31 | 2 | 148000 | 20210112 | 2.94 | 180 | NA |
| 1 | 2 | 271982 | NA | 3 | 360 | NA |
| 31 | 2 | 1472000 | 20210310 | 2.54 | 61 | NA |
| 31 | 2 | 286118.63 | NA | 3.125 | 360 | NA |
| 31 | 2 | 175000 | 20210723 | NA | 240 | NA |
| 2 | 1 | 25000 | 20210610 | NA | 360 | NA |
| 2 | 1 | 15000 | 20210518 | NA | 360 | NA |
| 1 | 2 | 220190 | NA | 3.375 | 360 | NA |
| 31 | 2 | 151000 | 20210220 | NA | 180 | NA |
| 1 | 2 | 275910 | NA | 2.625 | 360 | NA |
| 1 | 2 | 274928 | NA | 3 | 360 | NA |
| 1 | 2 | 255192 | NA | 2.875 | 360 | NA |
| 1 | 2 | 550000 | 20210916 | NA | 60 | NA |
| 31 | 2 | 145000 | 20211013 | NA | 180 | NA |
| 31 | 2 | 136400 | 20211008 | 3.04 | 180 | NA |
| 1 | 2 | 242526 | NA | 3.125 | 360 | NA |
| 1 | 2 | 163975 | NA | 3.125 | 360 | NA |
| 1 | 2 | 265109 | NA | 3.5 | 360 | NA |
| 1 | 2 | 185930.5 | NA | 3.125 | 360 | NA |
| 31 | 2 | 40000 | 20210321 | NA | 360 | NA |
| 1 | 2 | 168884 | NA | 3.5 | 360 | NA |
| 1 | 2 | 348570 | NA | 3.125 | 360 | NA |
| 1 | 2 | 352400 | 20201110 | NA | 60 | NA |
| 1 | 2 | 296530 | NA | 3 | 360 | NA |
| 1 | 2 | 532000 | 20210812 | 3.25 | 60 | NA |
| 1 | 2 | 499000 | 20210415 | 3.3 | 60 | NA |
| 31 | 2 | 88331.62 | 20210917 | 2.59 | 120 | NA |
| 1 | 2 | 153600 | NA | 3.75 | 360 | NA |
| 31 | 2 | 26000 | 20210618 | NA | 48 | NA |
| 1 | 2 | 205256.53 | NA | 2.875 | 360 | NA |


| 2 | 1 | 50000 | 20210309 | NA | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 382936 | 20210127 | NA | 360 | NA |
| 1 | 2 | 381359 | 20201215 | NA | 360 | NA |
| 1 | 2 | 217360.59 | NA | 3 | 360 | NA |
| 1 | 2 | 317630.33 | NA | 3.5 | 360 | NA |
| 1 | 2 | 316350 | NA | 3.75 | 360 | NA |
| 1 | 2 | 176116.19 | NA | 2.875 | 360 | NA |
| 31 | 2 | 143000 | 20211101 | NA | 180 | NA |
| 1 | 2 | 224200 | NA | 3.625 | 360 | NA |
| 1 | 2 | 324022 | NA | 2.75 | 360 | NA |
| 1 | 2 | 155200 | NA | 3.375 | 360 | NA |
| 1 | 2 | 240562 | 20210104 | NA | 360 | NA |
| 31 | 2 | 199000 | 20211130 | NA | 240 | NA |
| 1 | 2 | 275127.6 | NA | 3.75 | 360 | NA |
| 2 | 2 | 25000 | 20210804 | NA | 60 | NA |
| 31 | 2 | 148246.91 | 20210729 | NA | 180 | NA |
| 31 | 2 | 200000 | 20210604 | NA | 240 | NA |
| 2 | 2 | 50000 | 20210709 | NA | 60 | NA |
| 1 | 2 | 320100 | 20210616 | 3.75 | 360 | NA |
| 1 | 2 | 324950 | 20210514 | NA | 360 | NA |
| 32 | 2 | 176000 | 20210223 | NA | 180 | NA |
| 1 | 2 | 127224.8 | NA | 3.25 | 360 | NA |
| 1 | 2 | 176746.93 | NA | 5.125 | 360 | NA |
| 31 | 1 | 77000 | 20210811 | NA | 360 | NA |
| 2 | 2 | 75000 | 20210810 | 3.8 | 120 | NA |
| 1 | 2 | 258590.04 | NA | 3.25 | 360 | NA |
| 1 | 2 | 179552.96 | NA | 5.5 | 360 | NA |
| 1 | 2 | 184317.83 | NA | 5.125 | 360 | NA |
| 32 | 2 | 170400 | 20210810 | 3.5 | 360 | NA |
| 31 | 2 | 51000 | 20210508 | 3.24 | 120 | NA |
| 31 | 2 | 180000 | 20210128 | 3.375 | 360 | NA |
| 1 | 2 | 265109 | NA | 3.5 | 360 | NA |
| 1 | 2 | 225075 | NA | 3.375 | 360 | NA |
| 1 | 2 | 235653 | NA | 2.875 | 360 | NA |


| 1 | 2 | 210123 | NA | 3.125 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 420247 | NA | 2.5 | 360 | NA |
| 1 | 2 | 191468 | NA | 2.875 | 360 | NA |
| 1 | 2 | 245115 | NA | 3.5 | 360 | NA |
| 1 | 2 | 166657.3 | NA | 3.5 | 360 | NA |
| 2 | 1 | 20000 | 20210416 | NA | 360 | NA |
| 2 | 1 | 20000 | 20210312 | NA | 360 | NA |
| 1 | 2 | 59500 | 20210411 | NA | 360 | NA |
| 1 | 2 | 207595.27 | NA | 3.625 | 360 | NA |
| 1 | 2 | 96000 | NA | 3.375 | 360 | NA |
| 1 | 2 | 323211.22 | NA | 3.125 | 360 | NA |
| 1 | 2 | 247045.6 | NA | 3.5 | 360 | NA |
| 1 | 2 | 220000 | 20210420 | 2.84 | 60 | NA |
| 1 | 2 | 116400 | NA | 3.375 | 360 | NA |
| 1 | 2 | 171239.53 | NA | 3 | 360 | NA |
| 31 | 2 | 160000 | 20210609 | NA | 240 | NA |
| 1 | 2 | 217835 | 20210305 | 3.75 | 360 | NA |
| 1 | 2 | 191468 | NA | 3.125 | 360 | NA |
| 1 | 2 | 162011 | NA | 3.375 | 360 | NA |
| 1 | 2 | 132321.62 | NA | 2.875 | 360 | NA |
| 1 | 2 | 36000 | 20210615 | NA | 36 | NA |
| 1 | 2 | 212679.3 | NA | 2.625 | 360 | NA |
| 1 | 2 | 145865.05 | NA | 3 | 360 | NA |
| 1 | 2 | 147155 | 20210303 | 3.5 | 360 | NA |
| 31 | 2 | 91300 | NA | 3.125 | 360 | NA |
| 1 | 2 | 127444.12 | NA | 3.5 | 360 | NA |
| 1 | 2 | 196047.17 | NA | 3.125 | 360 | NA |
| 31 | 2 | 113273 | 20210421 | NA | 240 | NA |
| 2 | 1 | 1000 | 20210416 | NA | 360 | NA |
| 1 | 2 | 246584.71 | NA | 3 | 360 | NA |
| 31 | 2 | 60000 | 20210319 | NA | 192 | NA |
| 1 | 2 | 264613.81 | NA | 2.5 | 360 | NA |
| 31 | 2 | 225000 | 20210422 | 2.51 | 60 | NA |
| 32 | 2 | 125000 | 20210819 | 4.125 | 360 | NA |


| 1 | 2 | 80750 | 20210304 | 3.125 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | 2 | 85000 | 20210329 | NA | 240 | NA |
| 1 | 2 | 162011 | NA | 3.125 | 360 | NA |
| 1 | 2 | 185576 | NA | 3.5 | 360 | NA |
| 1 | 2 | 156832.4 | NA | 3 | 360 | NA |
| 1 | 2 | 150284.75 | NA | 3.75 | 360 | NA |
| 2 | 2 | 70000 | 20210223 | NA | 20 | NA |
| 1 | 2 | 121250 | NA | 3.625 | 360 | NA |
| 1 | 2 | 223100 | NA | 3.375 | 360 | NA |
| 1 | 2 | 309294 | NA | 3.5 | 360 | NA |
| 1 | 2 | 240183.41 | NA | 3.5 | 360 | NA |
| 2 | 1 | 70000 | 20210220 | NA | 360 | NA |
| 1 | 2 | 196067.95 | NA | 3.5 | 360 | NA |
| 32 | 2 | 64800 | 20210907 | 2.625 | 180 | NA |
| 2 | 1 | 45000 | 20210309 | NA | 360 | NA |
| 31 | 2 | 118000 | 20210721 | 2.79 | 120 | NA |
| 1 | 2 | 116516.58 | NA | 3.5 | 360 | NA |
| 1 | 2 | 288000 | 20210115 | NA | 360 | NA |
| 1 | 2 | 177762.93 | NA | 3.125 | 360 | NA |
| 31 | 2 | 123000 | 20211207 | NA | 360 | NA |
| 31 | 2 | 135791.25 | 20210310 | 3.09 | 180 | NA |
| 31 | 2 | 108753 | 20210707 | NA | 360 | NA |
| 1 | 2 | 244609.3 | NA | 2.875 | 360 | NA |
| 1 | 2 | 165938 | NA | 3 | 360 | NA |
| 1 | 2 | 227074.31 | NA | 3.5 | 360 | NA |
| 1 | 2 | 180335.09 | NA | 5 | 360 | NA |
| 1 | 2 | 230743 | NA | 3.625 | 360 | NA |
| 1 | 2 | 270019 | NA | 3.5 | 360 | NA |
| 32 | 2 | 136000 | 20210608 | 3 | 240 | NA |
| 1 | 2 | 204892.3 | NA | 3.5 | 360 | NA |
| 1 | 2 | 425000 | 20210805 | NA | 60 | NA |
| 1 | 2 | 145500 | 20210930 | NA | 360 | NA |
| 1 | 2 | 244489 | NA | 3.5 | 360 | NA |
| 31 | 2 | 114621 | 20211109 | NA | 240 | NA |


| 1 | 2 | 213201.37 | NA | 5.125 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 187168.23 | NA | 3.5 | 360 | NA |
| 1 | 2 | 236000 | 20201030 | 2.65 | 60 | NA |
| 1 | 2 | 75481.11 | NA | 5.375 | 360 | NA |
| 32 | 2 | 168000 | 20210514 | NA | 360 | NA |
| 1 | 2 | 145000 | NA | 3.625 | 360 | NA |
| 1 | 2 | 247000 | 20210108 | 2.99 | 360 | NA |
| 1 | 2 | 297467.26 | NA | 3 | 360 | NA |
| 1 | 2 | 245471 | 20210126 | 2.875 | 360 | NA |
| 2 | 1 | 20000 | 20210930 | NA | 360 | NA |
| 2 | 1 | 35000 | 20210608 | NA | 360 | NA |
| 1 | 2 | 146250 | 20210816 | NA | 180 | NA |
| 1 | 2 | 193687.96 | NA | 3.375 | 360 | NA |
| 1 | 1 | 150000 | 20210312 | NA | 360 | NA |
| 31 | 2 | 264957 | 20201021 | 3.75 | 360 | NA |
| 1 | 2 | 164900 | NA | 3.75 | 360 | NA |
| 1 | 2 | 249440.35 | NA | 3.125 | 360 | NA |
| 1 | 2 | 339733 | NA | 3.5 | 360 | NA |
| 1 | 2 | 166291.53 | NA | 3.625 | 360 | NA |
| 1 | 2 | 254308 | NA | 3 | 360 | NA |
| 1 | 2 | 196377 | 20201014 | 2.625 | 360 | NA |
| 1 | 2 | 650000 | 20210916 | NA | 60 | NA |
| 1 | 2 | 302000 | 20210708 | 3.05 | 59 | NA |
| 2 | 1 | 200000 | 20211015 | NA | 360 | NA |
| 1 | 2 | 220392.03 | NA | 4.25 | 360 | NA |
| 1 | 2 | 92295.59 | NA | 3 | 360 | NA |
| 2 | 2 | 50000 | 20210507 | NA | 180 | NA |
| 1 | 2 | 333326.99 | NA | 3.625 | 360 | NA |
| 2 | 1 | 35000 | 20210617 | NA | 360 | NA |
| 31 | 2 | 142000 | 20210105 | 3.625 | 360 | NA |
| 2 | 1 | 50000 | 20210329 | NA | 360 | NA |
| 1 | 2 | 314204 | NA | 2.625 | 360 | NA |
| 1 | 2 | 220662.25 | NA | 3 | 360 | NA |
| 1 | 2 | 221807 | NA | 3 | 360 | NA |


| 1 | 2 | 259790.51 | NA | 3.5 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 440000 | 20210916 | NA | 60 | NA |
| 1 | 2 | 225000 | 20201123 | 2.9 | 60 | NA |
| 1 | 2 | 101650 | 20210429 | 2.99 | 360 | NA |
| 1 | 2 | 289655 | NA | 3.75 | 360 | NA |
| 1 | 2 | 147056.35 | NA | 3.5 | 360 | NA |
| 1 | 2 | 193077.21 | NA | 2.625 | 360 | NA |
| 31 | 2 | 129500 | 20210505 | NA | 180 | NA |
| 2 | 1 | 25000 | 20210423 | NA | 360 | NA |
| 1 | 1 | 20000 | 20210412 | NA | 360 | NA |
| 2 | 1 | 40000 | 20210125 | 3.7 | 360 | NA |
| 1 | 2 | 279396.6 | NA | 3.5 | 360 | NA |
| 1 | 2 | 132960.34 | NA | 2.875 | 360 | NA |
| 1 | 2 | 151930.83 | NA | 3 | 360 | NA |
| 2 | 2 | 90000 | 20211207 | NA | 360 | NA |
| 1 | 2 | 127251.33 | NA | 3.625 | 360 | NA |
| 1 | 2 | 113998.38 | NA | 3.125 | 360 | NA |
| 2 | 1 | 80000 | 20210511 | NA | 360 | NA |
| 1 | 2 | 124858.84 | NA | 5.5 | 385 | NA |
| 31 | 2 | 207910 | 20210630 | 3.125 | 360 | NA |
| 1 | 2 | 215659.93 | NA | 3.25 | 360 | NA |
| 1 | 2 | 259015 | 20210608 | NA | 360 | NA |
| 1 | 2 | 149380 | NA | 3.375 | 360 | NA |
| 31 | 2 | 116000 | 20210305 | 2.75 | 180 | NA |
| 1 | 2 | 238598 | 20210406 | 3.375 | 360 | NA |
| 1 | 2 | 214098.31 | NA | 4.625 | 360 | NA |
| 1 | 2 | 107625 | 20201215 | 2.875 | 360 | NA |
| 1 | 2 | 214004.3 | NA | 3.625 | 360 | NA |
| 1 | 2 | 191216.02 | NA | 3.75 | 360 | NA |
| 1 | 2 | 147051.21 | NA | 3.5 | 360 | NA |
| 1 | 2 | 245471 | NA | 3.125 | 360 | NA |
| 31 | 2 | 85000 | 20210712 | 2.25 | 180 | NA |
| 31 | 2 | 184000 | 20210510 | 3.125 | 360 | NA |
| 31 | 2 | 174750 | 20210428 | 2.99 | 240 | NA |


| 2 | 1 | 20000 | 20210309 | NA | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 1 | 16000 | 20210216 | NA | 360 | NA |
| 2 | 2 | 40000 | 20210204 | NA | 180 | NA |
| 31 | 2 | 135100 | 20201228 | 2.89 | 180 | NA |
| 1 | 2 | 289656 | NA | 3.125 | 360 | NA |
| 31 | 2 | 213350 | NA | 3 | 360 | NA |
| 1 | 2 | 250381 | NA | 2.875 | 360 | NA |
| 32 | 2 | 175010 | 20201215 | 3.25 | 360 | NA |
| 31 | 2 | 199200 | 20210107 | 3.5 | 360 | NA |
| 2 | 1 | 15000 | 20211126 | NA | 360 | NA |
| 1 | 2 | 226298.98 | NA | 3 | 360 | NA |
| 31 | 2 | 165292 | 20210724 | NA | 180 | NA |
| 1 | 2 | 280876.32 | NA | 3.75 | 360 | NA |
| 1 | 2 | 248417 | NA | 3.375 | 360 | NA |
| 2 | 2 | 70000 | 20210612 | NA | 240 | NA |
| 1 | 2 | 408451.57 | NA | 2.625 | 360 | NA |
| 31 | 2 | 225600 | 20210309 | 3.25 | 360 | NA |
| 1 | 2 | 240562 | 20211115 | 3 | 360 | NA |
| 31 | 2 | 67800 | 20211021 | 2.5 | 120 | NA |
| 1 | 2 | 224852 | NA | 3 | 360 | NA |
| 1 | 2 | 271600 | NA | 3.375 | 360 | NA |
| 31 | 2 | 168000 | 20210810 | 3.5 | 240 | NA |
| 2 | 2 | 25000 | 20210121 | NA | 360 | NA |
| 31 | 2 | 157000 | 20210111 | NA | 240 | NA |
| 1 | 2 | 287201 | NA | 2.625 | 360 | NA |
| 1 | 2 | 332500 | NA | 3.25 | 360 | NA |
| 31 | 2 | 255426 | 20210121 | 3.125 | 360 | NA |
| 1 | 2 | 259799.37 | NA | 3.625 | 360 | NA |
| 31 | 2 | 93800 | 20201103 | 2.99 | 240 | NA |
| 1 | 2 | 242688.95 | NA | 3.125 | 360 | NA |
| 1 | 2 | 215325.2 | NA | 3.75 | 360 | NA |
| 2 | 1 | 62594 | 20210826 | 5.45 | 360 | NA |
| 31 | 2 | 218000 | 20210714 | NA | 240 | NA |
| 1 | 2 | 242500 | NA | 3.375 | 360 | NA |


| 1 | 2 | 203000 | NA | 3.75 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 247253 | NA | 3.625 | 360 | NA |
| 1 | 2 | 247350 | NA | 3.375 | 360 | NA |
| 1 | 2 | 224408.82 | NA | 3.25 | 360 | NA |
| 31 | 2 | 168000 | 20210609 | 2.375 | 180 | NA |
| 31 | 2 | 163500 | 20210505 | NA | 360 | NA |
| 1 | 2 | 209000 | NA | 3.75 | 360 | NA |
| 31 | 2 | 117100 | 20210119 | 3 | 240 | NA |
| 1 | 2 | 182365.16 | NA | 3.25 | 360 | NA |
| 31 | 2 | 155000 | 20211012 | NA | 180 | NA |
| 32 | 2 | 164000 | 20210929 | NA | 360 | NA |
| 31 | 2 | 230000 | 20210308 | NA | 120 | NA |
| 1 | 2 | 195296 | NA | 2.875 | 360 | NA |
| 32 | 2 | 204000 | 20210525 | 3.375 | 300 | NA |
| 31 | 2 | 149855 | 20210601 | 3.25 | 360 | NA |
| 1 | 2 | 190000 | 20210602 | 3.5 | 360 | NA |
| 1 | 2 | 218500 | NA | 3.625 | 360 | NA |
| 31 | 2 | 67800 | 20210909 | 3.55 | 84 | NA |
| 31 | 2 | 210000 | 20210804 | NA | 240 | NA |
| 1 | 2 | 283765 | NA | 3.125 | 360 | NA |
| 2 | 1 | 15000 | 20210405 | NA | 360 | NA |
| 1 | 2 | 87300 | NA | 3.875 | 360 | NA |
| 1 | 2 | 315680.21 | NA | 3.625 | 360 | NA |
| 2 | 1 | 8000 | 20210305 | NA | 360 | NA |
| 1 | 2 | 203250 | NA | 3.625 | 360 | NA |
| 31 | 2 | 168000 | 20210114 | NA | 180 | NA |
| 32 | 2 | 162000 | NA | 2.875 | 180 | NA |
| 1 | 2 | 259350 | 20210623 | NA | 360 | NA |
| 1 | 2 | 260200 | NA | 3.125 | 360 | NA |
| 1 | 2 | 293121.97 | NA | 3.5 | 360 | NA |
| 2 | 1 | 50000 | 20211013 | 5.05 | 360 | NA |
| 31 | 2 | 154335.32 | 20210924 | NA | 240 | NA |
| 2 | 2 | 20000 | 20210911 | NA | 180 | NA |
| 2 | 1 | 70000 | 20210726 | NA | 360 | NA |


| 2 | 1 | 50523 | 20210723 | 4.95 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 249923.05 | NA | 2.625 | 360 | NA |
| 31 | 2 | 95000 | 20210511 | 2.99 | 180 | NA |
| 32 | 2 | 135000 | 20210224 | NA | 360 | NA |
| 1 | 2 | 273946 | NA | 3.625 | 360 | NA |
| 2 | 1 | 149593 | 20210320 | 3.95 | 360 | NA |
| 31 | 2 | 156511 | 20210930 | 2.375 | 180 | NA |
| 1 | 2 | 216638.31 | NA | 3.25 | 360 | NA |
| 1 | 2 | 291000 | 20210927 | 3.75 | 360 | NA |
| 1 | 2 | 228800 | 20210902 | 3.375 | 360 | NA |
| 1 | 2 | 281300 | 20210804 | NA | 360 | NA |
| 1 | 2 | 279385.71 | NA | 3.625 | 360 | NA |
| 31 | 2 | 168000 | 20201218 | 2.99 | 360 | NA |
| 1 | 2 | 237500 | NA | 3.75 | 360 | NA |
| 1 | 2 | 207334.19 | NA | 3.5 | 360 | NA |
| 31 | 2 | 119633.2 | 20210830 | NA | 240 | NA |
| 1 | 2 | 223100 | NA | 3.75 | 360 | NA |
| 31 | 2 | 156000 | 20210607 | NA | 240 | NA |
| 1 | 2 | 254308 | NA | 2.5 | 360 | NA |
| 1 | 2 | 294092.2 | NA | 3.375 | 360 | NA |
| 32 | 2 | 220000 | 20210915 | 2.99 | 240 | NA |
| 1 | 2 | 188191.51 | NA | 2.875 | 360 | NA |
| 1 | 2 | 238994.66 | NA | 2.625 | 360 | NA |
| 2 | 1 | 55737 | 20210303 | 4.45 | 360 | NA |
| 2 | 2 | 25000 | 20210205 | 3.8 | 48 | NA |
| 2 | 1 | 57000 | 20210122 | 3.45 | 360 | NA |
| 31 | 2 | 75000 | 20201116 | 3.04 | 120 | NA |
| 1 | 2 | 197711.71 | NA | 3.5 | 360 | NA |
| 1 | 2 | 266000 | 20210421 | 2.875 | 360 | NA |
| 31 | 2 | 172500 | 20210323 | 3.75 | 360 | NA |
| 1 | 2 | 223003 | NA | 3.25 | 360 | NA |
| 31 | 2 | 252000 | 20201124 | 2.75 | 180 | NA |
| 1 | 2 | 266750 | NA | 3.375 | 360 | NA |
| 1 | 2 | 175623.1 | NA | 3 | 360 | NA |


| 1 | 2 | 257961.11 | NA | 5.25 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 185158.08 | 20210806 | NA | 180 | NA |
| 31 | 2 | 73000 | 20210627 | 3.04 | 180 | NA |
| 2 | 2 | 10000 | 20210621 | NA | 36 | NA |
| 1 | 2 | 274928 | NA | 3 | 360 | NA |
| 1 | 2 | 206822.48 | NA | 3 | 360 | NA |
| 1 | 2 | 273125 | 20210105 | 2.75 | 360 | NA |
| 1 | 2 | 255290 | NA | 3.125 | 360 | NA |
| 31 | 2 | 140000 | 20201024 | 3.5 | 324 | NA |
| 1 | 2 | 156903.32 | NA | 3.75 | 360 | NA |
| 1 | 2 | 266750 | NA | 3.375 | 360 | NA |
| 1 | 2 | 170620.73 | NA | 2.875 | 360 | NA |
| 31 | 2 | 136000 | 20201105 | NA | 180 | NA |
| 32 | 2 | 212000 | 20210701 | 3.375 | 240 | NA |
| 32 | 2 | 232000 | 20210921 | 4.125 | 360 | NA |
| 31 | 2 | 134200 | 20201219 | 2.875 | 240 | NA |
| 1 | 2 | 352872.42 | NA | 3 | 360 | NA |
| 1 | 2 | 120000 | 20211028 | NA | 60 | NA |
| 1 | 2 | 216316.9 | NA | 3.875 | 360 | NA |
| 1 | 2 | 211385.7 | NA | 2.875 | 360 | NA |
| 1 | 2 | 212506 | NA | 2.875 | 360 | NA |
| 1 | 2 | 100000 | 20211029 | NA | 240 | NA |
| 2 | 1 | 70000 | 20211028 | NA | 360 | NA |
| 1 | 1 | 100000 | 20211028 | NA | 360 | NA |
| 1 | 2 | 151500 | NA | 3.125 | 360 | NA |
| 1 | 2 | 93279 | NA | 3.375 | 360 | NA |
| 31 | 2 | 168000 | 20201230 | NA | 360 | NA |
| 31 | 2 | 267600 | 20211126 | 3.5 | 240 | NA |
| 2 | 2 | 130000 | 20210116 | NA | 360 | NA |
| 1 | 2 | 284905 | NA | 3.75 | 360 | NA |
| 1 | 2 | 258987.44 | NA | 2.625 | 360 | NA |
| 2 | 1 | 30000 | 20210203 | NA | 360 | NA |
| 1 | 2 | 215619.9 | NA | 2.625 | 360 | NA |
| 1 | 2 | 94800 | NA | 3.375 | 360 | NA |


| 2 | 1 | 20000 | 20210928 | NA | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 161029 | NA | 2.75 | 360 | NA |
| 1 | 2 | 225834 | NA | 3.5 | 360 | NA |
| 1 | 2 | 195687.65 | NA | 2.875 | 360 | NA |
| 31 | 2 | 127458.65 | 20210412 | 3.39 | 180 | NA |
| 2 | 2 | 60000 | 20210304 | NA | 180 | NA |
| 1 | 2 | 117826 | NA | 3 | 360 | NA |
| 1 | 2 | 213683.68 | NA | 3 | 360 | NA |
| 31 | 2 | 158889 | 20210820 | NA | 248 | NA |
| 2 | 1 | 50000 | 20210525 | NA | 360 | NA |
| 1 | 2 | 274928 | NA | 3.375 | 360 | NA |
| 1 | 2 | 264127 | NA | 2.875 | 360 | NA |
| 1 | 2 | 313960.31 | NA | 3 | 360 | NA |
| 1 | 2 | 245520 | NA | 2.75 | 360 | NA |
| 1 | 2 | 261250 | NA | 3.375 | 360 | NA |
| 1 | 2 | 274495.32 | NA | 3.5 | 360 | NA |
| 2 | 2 | 45000 | 20210709 | NA | 72 | NA |
| 2 | 1 | 40000 | 20210622 | NA | 360 | NA |
| 31 | 2 | 171000 | 20210120 | 3.375 | 300 | NA |
| 2 | 2 | 55000 | 20211104 | NA | 120 | NA |
| 2 | 2 | 18750 | 20210927 | NA | 36 | NA |
| 2 | 2 | 70000 | 20210405 | NA | 120 | NA |
| 1 | 2 | 800000 | 20210927 | 3.2 | 61 | NA |
| 1 | 2 | 99849.38 | NA | 3.75 | 360 | NA |
| 2 | 2 | 100000 | 20201223 | 2.89 | 180 | NA |
| 1 | 2 | 178101.92 | NA | 3.125 | 360 | NA |
| 1 | 2 | 266076 | NA | 3.25 | 360 | NA |
| 1 | 2 | 392000 | 20210429 | 2.89 | 60 | NA |
| 1 | 2 | 247000 | NA | 3.125 | 360 | NA |
| 1 | 2 | 190000 | NA | 3.75 | 360 | NA |
| 31 | 2 | 187500 | 20210804 | 3.125 | 360 | NA |
| 1 | 2 | 110126.22 | NA | 3.625 | 360 | NA |
| 1 | 2 | 246050 | NA | 3.25 | 360 | NA |
| 1 | 2 | 176105.29 | NA | 2.75 | 360 | NA |


| 1 | 2 | 259790.51 | NA | 3.5 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 289075.24 | NA | 3.25 | 360 | NA |
| 1 | 2 | 239089 | NA | 3 | 360 | NA |
| 32 | 2 | 167000 | 20210727 | 2.375 | 180 | NA |
| 32 | 2 | 190000 | 20210720 | 3.125 | 360 | NA |
| 31 | 2 | 111500 | 20210710 | 2.125 | 120 | NA |
| 31 | 2 | 70722.05 | 20210116 | NA | 180 | NA |
| 1 | 2 | 268856.96 | NA | 3.125 | 360 | NA |
| 31 | 2 | 73000 | 20210202 | 2.5 | 180 | NA |
| 1 | 2 | 196597.09 | NA | 3.75 | 360 | NA |
| 1 | 2 | 212657 | NA | 3.125 | 360 | NA |
| 1 | 2 | 127836.85 | NA | 3.375 | 360 | NA |
| 31 | 2 | 80500 | 20201003 | 2.99 | 360 | NA |
| 1 | 2 | 232707 | NA | 2.875 | 360 | NA |
| 31 | 2 | 130000 | NA | 3.125 | 360 | NA |
| 1 | 2 | 247350 | NA | 3.75 | 360 | NA |
| 32 | 2 | 200000 | 20210729 | 2.99 | 180 | NA |
| 1 | 2 | 229552.14 | NA | 3 | 360 | NA |
| 1 | 2 | 232441.56 | NA | 3.625 | 360 | NA |
| 1 | 2 | 169632.44 | NA | 5.125 | 360 | NA |
| 1 | 2 | 249364.86 | NA | 4.125 | 360 | NA |
| 32 | 2 | 87000 | NA | 2.875 | 240 | NA |
| 1 | 2 | 152911.15 | NA | 3 | 360 | NA |
| 1 | 2 | 73150 | 20210519 | NA | 360 | NA |
| 31 | 2 | 151800 | 20210927 | 3.125 | 360 | NA |
| 1 | 2 | 242403 | NA | 3.625 | 360 | NA |
| 1 | 2 | 251230 | NA | 3.875 | 360 | NA |
| 1 | 2 | 152179.2 | NA | 4.125 | 360 | NA |
| 1 | 2 | 177230 | NA | 3 | 360 | NA |
| 1 | 2 | 201435.48 | NA | 3.375 | 360 | NA |
| 1 | 2 | 200697.98 | NA | 3.125 | 360 | NA |
| 1 | 2 | 177736.65 | NA | 3.625 | 360 | NA |
| 1 | 2 | 176220 | NA | 3.5 | 360 | NA |
| 1 | 2 | 242500 | NA | 3.875 | 360 | NA |


| 31 | 2 | 309950 | 20210625 | 2.875 | 240 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | 1 | 75000 | 20210103 | NA | 360 | NA |
| 2 | 2 | 158000 | 20201210 | 3.44 | 240 | NA |
| 1 | 2 | 776250 | 20210322 | 3.125 | 360 | NA |
| 31 | 2 | 260000 | 20201216 | 2.875 | 360 | NA |
| 1 | 2 | 418000 | NA | 3.125 | 360 | NA |
| 31 | 2 | 258000 | NA | 3.125 | 240 | NA |
| 2 | 1 | 55575 | 20210803 | 3.95 | 360 | NA |
| 2 | 2 | 100000 | 20210713 | NA | 360 | NA |
| 31 | 2 | 593000 | 20210203 | 3.75 | 360 | NA |
| 31 | 2 | 228300 | 20210203 | 3.25 | 360 | NA |
| 32 | 2 | 197900 | 20210112 | 2.75 | 180 | NA |
| 31 | 2 | 325000 | 20210216 | 3.125 | 360 | NA |
| 1 | 2 | 66560 | 20210125 | 3.25 | 360 | NA |
| 32 | 2 | 110000 | 20210118 | NA | 360 | NA |
| 31 | 2 | 227000 | 20201206 | 2.875 | 360 | NA |
| 1 | 2 | 389809 | NA | 2.75 | 360 | NA |
| 31 | 2 | 175000 | 20210909 | NA | 180 | NA |
| 31 | 2 | 413300 | NA | 2.625 | 360 | NA |
| 2 | 1 | 40000 | 20210706 | 4.7 | 360 | NA |
| 1 | 2 | 270725.06 | NA | 3.375 | 360 | NA |
| 1 | 2 | 280451.32 | NA | 3.75 | 360 | NA |
| 31 | 2 | 93133.56 | 20210605 | 2.74 | 120 | NA |
| 1 | 2 | 492560 | 20211014 | 2.99 | 360 | NA |
| 31 | 2 | 174600 | 20211115 | 2.5 | 180 | NA |
| 2 | 1 | 50000 | 20210122 | NA | 360 | NA |
| 31 | 1 | 99700 | 20201211 | 3.95 | 360 | NA |
| 31 | 2 | 488950 | 20210316 | 2.99 | 360 | NA |
| 31 | 2 | 494000 | 20201215 | NA | 360 | NA |
| 31 | 2 | 168300 | 20201204 | 2.375 | 180 | NA |
| 32 | 2 | 217200 | 20201028 | 2.625 | 180 | NA |
| 31 | 2 | 292000 | NA | 2.625 | 360 | NA |
| 31 | 2 | 292500 | NA | 2.25 | 360 | NA |
| 31 | 2 | 344000 | NA | 2.875 | 360 | NA |


| 31 | 2 | 345518.69 | NA | 3.125 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | 2 | 211237 | 20210723 | 5.2 | 360 | NA |
| 31 | 2 | 130000 | NA | 2.875 | 360 | NA |
| 31 | 2 | 294000 | NA | 3 | 240 | NA |
| 2 | 2 | 50000 | 20210408 | 3.55 | 120 | NA |
| 2 | 2 | 40000 | 20210227 | NA | 72 | NA |
| 31 | 2 | 269000 | 20210318 | 2.625 | 180 | NA |
| 2 | 2 | 30000 | 20210516 | 4.05 | 72 | NA |
| 1 | 2 | 208000 | 20210907 | 2.875 | 360 | NA |
| 1 | 2 | 400000 | NA | 2.875 | 360 | NA |
| 1 | 2 | 261803 | NA | 3.75 | 360 | NA |
| 31 | 2 | 142200 | 20210322 | NA | 120 | NA |
| 1 | 2 | 103500 | 20210212 | 2.125 | 180 | NA |
| 31 | 2 | 181300 | NA | 2.625 | 360 | NA |
| 1 | 2 | 115800 | NA | 3.375 | 360 | NA |
| 31 | 2 | 360000 | NA | 3.5 | 360 | NA |
| 31 | 2 | 28398.02 | 20210624 | 2.84 | 60 | NA |
| 32 | 2 | 220317.6 | NA | 2.875 | 240 | NA |
| 31 | 2 | 278500 | NA | 2.875 | 300 | NA |
| 32 | 2 | 298000 | NA | 2.625 | 240 | NA |
| 1 | 2 | 245000 | 20210918 | 3.5 | 240 | NA |
| 31 | 2 | 266686 | NA | 2.75 | 240 | NA |
| 31 | 2 | 463725 | NA | 2.625 | 360 | NA |
| 1 | 2 | 181649 | NA | 3 | 360 | NA |
| 32 | 2 | 132000 | 20210309 | 3.625 | 360 | NA |
| 31 | 2 | 253148.89 | 20210324 | 3.05 | 61 | NA |
| 32 | 2 | 300000 | NA | 2.875 | 360 | NA |
| 1 | 2 | 151260.79 | NA | 4.5 | 390 | NA |
| 1 | 2 | 255290 | NA | 3.125 | 360 | NA |
| 1 | 2 | 185631.82 | NA | 3.5 | 360 | NA |
| 1 | 2 | 246627.97 | NA | 3.75 | 360 | NA |
| 1 | 2 | 132554 | NA | 3.125 | 360 | NA |
| 1 | 2 | 150220.41 | NA | 3.75 | 360 | NA |
| 31 | 1 | 115000 | 20211019 | NA | 360 | NA |


| 1 | 2 | 220825 | NA | 3.625 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 254861.22 | NA | 3.125 | 360 | NA |
| 32 | 2 | 158400 | 20210524 | 4.125 | 360 | NA |
| 31 | 2 | 55000 | 20211119 | 2.5 | 180 | NA |
| 31 | 2 | 162000 | 20211022 | 3.25 | 360 | NA |
| 1 | 2 | 111805.13 | NA | 5.5 | 360 | NA |
| 1 | 2 | 186951.29 | NA | 3.625 | 360 | NA |
| 1 | 2 | 397260.34 | NA | 2.875 | 360 | NA |
| 31 | 2 | 373000 | 20210223 | NA | 60 | NA |
| 2 | 1 | 74182 | 20210726 | 3.95 | 360 | NA |
| 31 | 2 | 83000 | 20210518 | NA | 120 | NA |
| 31 | 2 | 82500 | 20200716 | 2.625 | 120 | NA |
| 31 | 2 | 55000 | 20211219 | NA | 60 | NA |
| 31 | 2 | 80000 | 20211219 | NA | 60 | NA |
| 31 | 2 | 105000 | 20210517 | 1.99 | 120 | NA |
| 1 | 2 | 124438.03 | NA | 3.5 | 360 | NA |
| 1 | 2 | 289410 | NA | 3.125 | 360 | NA |
| 31 | 2 | 60000 | 20210202 | NA | 180 | NA |
| 1 | 2 | 237500 | NA | 3.25 | 360 | NA |
| 1 | 2 | 269037 | NA | 3.125 | 360 | NA |
| 31 | 2 | 137000 | 20201213 | 2.875 | 360 | NA |
| 2 | 1 | 70000 | 20210820 | NA | 360 | NA |
| 2 | 1 | 115000 | 20210807 | NA | 360 | NA |
| 31 | 2 | 20000 | 20210316 | NA | 300 | NA |
| 32 | 2 | 160000 | 20210823 | 2.75 | 180 | NA |
| 1 | 2 | 275383 | NA | 3.125 | 360 | NA |
| 1 | 2 | 242250 | 20201214 | 2.5 | 360 | NA |
| 32 | 2 | 157499 | NA | 2.75 | 360 | NA |
| 1 | 2 | 112461.74 | NA | 5.375 | 360 | NA |
| 1 | 2 | 152000 | NA | 3.375 | 360 | NA |
| 2 | 1 | 15000 | 20210108 | NA | 360 | NA |
| 1 | 2 | 156120 | NA | 2.875 | 360 | NA |
| 32 | 2 | 95000 | 20210329 | 3.625 | 276 | NA |
| 2 | 1 | 50000 | 20210420 | 3.65 | 360 | NA |


| 31 | 2 | 132540 | 20210107 | 2.5 | 180 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 211965.89 | NA | 3.5 | 360 | NA |
| 1 | 2 | 274928 | NA | 3.5 | 360 | NA |
| 2 | 1 | 140000 | 20210222 | NA | 360 | NA |
| 31 | 2 | 110000 | 20210120 | NA | 240 | NA |
| 1 | 2 | 102497.9 | NA | 5.125 | 360 | NA |
| 1 | 2 | 211105 | NA | 3.125 | 360 | NA |
| 1 | 2 | 195052.45 | NA | 2.875 | 360 | NA |
| 1 | 2 | 245471 | NA | 3.125 | 360 | NA |
| 1 | 2 | 181925.93 | NA | 5.625 | 360 | NA |
| 1 | 2 | 139382.39 | NA | 5.125 | 360 | NA |
| 1 | 2 | 201099.26 | NA | 2.875 | 360 | NA |
| 31 | 2 | 122000 | 20210903 | NA | 240 | NA |
| 2 | 2 | 25000 | 20210813 | 3.59 | 120 | NA |
| 31 | 2 | 132000 | NA | 2.625 | 360 | NA |
| 1 | 2 | 202844.02 | NA | 3.75 | 360 | NA |
| 1 | 2 | 245471 | NA | 3.375 | 360 | NA |
| 31 | 2 | 100000 | 20210111 | 2.94 | 180 | NA |
| 31 | 2 | 95950 | 20210211 | 2.99 | 360 | NA |
| 2 | 1 | 70000 | 20211025 | NA | 360 | NA |
| 31 | 2 | 169281.95 | 20210911 | 2.84 | 180 | NA |
| 2 | 1 | 40000 | 20210722 | 4.7 | 360 | NA |
| 2 | 2 | 100000 | 20210712 | NA | 180 | NA |
| 2 | 1 | 50000 | 20210710 | NA | 360 | NA |
| 1 | 2 | 221700 | NA | 3.375 | 360 | NA |
| 1 | 2 | 225834 | NA | 3.5 | 360 | NA |
| 2 | 1 | 17182 | 20210614 | 4.95 | 360 | NA |
| 31 | 2 | 103000 | 20211014 | 2.125 | 180 | NA |
| 1 | 2 | 193728.35 | NA | 3.625 | 360 | NA |
| 1 | 2 | 235248.61 | NA | 3 | 360 | NA |
| 32 | 2 | 100000 | 20210821 | 2.625 | 180 | NA |
| 31 | 2 | 100971 | 20210716 | NA | 180 | NA |
| 1 | 2 | 269594.05 | NA | 3.5 | 360 | NA |
| 1 | 2 | 237650 | NA | 3.875 | 360 | NA |


| 2 | 1 | 35000 | 20210616 | NA | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | 2 | 15000 | 20210614 | NA | 60 | NA |
| 1 | 2 | 165221.6 | NA | 4.125 | 360 | NA |
| 31 | 2 | 93500 | 20210507 | NA | 240 | NA |
| 31 | 2 | 263200 | 20210611 | 2.25 | 180 | NA |
| 1 | 2 | 154253 | NA | 3.375 | 360 | NA |
| 1 | 2 | 261900 | NA | 3.75 | 360 | NA |
| 2 | 2 | 15000 | 20210826 | NA | 180 | NA |
| 32 | 2 | 220600 | NA | 2.5 | 180 | NA |
| 1 | 2 | 275500 | NA | 3.75 | 360 | NA |
| 1 | 2 | 244925 | NA | 3.375 | 360 | NA |
| 1 | 2 | 269594.05 | NA | 3.5 | 360 | NA |
| 1 | 2 | 218500 | NA | 3.125 | 360 | NA |
| 31 | 2 | 371500 | NA | 2.75 | 360 | NA |
| 2 | 2 | 30000 | 20210519 | NA | 240 | NA |
| 31 | 2 | 153500 | 20210816 | 2.99 | 360 | NA |
| 31 | 2 | 164000 | 20210108 | 2.5 | 120 | NA |
| 31 | 2 | 69100 | 20210409 | NA | 120 | NA |
| 31 | 2 | 90000 | 20210216 | NA | 324 | NA |
| 31 | 2 | 170400 | 20210517 | 2.875 | 240 | NA |
| 31 | 2 | 97200 | NA | 2.875 | 120 | NA |
| 1 | 2 | 228400 | NA | 2.875 | 360 | NA |
| 31 | 2 | 214000 | NA | 2.625 | 360 | NA |
| 31 | 2 | 98000 | 20210207 | 2.875 | 240 | NA |
| 31 | 2 | 195000 | 20201220 | 2.375 | 180 | NA |
| 32 | 2 | 485000 | 20201104 | 2.99 | 360 | NA |
| 31 | 2 | 282900 | NA | 2.625 | 240 | NA |
| 1 | 2 | 365000 | NA | 2.625 | 360 | NA |
| 32 | 2 | 237500 | NA | 3 | 360 | NA |
| 31 | 2 | 261000 | 20210323 | 2.875 | 180 | NA |
| 31 | 2 | 164000 | 20211008 | 3.125 | 360 | NA |
| 2 | 1 | 15000 | 20210118 | NA | 360 | NA |
| 2 | 2 | 90000 | 20210114 | 4.35 | 360 | NA |
| 31 | 2 | 417171.47 | NA | 2.875 | 360 | NA |


| 1 | 2 | 225000 | NA | 2.625 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 383800 | 20210131 | 2.875 | 360 | NA |
| 1 | 2 | 400500 | NA | 3.125 | 360 | NA |
| 31 | 2 | 290500 | 20210104 | 2.375 | 180 | NA |
| 32 | 2 | 298000 | 20201210 | 3.5 | 360 | NA |
| 1 | 2 | 302197 | 20201118 | 2.625 | 360 | NA |
| 2 | 1 | 15000 | 20211221 | NA | 360 | NA |
| 31 | 2 | 90000 | 20210902 | NA | 240 | NA |
| 32 | 2 | 345000 | NA | 3 | 240 | NA |
| 31 | 2 | 94000 | NA | 2.5 | 240 | NA |
| 1 | 2 | 242968.25 | NA | 2.875 | 360 | NA |
| 31 | 2 | 172195.28 | 20210510 | 3.79 | 240 | NA |
| 2 | 1 | 20000 | 20210421 | NA | 360 | NA |
| 32 | 2 | 34000 | 20210922 | NA | 120 | NA |
| 2 | 1 | 40000 | 20210210 | NA | 360 | NA |
| 1 | 2 | 374250 | 20210719 | 4.125 | 360 | NA |
| 31 | 2 | 320000 | 20201230 | 2.125 | 180 | NA |
| 31 | 2 | 273750 | 20201019 | NA | 360 | NA |
| 1 | 2 | 202930.13 | NA | 3.5 | 360 | NA |
| 32 | 2 | 444000 | NA | 2.875 | 360 | NA |
| 2 | 1 | 150000 | 20210606 | 3.65 | 360 | NA |
| 31 | 2 | 231000 | 20210416 | 3.25 | 360 | NA |
| 1 | 2 | 206196 | NA | 3 | 360 | NA |
| 31 | 2 | 175000 | 20210318 | 3.54 | 240 | NA |
| 31 | 2 | 271000 | 20210920 | NA | 360 | NA |
| 31 | 2 | 60000 | 20210213 | 2.64 | 120 | NA |
| 31 | 2 | 61000 | 20210713 | NA | 360 | NA |
| 32 | 2 | 263593.52 | NA | 3.625 | 360 | NA |
| 32 | 2 | 128000 | 20210311 | 2.875 | 180 | NA |
| 1 | 2 | 232425.55 | NA | 3.375 | 360 | NA |
| 2 | 2 | 75000 | 20211109 | NA | 240 | NA |
| 32 | 2 | 160000 | NA | 3 | 360 | NA |
| 31 | 2 | 72000 | 20210511 | NA | 240 | NA |
| 32 | 2 | 148000 | 20210520 | 2.75 | 180 | NA |


| 32 | 2 | 277280 | 20210209 | 2.875 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 197982 | 20201114 | 4 | 360 | NA |
| 31 | 2 | 125693.63 | 20211118 | 2.99 | 108 | NA |
| 1 | 2 | 118364.99 | NA | 3.25 | 360 | NA |
| 1 | 2 | 163660.55 | NA | 3.25 | 360 | NA |
| 31 | 2 | 36000 | 20210602 | NA | 60 | NA |
| 31 | 2 | 281000 | 20210712 | 2.5 | 180 | NA |
| 31 | 2 | 279997.69 | NA | 2.75 | 360 | NA |
| 32 | 2 | 220000 | NA | 2.625 | 180 | NA |
| 31 | 2 | 240000 | NA | 2.875 | 360 | NA |
| 31 | 2 | 367250 | NA | 2.625 | 360 | NA |
| 31 | 2 | 228700 | 20210806 | 2.25 | 180 | NA |
| 2 | 1 | 250000 | 20210415 | 3.65 | 360 | NA |
| 31 | 1 | 72700 | 20210122 | 3.45 | 360 | NA |
| 1 | 2 | 199500 | 20211203 | NA | 360 | NA |
| 32 | 2 | 199000 | 20210504 | 3.5 | 360 | NA |
| 32 | 2 | 226000 | NA | 3.5 | 360 | NA |
| 31 | 2 | 384000 | 20210125 | 2.875 | 360 | NA |
| 1 | 2 | 230743 | NA | 3.125 | 360 | NA |
| 31 | 2 | 150000 | 20201122 | NA | 360 | NA |
| 31 | 2 | 145900 | 20201110 | 2.625 | 180 | NA |
| 2 | 2 | 90000 | 20210827 | NA | 240 | NA |
| 1 | 2 | 221600 | NA | 3 | 360 | NA |
| 31 | 2 | 88408.23 | 20210806 | 3.39 | 144 | NA |
| 1 | 2 | 282400 | NA | 2.625 | 360 | NA |
| 1 | 2 | 218250 | NA | 3.625 | 360 | NA |
| 1 | 2 | 207178 | NA | 2.625 | 360 | NA |
| 31 | 2 | 63500 | 20210520 | 2.99 | 180 | NA |
| 31 | 2 | 177900 | 20210324 | NA | 240 | NA |
| 2 | 1 | 30000 | 20210224 | NA | 360 | NA |
| 31 | 2 | 139700 | 20210518 | 2.5 | 180 | NA |
| 1 | 2 | 257050 | NA | 3.75 | 360 | NA |
| 1 | 2 | 365024.62 | NA | 3.5 | 360 | NA |
| 31 | 2 | 264600 | 20201120 | 2.5 | 180 | NA |


| 1 | 2 | 172000 | 20201028 | 2.625 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 1 | 100000 | 20210722 | 3.45 | 360 | NA |
| 1 | 2 | 242500 | NA | 3.75 | 360 | NA |
| 1 | 2 | 254888.23 | NA | 3.5 | 360 | NA |
| 1 | 2 | 342000 | 20210907 | NA | 360 | NA |
| 1 | 2 | 200212 | 20201104 | NA | 360 | NA |
| 1 | 2 | 259752.49 | NA | 3 | 360 | NA |
| 32 | 2 | 258400 | 20210818 | 3.25 | 360 | NA |
| 31 | 2 | 135000 | 20210217 | NA | 240 | NA |
| 31 | 2 | 82000 | 20210629 | 3.25 | 360 | NA |
| 31 | 2 | 60300 | 20210628 | 2.75 | 180 | NA |
| 1 | 2 | 76000 | 20210607 | NA | 360 | NA |
| 1 | 2 | 149246 | NA | 2.875 | 360 | NA |
| 2 | 1 | 36000 | 20211028 | NA | 360 | NA |
| 31 | 2 | 112000 | 20210806 | NA | 240 | NA |
| 32 | 2 | 155000 | 20211014 | NA | 360 | NA |
| 31 | 2 | 48010 | 20210503 | NA | 240 | NA |
| 31 | 2 | 80000 | 20210324 | NA | 180 | NA |
| 1 | 2 | 142144 | NA | 3.5 | 360 | NA |
| 31 | 2 | 4430 | 20210309 | NA | 108 | NA |
| 1 | 2 | 173145 | NA | 3.625 | 360 | NA |
| 31 | 2 | 99000 | NA | 2.625 | 240 | NA |
| 1 | 2 | 156497.87 | NA | 3.375 | 360 | NA |
| 32 | 2 | 405000 | 20210818 | 2.99 | 360 | NA |
| 1 | 2 | 102600 | NA | 3.75 | 360 | NA |
| 31 | 2 | 61000 | 20210306 | 3.25 | 360 | NA |
| 31 | 2 | 200000 | 20210507 | 2.25 | 120 | NA |
| 2 | 2 | 30000 | 20210416 | NA | 48 | NA |
| 31 | 2 | 250001 | 20201102 | 3.125 | 360 | NA |
| 32 | 2 | 250000 | 20210917 | 3 | 360 | NA |
| 31 | 2 | 277000 | NA | 3.25 | 360 | NA |
| 31 | 2 | 55000 | 20210310 | NA | 120 | NA |
| 1 | 2 | 147440 | NA | 2.99 | 360 | NA |
| 1 | 2 | 203942.37 | NA | 3.75 | 360 | NA |


| 1 | 2 | 550000 | 20210714 | 3.45 | 84 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 392000 | 20210730 | 3.03 | 61 | NA |
| 1 | 2 | 117572.19 | NA | 3.125 | 360 | NA |
| 32 | 2 | 138700 | 20210623 | 3 | 360 | NA |
| 1 | 2 | 483000 | NA | 3.625 | 360 | NA |
| 31 | 2 | 231000 | 20210310 | 2.625 | 180 | NA |
| 31 | 1 | 100000 | 20211014 | 3.65 | 360 | NA |
| 31 | 1 | 130854 | 20210528 | 3.65 | 360 | NA |
| 31 | 2 | 130000 | 20210304 | 2.84 | 120 | NA |
| 1 | 2 | 180000 | 20210902 | 2.875 | 360 | NA |
| 1 | 2 | 286400 | 20210518 | 2.875 | 360 | NA |
| 32 | 2 | 360000 | 20210518 | NA | 180 | NA |
| 31 | 2 | 548250 | 20201222 | 3.5 | 360 | NA |
| 1 | 2 | 960000 | 20201118 | 2.875 | 360 | NA |
| 1 | 2 | 206613.35 | NA | 2.5 | 360 | NA |
| 32 | 2 | 186000 | 20210525 | NA | 360 | NA |
| 1 | 2 | 580000 | 20210505 | 2.875 | 360 | NA |
| 31 | 1 | 200000 | 20210706 | 3.25 | 360 | NA |
| 31 | 2 | 472000 | 20210427 | 2.875 | 240 | NA |
| 31 | 2 | 246000 | 20210420 | 3.625 | 240 | NA |
| 31 | 2 | 576000 | 20210326 | 3.5 | 360 | NA |
| 32 | 2 | 325000 | NA | 2.875 | 360 | NA |
| 1 | 2 | 270000 | 20210129 | 2.625 | 360 | NA |
| 31 | 2 | 410000 | NA | 2.875 | 360 | NA |
| 31 | 2 | 320500 | 20210111 | 2.375 | 180 | NA |
| 31 | 2 | 438700 | 20201216 | 2.875 | 360 | NA |
| 31 | 2 | 244000 | NA | 2.875 | 300 | NA |
| 1 | 2 | 422750 | NA | 2.75 | 360 | NA |
| 32 | 2 | 358918.35 | NA | 3.125 | 240 | NA |
| 32 | 2 | 360000 | NA | 2.75 | 360 | NA |
| 31 | 2 | 450000 | NA | 2.875 | 360 | NA |
| 31 | 2 | 198000 | 20210706 | 2.25 | 180 | NA |
| 1 | 2 | 312800 | 20211101 | 2.125 | 180 | NA |
| 32 | 2 | 300001 | 20210811 | 2.25 | 180 | NA |


| 1 | 2 | 151947.2 | NA | 3.375 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 111750 | 20201130 | 2.75 | 360 | NA |
| 2 | 2 | 35000 | 20210826 | NA | 240 | NA |
| 1 | 2 | 87751.21 | NA | 2.625 | 360 | NA |
| 1 | 2 | 165190 | NA | 3.25 | 360 | NA |
| 1 | 2 | 157140 | 20211103 | 3.625 | 360 | NA |
| 1 | 2 | 132074.35 | NA | 2.625 | 360 | NA |
| 1 | 2 | 107908 | NA | 3 | 360 | NA |
| 31 | 1 | 50000 | 20210203 | NA | 360 | NA |
| 1 | 2 | 170143.35 | NA | 3.75 | 360 | NA |
| 31 | 2 | 125589 | 20210125 | 3.34 | 240 | NA |
| 1 | 2 | 219942 | 20210520 | 3.5 | 360 | NA |
| 1 | 2 | 175549 | 20210207 | 3.625 | 360 | NA |
| 1 | 2 | 139019.46 | NA | 3.75 | 360 | NA |
| 1 | 2 | 244625 | NA | 3.75 | 360 | NA |
| 32 | 2 | 110000 | NA | 2.75 | 360 | NA |
| 1 | 2 | 189525 | NA | 3.75 | 360 | NA |
| 1 | 2 | 181171.19 | NA | 3.125 | 360 | NA |
| 31 | 2 | 125000 | 20210122 | 2.99 | 360 | NA |
| 1 | 2 | 101850 | 20201221 | 2.875 | 360 | NA |
| 1 | 2 | 179685 | NA | 3.25 | 360 | NA |
| 32 | 2 | 116000 | 20211118 | 3.125 | 240 | NA |
| 1 | 2 | 70000 | 20210317 | NA | 360 | NA |
| 31 | 2 | 23578 | 20210312 | NA | 48 | NA |
| 31 | 2 | 25000 | 20210226 | 3.34 | 120 | NA |
| 1 | 2 | 209631 | NA | 3.5 | 360 | NA |
| 1 | 2 | 194750 | NA | 3.75 | 360 | NA |
| 1 | 2 | 220511.34 | NA | 2.5 | 360 | NA |
| 2 | 1 | 20000 | 20211005 | NA | 360 | NA |
| 1 | 2 | 520000 | NA | 2.99 | 360 | NA |
| 1 | 2 | 182000 | NA | 3.75 | 360 | NA |
| 32 | 2 | 151500 | 20210824 | 3.625 | 360 | NA |
| 31 | 2 | 226879 | 20210528 | 2.99 | 240 | NA |
| 1 | 2 | 296000 | 20210412 | 2.99 | 360 | NA |


| 1 | 2 | 310400 | NA | 3.625 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 247000 | NA | 3.75 | 360 | NA |
| 31 | 2 | 281000 | NA | 2.875 | 360 | NA |
| 1 | 2 | 303438.08 | NA | 3.625 | 360 | NA |
| 1 | 2 | 323000 | NA | 3.125 | 360 | NA |
| 1 | 2 | 237500 | NA | 3.625 | 360 | NA |
| 1 | 2 | 988000 | NA | 2.5 | 360 | NA |
| 1 | 2 | 399000 | NA | 3.125 | 360 | NA |
| 1 | 2 | 855000 | 20210613 | 2.875 | 360 | NA |
| 31 | 2 | 272000 | 20210124 | 3 | 360 | NA |
| 1 | 2 | 530000 | NA | 2.875 | 360 | NA |
| 1 | 2 | 330000 | NA | 2.75 | 360 | NA |
| 1 | 2 | 279818.51 | NA | 3.625 | 360 | NA |
| 1 | 2 | 544000 | 20210317 | 2.5 | 360 | NA |
| 2 | 1 | 40000 | 20210116 | NA | 360 | NA |
| 2 | 2 | 205000 | 20210601 | 3 | 240 | NA |
| 32 | 2 | 205000 | 20210420 | NA | 240 | NA |
| 1 | 2 | 548250 | NA | 2.75 | 360 | NA |
| 1 | 2 | 572400 | 20210219 | 3.125 | 360 | NA |
| 31 | 2 | 222000 | 20210112 | 3.375 | 360 | NA |
| 1 | 2 | 246000 | NA | 3.75 | 360 | NA |
| 31 | 2 | 322850 | 20201117 | 3.125 | 240 | NA |
| 31 | 2 | 464885 | 20201031 | 2.875 | 360 | NA |
| 31 | 2 | 3200000 | 20200923 | NA | 360 | NA |
| 31 | 2 | 740000 | NA | 3.375 | 360 | NA |
| 31 | 2 | 510400 | NA | 2.875 | 360 | NA |
| 31 | 2 | 1000000 | 20211018 | 2.75 | 360 | NA |
| 31 | 2 | 528950 | NA | 3 | 360 | NA |
| 31 | 2 | 463143.29 | NA | 2.5 | 360 | NA |
| 1 | 2 | 215999 | NA | 2.75 | 360 | NA |
| 31 | 2 | 100800 | 20200506 | NA | 360 | NA |
| 31 | 2 | 280000 | 20210327 | NA | 240 | NA |
| 31 | 2 | 235000 | 20211006 | 3.25 | 360 | NA |
| 1 | 2 | 286150 | NA | 3.375 | 360 | NA |


| 2 | 2 | 50000 | 20210610 | NA | 84 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 200000 | 20210319 | NA | 20 | NA |
| 1 | 2 | 343660 | 20210819 | 2.375 | 360 | NA |
| 31 | 2 | 28859.02 | 20211006 | 3.19 | 120 | NA |
| 2 | 1 | 50000 | 20210920 | NA | 360 | NA |
| 1 | 2 | 274928 | NA | 3.125 | 360 | NA |
| 31 | 2 | 160000 | 20210527 | 3.14 | 180 | NA |
| 31 | 2 | 141300 | 20210818 | 3.25 | 360 | NA |
| 31 | 2 | 145000 | 20210106 | NA | 120 | NA |
| 1 | 2 | 218500 | 20210224 | 3.625 | 360 | NA |
| 32 | 2 | 133000 | 20210218 | 3.25 | 240 | NA |
| 32 | 2 | 269637 | NA | 2.75 | 360 | NA |
| 32 | 2 | 250000 | NA | 3.25 | 360 | NA |
| 31 | 1 | 50000 | 20210716 | 3.45 | 360 | NA |
| 1 | 2 | 234362.43 | NA | 3.375 | 360 | NA |
| 31 | 2 | 78000 | 20211114 | 2.5 | 120 | NA |
| 1 | 2 | 271095 | NA | 3.25 | 360 | NA |
| 1 | 2 | 314204 | NA | 3.125 | 360 | NA |
| 1 | 2 | 227950 | NA | 3 | 360 | NA |
| 31 | 2 | 257077.53 | 20211004 | NA | 240 | NA |
| 31 | 2 | 232150 | NA | 2.875 | 360 | NA |
| 31 | 1 | 100000 | 20210614 | 3.45 | 360 | NA |
| 31 | 2 | 136000 | 20210601 | 3.29 | 240 | NA |
| 2 | 1 | 266545 | 20210408 | 4.55 | 360 | NA |
| 1 | 2 | 237650 | NA | 3.25 | 360 | NA |
| 31 | 2 | 107000 | 20211103 | 2.375 | 120 | NA |
| 31 | 2 | 61250 | 20211004 | 3 | 360 | NA |
| 31 | 2 | 108000 | 20210806 | NA | 120 | NA |
| 31 | 2 | 254000 | NA | 2.875 | 240 | NA |
| 1 | 2 | 542925 | 20210420 | 2.875 | 360 | NA |
| 1 | 2 | 214224.6 | NA | 3.75 | 360 | NA |
| 31 | 2 | 350485.54 | NA | 2.75 | 240 | NA |
| 31 | 2 | 308325 | NA | 2.75 | 240 | NA |
| 1 | 2 | 282545 | 20210122 | 2.875 | 360 | NA |


| 31 | 2 | 262500 | 20201228 | 2.875 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 1 | 322000 | 20210708 | 3.45 | 360 | NA |
| 1 | 2 | 215325.2 | NA | 3.75 | 360 | NA |
| 31 | 2 | 191000 | 20210820 | 2.125 | 120 | NA |
| 1 | 2 | 500000 | 20210802 | 2.875 | 360 | NA |
| 1 | 2 | 1024900 | 20210409 | 2.625 | 360 | NA |
| 1 | 2 | 219800 | NA | 3.75 | 360 | NA |
| 1 | 2 | 765000 | 20210331 | 2.625 | 360 | NA |
| 31 | 2 | 359000 | 20201221 | 2.99 | 360 | NA |
| 1 | 2 | 261496.76 | NA | 3.625 | 360 | NA |
| 31 | 2 | 361000 | 20201019 | 2.99 | 240 | NA |
| 31 | 2 | 850000 | 20200730 | 3 | 360 | NA |
| 1 | 2 | 560000 | NA | 2.99 | 360 | NA |
| 31 | 2 | 337419.98 | NA | 3 | 360 | NA |
| 31 | 2 | 462000 | 20200812 | 2.75 | 360 | NA |
| 31 | 2 | 1240000 | 20210923 | 2.25 | 360 | NA |
| 1 | 2 | 188300 | 20210830 | 2.75 | 360 | NA |
| 1 | 2 | 340000 | 20201217 | 2.625 | 360 | NA |
| 1 | 2 | 528525 | NA | 2.875 | 360 | NA |
| 31 | 2 | 365000 | NA | 2.625 | 360 | NA |
| 31 | 2 | 519000 | 20210427 | 2.25 | 180 | NA |
| 1 | 2 | 218250 | NA | 3.75 | 360 | NA |
| 31 | 2 | 248491.84 | 20211101 | 2.99 | 240 | NA |
| 1 | 2 | 211181.45 | NA | 3.75 | 360 | NA |
| 1 | 2 | 483200 | 20210820 | 2.875 | 360 | NA |
| 1 | 2 | 735000 | 20210831 | 3.125 | 360 | NA |
| 1 | 2 | 436800 | 20210629 | 2.375 | 360 | NA |
| 31 | 2 | 960000 | 20210625 | 3 | 360 | NA |
| 31 | 2 | 386250 | NA | 3.125 | 360 | NA |
| 31 | 1 | 45000 | 20210203 | 4.2 | 360 | NA |
| 32 | 2 | 514500 | NA | 2.875 | 240 | NA |
| 1 | 2 | 1156000 | 20210210 | 2.125 | 360 | NA |
| 31 | 2 | 547000 | 20210203 | 2.875 | 240 | NA |
| 31 | 2 | 748000 | NA | 3 | 360 | NA |


| 1 | 2 | 461250 | 20201218 | 2.625 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 476250 | NA | 3.125 | 360 | NA |
| 2 | 2 | 100000 | 20210624 | NA | 240 | NA |
| 2 | 2 | 100000 | 20210624 | NA | 240 | NA |
| 1 | 2 | 836500 | NA | 2.75 | 360 | NA |
| 31 | 2 | 460000 | NA | 3.125 | 240 | NA |
| 1 | 2 | 990000 | 20210126 | 3.5 | 360 | NA |
| 1 | 2 | 441750 | NA | 3.5 | 360 | NA |
| 1 | 2 | 305550 | NA | 3.75 | 360 | NA |
| 31 | 2 | 284000 | NA | 3.125 | 360 | NA |
| 31 | 2 | 508800 | NA | 2.75 | 360 | NA |
| 1 | 2 | 382500 | NA | 2.75 | 360 | NA |
| 31 | 1 | 308000 | 20210517 | 3.65 | 300 | NA |
| 31 | 2 | 330000 | NA | 2.625 | 240 | NA |
| 31 | 2 | 363000 | 20201102 | 3.125 | 360 | NA |
| 31 | 2 | 1123300 | 20210817 | 2.375 | 360 | NA |
| 2 | 1 | 300000 | 20210205 | NA | 360 | NA |
| 31 | 2 | 275000 | 20210715 | 2.99 | 360 | NA |
| 2 | 1 | 174557 | 20210121 | 3.95 | 360 | NA |
| 1 | 2 | 452954.54 | NA | 2.875 | 360 | NA |
| 31 | 2 | 401200 | 20210107 | 2.875 | 360 | NA |
| 31 | 2 | 438000 | NA | 2.625 | 360 | NA |
| 1 | 2 | 468813 | NA | 2.5 | 360 | NA |
| 31 | 2 | 636951.3 | NA | 3.25 | 360 | NA |
| 1 | 2 | 536000 | 20210610 | 3.25 | 360 | NA |
| 31 | 1 | 250000 | 20210126 | 3.95 | 360 | NA |
| 31 | 2 | 702000 | 20210128 | 2.5 | 180 | NA |
| 31 | 2 | 1439600 | 20210126 | 2.625 | 360 | NA |
| 1 | 2 | 548250 | NA | 2.75 | 360 | NA |
| 31 | 2 | 779500 | 20201209 | 2.875 | 360 | NA |
| 2 | 1 | 205000 | 20210924 | 4.15 | 360 | NA |
| 31 | 2 | 489157.7 | NA | 2.99 | 360 | NA |
| 1 | 2 | 864000 | 20210630 | 3 | 360 | NA |
| 31 | 2 | 926500 | 20210621 | 3.125 | 360 | NA |


| 31 | 2 | 652000 | 20210412 | 2.875 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 490498.84 | NA | 3 | 360 | NA |
| 1 | 2 | 2483770 | 20210331 | 2.75 | 360 | NA |
| 1 | 2 | 2326150 | 20210324 | 2.375 | 360 | NA |
| 1 | 2 | 480000 | NA | 2.99 | 360 | NA |
| 31 | 2 | 1983675 | 20210217 | 2.75 | 360 | NA |
| 1 | 2 | 760000 | 20210126 | 2.375 | 360 | NA |
| 31 | 2 | 320200 | 20210108 | 3 | 180 | NA |
| 31 | 2 | 650000 | 20210108 | 2.5 | 180 | NA |
| 1 | 2 | 300700 | NA | 3.625 | 360 | NA |
| 1 | 2 | 419920 | NA | 3 | 360 | NA |
| 1 | 2 | 662835.94 | NA | 2.875 | 360 | NA |
| 1 | 2 | 475165.53 | NA | 2.875 | 360 | NA |
| 31 | 2 | 707200 | 20200921 | 3.125 | 360 | NA |
| 1 | 2 | 547288.87 | NA | 2.875 | 360 | NA |
| 1 | 2 | 548250 | NA | 2.75 | 360 | NA |
| 31 | 2 | 524000 | NA | 3.125 | 360 | NA |
| 31 | 2 | 612000 | 20210310 | 2.54 | 61 | NA |
| 1 | 2 | 480000 | 20210528 | 3.15 | 60 | NA |
| 1 | 2 | 740000 | NA | 2.875 | 360 | NA |
| 31 | 2 | 445000 | 20210829 | NA | 240 | NA |
| 1 | 2 | 832000 | 20210628 | 2 | 360 | NA |
| 1 | 2 | 900000 | 20210520 | 2.5 | 360 | NA |
| 31 | 2 | 485872 | NA | 2.625 | 360 | NA |
| 31 | 2 | 414509 | NA | 3.5 | 360 | NA |
| 1 | 2 | 575000 | 20210322 | 2.875 | 360 | NA |
| 1 | 2 | 832500 | 20210216 | 2.75 | 360 | NA |
| 1 | 2 | 727200 | 20210221 | 2.5 | 360 | NA |
| 1 | 2 | 476000 | 20210209 | 3.25 | 360 | NA |
| 1 | 2 | 456000 | 20210201 | 2.75 | 360 | NA |
| 31 | 2 | 367000 | NA | 2.875 | 240 | NA |
| 1 | 2 | 290000 | NA | 2.5 | 360 | NA |
| 31 | 2 | 741400 | NA | 2.875 | 360 | NA |
| 31 | 2 | 800000 | NA | 3 | 360 | NA |


| 31 | 2 | 327000 | 20210316 | 2.75 | 180 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 502500 | NA | 2.625 | 240 | NA |
| 31 | 2 | 204000 | 20201026 | 3.125 | 288 | NA |
| 1 | 2 | 936000 | 20210806 | 2.25 | 360 | NA |
| 31 | 2 | 1523946 | 20210804 | 2.125 | 360 | NA |
| 1 | 2 | 1000080 | 20210708 | 2.25 | 360 | NA |
| 1 | 2 | 243600 | 20210628 | 2.99 | 360 | NA |
| 1 | 2 | 1799900 | 20210701 | NA | 360 | NA |
| 1 | 2 | 416700 | 20210519 | 2.875 | 360 | NA |
| 31 | 2 | 178000 | 20210325 | NA | 240 | NA |
| 31 | 2 | 331478 | NA | 3 | 240 | NA |
| 1 | 2 | 548250 | 20210317 | 2.99 | 360 | NA |
| 31 | 2 | 220000 | 20210222 | 3.125 | 360 | NA |
| 1 | 2 | 150000 | 20210301 | 2.375 | 180 | NA |
| 1 | 2 | 191575 | NA | 3.625 | 360 | NA |
| 1 | 2 | 289750 | NA | 3.75 | 360 | NA |
| 1 | 2 | 389250 | NA | 3.125 | 360 | NA |
| 31 | 2 | 315000 | NA | 2.75 | 240 | NA |
| 1 | 2 | 208000 | 20201210 | NA | 360 | NA |
| 1 | 2 | 435600 | NA | 3.125 | 360 | NA |
| 1 | 2 | 472000 | NA | 2.875 | 360 | NA |
| 31 | 2 | 352354.36 | NA | 2.625 | 360 | NA |
| 2 | 1 | 20000 | 20210701 | NA | 360 | NA |
| 1 | 2 | 284500 | NA | 3.75 | 360 | NA |
| 1 | 2 | 248000 | 20210826 | NA | 360 | NA |
| 31 | 2 | 609000 | 20201202 | NA | 360 | NA |
| 1 | 1 | 300000 | 20210325 | NA | 360 | NA |
| 1 | 2 | 920000 | 20211110 | 2.25 | 360 | NA |
| 31 | 2 | 920000 | 20210929 | 2.625 | 360 | NA |
| 31 | 2 | 262400 | 20210923 | NA | 360 | NA |
| 1 | 2 | 792000 | 20210921 | 2.375 | 360 | NA |
| 31 | 2 | 560000 | 20210903 | 2.75 | 360 | NA |
| 1 | 1 | 700000 | 20210228 | NA | 360 | NA |
| 31 | 2 | 698552 | 20210820 | 2.375 | 360 | NA |


| 31 | 2 | 162000 | 20210210 | 2.56 | 240 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 506400 | 20210803 | 2.375 | 240 | NA |
| 1 | 2 | 548250 | NA | 3 | 360 | NA |
| 31 | 2 | 339500 | 20201203 | 2.875 | 240 | NA |
| 1 | 2 | 536657.54 | NA | 2.875 | 360 | NA |
| 2 | 1 | 62009 | 20210611 | NA | 360 | NA |
| 32 | 2 | 130000 | 20210907 | NA | 360 | NA |
| 1 | 2 | 167902 | NA | 3.5 | 360 | NA |
| 1 | 2 | 68732 | NA | 3.125 | 360 | NA |
| 1 | 2 | 728000 | 20210726 | 2.99 | 60 | NA |
| 1 | 2 | 480000 | 20210714 | NA | 120 | NA |
| 1 | 2 | 908000 | 20210504 | NA | 60 | NA |
| 2 | 1 | 25000 | 20210825 | NA | 360 | NA |
| 1 | 2 | 223322.88 | NA | 3.5 | 360 | NA |
| 1 | 2 | 294216.01 | NA | 3.375 | 360 | NA |
| 2 | 1 | 65000 | 20210408 | NA | 360 | NA |
| 1 | 2 | 244000 | 20210806 | 3.4 | 61 | NA |
| 1 | 2 | 137649.41 | NA | 5.125 | 378 | NA |
| 1 | 2 | 96000 | 20210731 | 4.125 | 360 | NA |
| 32 | 2 | 202451.1 | NA | 4.25 | 360 | NA |
| 31 | 2 | 226950 | NA | 3.25 | 360 | NA |
| 1 | 2 | 222636.45 | NA | 3.25 | 360 | NA |
| 1 | 2 | 227614.13 | NA | 3.125 | 360 | NA |
| 31 | 2 | 134000 | 20201121 | 2.875 | 360 | NA |
| 1 | 2 | 265109 | NA | 2.875 | 360 | NA |
| 1 | 2 | 254308 | NA | 3 | 360 | NA |
| 31 | 2 | 200000 | 20210901 | NA | 240 | NA |
| 2 | 1 | 30000 | 20210825 | NA | 360 | NA |
| 1 | 2 | 270019 | NA | 3.5 | 360 | NA |
| 31 | 2 | 155000 | 20210618 | NA | 240 | NA |
| 1 | 2 | 209797.08 | NA | 3.25 | 360 | NA |
| 32 | 2 | 189800 | 20211117 | 3.625 | 360 | NA |
| 31 | 2 | 204200 | 20210927 | NA | 360 | NA |
| 1 | 2 | 274829 | 20210907 | 2.99 | 360 | NA |


| 1 | 2 | 350170 | 20210714 | 2.99 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 32 | 2 | 200000 | 20210630 | NA | 240 | NA |
| 31 | 2 | 159000 | 20210608 | 2.375 | 180 | NA |
| 1 | 2 | 280250 | NA | 3.75 | 360 | NA |
| 1 | 2 | 218500 | NA | 3.375 | 360 | NA |
| 1 | 2 | 193950 | 20210616 | NA | 360 | NA |
| 32 | 2 | 212000 | 20210601 | 3.5 | 360 | NA |
| 31 | 2 | 102613.49 | 20201210 | 2.89 | 180 | NA |
| 31 | 2 | 219115.2 | NA | 2.875 | 360 | NA |
| 31 | 2 | 241300 | 20210121 | 2.99 | 180 | NA |
| 31 | 2 | 125250 | 20201216 | 2.99 | 360 | NA |
| 31 | 2 | 233000 | 20201120 | NA | 180 | NA |
| 1 | 2 | 163400 | NA | 3.625 | 360 | NA |
| 31 | 2 | 15000 | 20210910 | NA | 20 | NA |
| 1 | 2 | 227853 | NA | 3.625 | 360 | NA |
| 1 | 2 | 245373 | NA | 3.5 | 360 | NA |
| 1 | 2 | 175600 | 20210216 | 3.125 | 360 | NA |
| 2 | 1 | 100000 | 20210503 | NA | 360 | NA |
| 2 | 1 | 125000 | 20210301 | NA | 360 | NA |
| 1 | 2 | 388303.4 | NA | 2.75 | 360 | NA |
| 1 | 2 | 180278.35 | NA | 3.125 | 360 | NA |
| 1 | 2 | 139602.2 | NA | 2.625 | 360 | NA |
| 31 | 2 | 184930 | NA | 2.99 | 360 | NA |
| 1 | 2 | 128800 | 20210728 | 3.6 | 60 | NA |
| 1 | 2 | 171830 | NA | 3.125 | 360 | NA |
| 1 | 2 | 260200 | NA | 2.625 | 360 | NA |
| 2 | 2 | 25000 | 20211223 | NA | 48 | NA |
| 2 | 1 | 49000 | 20211215 | NA | 360 | NA |
| 1 | 2 | 172894.39 | NA | 5.125 | 360 | NA |
| 1 | 2 | 222898.66 | NA | 3.5 | 360 | NA |
| 31 | 2 | 166750 | 20210707 | 3.75 | 240 | NA |
| 1 | 2 | 173630 | 20201228 | NA | 360 | NA |
| 1 | 2 | 392000 | 20210505 | 3.51 | 61 | NA |
| 1 | 2 | 314204 | NA | 2.625 | 360 | NA |


| 1 | 2 | 230347.04 | NA | 3 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 216997 | NA | 2.625 | 360 | NA |
| 32 | 2 | 213675 | 20210928 | NA | 360 | NA |
| 1 | 2 | 68000 | NA | 3.75 | 360 | NA |
| 31 | 2 | 146677.96 | 20210927 | 2.89 | 180 | NA |
| 1 | 2 | 261250 | NA | 3.75 | 360 | NA |
| 1 | 2 | 151947.2 | NA | 3.375 | 360 | NA |
| 1 | 2 | 251750 | 20210617 | 3 | 360 | NA |
| 1 | 2 | 328500 | 20210526 | 2.125 | 180 | NA |
| 31 | 2 | 367826 | NA | 2.5 | 360 | NA |
| 1 | 2 | 220826.9 | NA | 3.75 | 360 | NA |
| 1 | 2 | 484500 | NA | 3.25 | 360 | NA |
| 1 | 2 | 230600 | NA | 3.75 | 360 | NA |
| 31 | 2 | 209000 | 20200706 | 3.25 | 360 | NA |
| 1 | 2 | 222883.04 | NA | 3.25 | 360 | NA |
| 1 | 2 | 166840 | NA | 3.75 | 360 | NA |
| 32 | 2 | 130000 | 20210104 | NA | 180 | NA |
| 31 | 2 | 181800 | 20200505 | 3.625 | 360 | NA |
| 1 | 2 | 232800 | NA | 3.625 | 360 | NA |
| 1 | 2 | 920000 | 20210603 | 3 | 61 | NA |
| 2 | 1 | 75000 | 20211202 | NA | 360 | NA |
| 1 | 2 | 230000 | NA | 3.75 | 360 | NA |
| 1 | 2 | 142285.37 | NA | 3.75 | 360 | NA |
| 1 | 2 | 246889.34 | NA | 3.25 | 360 | NA |
| 1 | 2 | 99993 | 20210618 | NA | 360 | NA |
| 1 | 2 | 129200 | NA | 3.125 | 360 | NA |
| 32 | 2 | 215000 | 20210622 | 2.375 | 120 | NA |
| 2 | 1 | 60000 | 20210422 | NA | 360 | NA |
| 31 | 2 | 200000 | 20210317 | NA | 360 | NA |
| 1 | 2 | 260000 | NA | 3.75 | 360 | NA |
| 1 | 1 | 65000 | 20211215 | NA | 360 | NA |
| 32 | 2 | 525000 | NA | 3.625 | 360 | NA |
| 32 | 2 | 300000 | 20211112 | 3.125 | 360 | NA |
| 31 | 2 | 234500 | 20210416 | 2.5 | 180 | NA |


| 32 | 2 | 177000 | 20210305 | 2.75 | 180 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 260000 | 20201127 | 2.375 | 180 | NA |
| 1 | 2 | 179550 | NA | 3.375 | 360 | NA |
| 2 | 1 | 80000 | 20210809 | NA | 360 | NA |
| 31 | 2 | 270400 | 20210624 | 3.94 | 240 | NA |
| 2 | 2 | 272000 | 20210608 | NA | 240 | NA |
| 1 | 2 | 236423.51 | NA | 3.75 | 360 | NA |
| 2 | 1 | 75000 | 20210524 | NA | 360 | NA |
| 2 | 1 | 115000 | 20201121 | 3.45 | 360 | NA |
| 1 | 2 | 222130 | 20210414 | 2.875 | 360 | NA |
| 2 | 1 | 250000 | 20210706 | NA | 360 | NA |
| 31 | 2 | 263000 | 20210622 | 3.94 | 240 | NA |
| 31 | 2 | 263000 | 20210528 | NA | 240 | NA |
| 31 | 2 | 247106.5 | NA | 2.99 | 360 | NA |
| 31 | 2 | 238500 | 20201124 | 3.625 | 360 | NA |
| 2 | 2 | 100000 | 20210813 | NA | 360 | NA |
| 31 | 2 | 138000 | 20210724 | NA | 180 | NA |
| 1 | 2 | 208550 | NA | 3.75 | 360 | NA |
| 1 | 2 | 217222.33 | NA | 3.75 | 360 | NA |
| 2 | 1 | 80000 | 20210713 | NA | 360 | NA |
| 2 | 1 | 50000 | 20210428 | NA | 360 | NA |
| 31 | 2 | 207000 | 20210614 | NA | 360 | NA |
| 2 | 1 | 15000 | 20210601 | NA | 360 | NA |
| 2 | 1 | 15000 | 20210527 | NA | 360 | NA |
| 31 | 2 | 203400 | 20210522 | NA | 240 | NA |
| 1 | 2 | 442805 | 20201104 | 2.625 | 360 | NA |
| 31 | 1 | 150000 | 20210318 | NA | 360 | NA |
| 31 | 2 | 128700 | 20210428 | 2.375 | 120 | NA |
| 31 | 2 | 15000 | 20211214 | NA | 60 | NA |
| 31 | 2 | 155000 | 20211026 | 3.34 | 240 | NA |
| 31 | 2 | 101500 | 20210928 | 3.125 | 240 | NA |
| 1 | 2 | 680000 | 20210930 | 3.15 | 60 | NA |
| 1 | 2 | 484702.56 | NA | 3.625 | 360 | NA |
| 1 | 2 | 171949 | NA | 3.25 | 360 | NA |


| 31 | 2 | 182199 | 20201207 | 2.99 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 256500 | NA | 3.375 | 360 | NA |
| 31 | 2 | 367400 | 20210826 | NA | 360 | NA |
| 31 | 2 | 170000 | 20201106 | 3.625 | 360 | NA |
| 1 | 2 | 387290.35 | NA | 2.625 | 360 | NA |
| 1 | 2 | 237650 | NA | 3.125 | 360 | NA |
| 1 | 2 | 284531.54 | NA | 3.25 | 360 | NA |
| 31 | 2 | 442317.92 | NA | 3.625 | 360 | NA |
| 1 | 2 | 235600 | 20210212 | 3.25 | 360 | NA |
| 31 | 2 | 152000 | 20210121 | 3.5 | 360 | NA |
| 31 | 2 | 779000 | 20201029 | 3.25 | 360 | NA |
| 1 | 2 | 296820 | NA | 3.75 | 360 | NA |
| 31 | 2 | 460000 | NA | 3.5 | 360 | NA |
| 31 | 2 | 326132 | 20201125 | 2.875 | 240 | NA |
| 2 | 2 | 100000 | 20210627 | NA | 180 | NA |
| 31 | 2 | 600000 | 20201016 | 2.56 | 120 | NA |
| 1 | 2 | 255120.78 | NA | 3.125 | 360 | NA |
| 31 | 2 | 308000 | 20201107 | 2.99 | 360 | NA |
| 31 | 2 | 287500 | 20201109 | 2.99 | 240 | NA |
| 1 | 2 | 137969.1 | NA | 3.375 | 360 | NA |
| 2 | 1 | 350000 | 20210308 | 4.35 | 360 | NA |
| 1 | 2 | 401591 | NA | 2.5 | 360 | NA |
| 1 | 2 | 281327.69 | NA | 3.125 | 360 | NA |
| 1 | 2 | 136813.11 | NA | 3.5 | 360 | NA |
| 1 | 2 | 450909.39 | NA | 3.125 | 360 | NA |
| 1 | 2 | 424000 | 20210708 | 3.05 | 59 | NA |
| 1 | 2 | 412000 | 20210708 | 3.05 | 59 | NA |
| 1 | 2 | 286110.97 | NA | 2.625 | 360 | NA |
| 1 | 2 | 181406.42 | NA | 2.875 | 360 | NA |
| 1 | 2 | 308807.24 | NA | 3.5 | 360 | NA |
| 31 | 2 | 213000 | 20211012 | NA | 360 | NA |
| 1 | 2 | 117826 | 20210907 | 3.125 | 360 | NA |
| 2 | 1 | 30000 | 20211020 | NA | 360 | NA |
| 1 | 2 | 150950.52 | NA | 3 | 360 | NA |


| 1 | 2 | 253154 | NA | 3.375 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 140234.92 | NA | 3.875 | 360 | NA |
| 32 | 2 | 129500 | 20211025 | 3.99 | 360 | NA |
| 31 | 2 | 280000 | 20210402 | 3.375 | 360 | NA |
| 1 | 2 | 220190 | 20210409 | 2.875 | 360 | NA |
| 1 | 2 | 306000 | 20210419 | 3 | 360 | NA |
| 1 | 2 | 303600 | 20210317 | 2.875 | 180 | NA |
| 1 | 2 | 258750 | NA | 3.125 | 360 | NA |
| 1 | 2 | 266000 | 20201218 | 2.875 | 360 | NA |
| 1 | 2 | 165600 | NA | 3.75 | 360 | NA |
| 31 | 2 | 277000 | NA | 2.625 | 360 | NA |
| 2 | 1 | 100000 | 20210702 | 4.35 | 360 | NA |
| 1 | 2 | 112615.53 | NA | 3.125 | 360 | NA |
| 31 | 2 | 100000 | 20210917 | 2.625 | 180 | NA |
| 31 | 2 | 100000 | 20210225 | NA | 240 | NA |
| 2 | 1 | 150000 | 20210128 | 3.45 | 360 | NA |
| 31 | 2 | 295000 | 20210630 | NA | 240 | NA |
| 1 | 2 | 480000 | NA | 3.125 | 360 | NA |
| 1 | 2 | 137000 | 20210415 | 2.875 | 360 | NA |
| 31 | 2 | 168000 | 20210831 | 3.53 | 240 | NA |
| 2 | 1 | 35000 | 20210708 | NA | 360 | NA |
| 31 | 2 | 234000 | 20210326 | NA | 360 | NA |
| 31 | 2 | 300000 | 20200602 | NA | 180 | NA |
| 31 | 2 | 257000 | 20210211 | NA | 240 | NA |
| 1 | 2 | 106539.3 | NA | 3.75 | 360 | NA |
| 1 | 2 | 107026.13 | NA | 3.75 | 360 | NA |
| 1 | 2 | 130950 | NA | 3.25 | 360 | NA |
| 1 | 2 | 145000 | 20201109 | 2.875 | 360 | NA |
| 31 | 2 | 185000 | 20211108 | NA | 360 | NA |
| 31 | 2 | 131500 | 20200720 | 3.125 | 300 | NA |
| 1 | 2 | 1006664 | 20210312 | NA | 360 | NA |
| 31 | 2 | 239000 | 20210901 | 2.625 | 240 | NA |
| 31 | 2 | 765000 | 20210701 | 3.125 | 360 | NA |
| 31 | 1 | 150000 | 20210116 | NA | 360 | NA |


| 31 | 2 | 131000 | 20210618 | 2.5 | 180 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 517600 | 20210412 | 2.99 | 360 | NA |
| 1 | 2 | 548250 | NA | 2.5 | 360 | NA |
| 1 | 2 | 440000 | 20210118 | 2.75 | 360 | NA |
| 31 | 2 | 254571.7 | NA | 3.125 | 360 | NA |
| 2 | 2 | 50000 | 20210723 | NA | 120 | NA |
| 2 | 2 | 50000 | 20210723 | 2.59 | 120 | NA |
| 32 | 2 | 525000 | 20210817 | 3.25 | 360 | NA |
| 31 | 2 | 391000 | 20210729 | 3.625 | 240 | NA |
| 1 | 2 | 338850 | 20210810 | 2.75 | 360 | NA |
| 2 | 1 | 100000 | 20211107 | NA | 360 | NA |
| 2 | 1 | 300000 | 20210829 | NA | 360 | NA |
| 31 | 2 | 241800 | NA | 2.75 | 360 | NA |
| 31 | 2 | 267366.31 | 20210528 | 2.875 | 240 | NA |
| 31 | 2 | 237500 | 20210309 | 2.625 | 180 | NA |
| 1 | 2 | 222400 | 20201104 | NA | 360 | NA |
| 1 | 2 | 436875 | 20210902 | 4.125 | 360 | NA |
| 31 | 1 | 85000 | 20210204 | NA | 360 | NA |
| 31 | 2 | 85000 | 20210202 | NA | 120 | NA |
| 31 | 2 | 119000 | 20201119 | 3.04 | 120 | NA |
| 31 | 1 | 120000 | 20210920 | NA | 360 | NA |
| 1 | 2 | 190950 | NA | 3.625 | 360 | NA |
| 1 | 2 | 416000 | 20210317 | 2.625 | 180 | NA |
| 32 | 2 | 172000 | 20201001 | 3.625 | 240 | NA |
| 1 | 2 | 190000 | NA | 3.75 | 360 | NA |
| 31 | 1 | 122545 | 20211005 | 3.65 | 360 | NA |
| 2 | 2 | 25000 | 20210803 | NA | 60 | NA |
| 1 | 2 | 209855 | NA | 3.375 | 360 | NA |
| 1 | 2 | 197400 | NA | 3.75 | 360 | NA |
| 2 | 1 | 120000 | 20210602 | 4.15 | 360 | NA |
| 31 | 2 | 243000 | 20211102 | 3.125 | 360 | NA |
| 1 | 2 | 438400 | 20211021 | 3.375 | 360 | NA |
| 31 | 2 | 168000 | 20210920 | NA | 180 | NA |
| 2 | 1 | 60000 | 20210221 | 3.45 | 360 | NA |


| 31 | 2 | 471154.77 | NA | 2.75 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 230000 | 20210210 | NA | 120 | NA |
| 32 | 2 | 307500 | 20210718 | 2.625 | 180 | NA |
| 31 | 2 | 359000 | 20210614 | 2.375 | 180 | NA |
| 31 | 1 | 100000 | 20210107 | 3.45 | 360 | NA |
| 1 | 2 | 497600 | 20210514 | 2.875 | 360 | NA |
| 32 | 1 | 250000 | 20210615 | 5.45 | 360 | NA |
| 31 | 2 | 465000 | 20210102 | 3.625 | 360 | NA |
| 31 | 2 | 473000 | 20210102 | 2.875 | 360 | NA |
| 31 | 2 | 302800 | 20201128 | 2.375 | 180 | NA |
| 1 | 2 | 461250 | 20201213 | 2.625 | 360 | NA |
| 31 | 2 | 356000 | 20201018 | 2.99 | 180 | NA |
| 31 | 2 | 198600 | 20200930 | 2.875 | 360 | NA |
| 31 | 2 | 111700 | 20210721 | NA | 180 | NA |
| 31 | 2 | 134000 | 20201014 | 2.875 | 360 | NA |
| 2 | 1 | 200000 | 20210421 | NA | 360 | NA |
| 31 | 2 | 431000 | 20210811 | NA | 360 | NA |
| 31 | 1 | 150000 | 20201205 | NA | 360 | NA |
| 31 | 2 | 140001 | 20210911 | 3.04 | 240 | NA |
| 1 | 2 | 240000 | NA | 3.25 | 360 | NA |
| 1 | 2 | 237520 | 20210907 | 2.875 | 360 | NA |
| 31 | 2 | 171600 | 20210109 | 2.99 | 360 | NA |
| 31 | 2 | 298000 | 20201208 | 2.875 | 360 | NA |
| 1 | 2 | 318250 | NA | 2.75 | 360 | NA |
| 31 | 2 | 109000 | 20210810 | NA | 180 | NA |
| 1 | 2 | 86836.88 | NA | 2.625 | 360 | NA |
| 1 | 2 | 289656 | NA | 3.5 | 360 | NA |
| 31 | 2 | 120400 | 20210329 | 2.99 | 180 | NA |
| 31 | 2 | 130000 | 20201120 | 2.625 | 180 | NA |
| 1 | 2 | 431000 | 20211012 | 2.875 | 360 | NA |
| 31 | 2 | 165000 | 20210209 | NA | 240 | NA |
| 1 | 2 | 120000 | 20210519 | 2.25 | 180 | NA |
| 32 | 2 | 187500 | 20200526 | 3.125 | 360 | NA |
| 31 | 2 | 227000 | 20210210 | 3 | 180 | NA |


| 1 | 2 | 120800 | NA | 3.75 | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 194422.9 | NA | 3.125 | 360 | NA |
| 31 | 2 | 130000 | 20210409 | NA | 180 | NA |
| 1 | 2 | 142500 | 20211007 | NA | 360 | NA |
| 31 | 2 | 103000 | 20210215 | 2.99 | 180 | NA |
| 2 | 1 | 100000 | 20210624 | 3.45 | 360 | NA |
| 31 | 2 | 272300 | 20210818 | 3.25 | 360 | NA |
| 1 | 2 | 180000 | 20210802 | 2.125 | 180 | NA |
| 1 | 2 | 290000 | 20210721 | 2.875 | 360 | NA |
| 1 | 2 | 450000 | 20210715 | 4.125 | 360 | NA |
| 2 | 1 | 135818 | 20201216 | 3.45 | 360 | NA |
| 31 | 2 | 176000 | 20210519 | 3.25 | 360 | NA |
| 32 | 2 | 150000 | 20210329 | 3 | 180 | NA |
| 31 | 2 | 105000 | 20210315 | 2.875 | 120 | NA |
| 31 | 2 | 158500 | 20201205 | NA | 180 | NA |
| 2 | 1 | 101182 | 20210921 | 4.15 | 360 | NA |
| 1 | 2 | 177451.05 | NA | 3.625 | 360 | NA |
| 2 | 1 | 50000 | 20210611 | NA | 360 | NA |
| 1 | 2 | 380950 | 20211105 | 3.125 | 360 | NA |
| 31 | 2 | 94000 | 20211012 | 2.5 | 180 | NA |
| 31 | 2 | 200000 | 20210308 | NA | 240 | NA |
| 32 | 2 | 182000 | 20210420 | NA | 360 | NA |
| 31 | 2 | 170000 | 20210914 | 3.04 | 240 | NA |
| 31 | 2 | 171255.84 | 20210708 | NA | 240 | NA |
| 1 | 2 | 193500 | 20210706 | 2.99 | 360 | NA |
| 1 | 2 | 193500 | NA | 3.375 | 360 | NA |
| 1 | 2 | 197650.04 | NA | 3.75 | 360 | NA |
| 1 | 2 | 494301 | 20211019 | 3.125 | 360 | NA |
| 31 | 2 | 93000 | 20210111 | NA | 240 | NA |
| 1 | 2 | 260200 | NA | 3.125 | 360 | NA |
| 1 | 2 | 206196 | NA | 3.5 | 360 | NA |
| 1 | 2 | 243750 | NA | 3.375 | 360 | NA |
| 32 | 2 | 117200 | 20210827 | NA | 180 | NA |
| 32 | 2 | 156000 | 20210625 | NA | 360 | NA |


| 1 | 1 | 25000 | 20210409 | NA | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 82721.99 | NA | 3.375 | 360 | NA |
| 32 | 2 | 187500 | 20211111 | 3.5 | 360 | NA |
| 1 | 2 | 81027.51 | NA | 5.625 | 360 | NA |
| 1 | 2 | 180336.56 | NA | 2.625 | 360 | NA |
| 1 | 2 | 187846.05 | NA | 2.75 | 360 | NA |
| 1 | 2 | 235239.88 | NA | 2.875 | 360 | NA |
| 1 | 2 | 267469.09 | NA | 3.375 | 360 | NA |
| 1 | 2 | 204250 | NA | 3.375 | 360 | NA |
| 31 | 2 | 230000 | 20210202 | 3.44 | 240 | NA |
| 31 | 2 | 264000 | 20210617 | NA | 360 | NA |
| 31 | 2 | 505000 | 20210615 | 2.875 | 240 | NA |
| 31 | 2 | 375400 | 20210310 | 2.625 | 180 | NA |
| 1 | 2 | 193687.96 | NA | 3.375 | 360 | NA |
| 1 | 2 | 234750 | 20210309 | 2.99 | 360 | NA |
| 1 | 2 | 300700 | NA | 3.75 | 360 | NA |
| 1 | 2 | 312075 | 20210119 | 2.875 | 360 | NA |
| 1 | 2 | 545400 | NA | 2.875 | 360 | NA |
| 1 | 2 | 242134.75 | NA | 3.75 | 360 | NA |
| 1 | 2 | 266750 | NA | 2.75 | 360 | NA |
| 1 | 2 | 197506.8 | NA | 3.375 | 360 | NA |
| 1 | 2 | 224000 | NA | 2.875 | 360 | NA |
| 1 | 2 | 235682 | NA | 3.25 | 360 | NA |
| 31 | 2 | 195000 | 20200930 | NA | 360 | NA |
| 32 | 2 | 212500 | 20210409 | NA | 180 | NA |
| 1 | 2 | 323000 | NA | 3.125 | 360 | NA |
| 31 | 2 | 393558 | NA | 2.25 | 360 | NA |
| 1 | 2 | 388800 | 20201120 | NA | 360 | NA |
| 31 | 2 | 75000 | 20211213 | NA | 120 | NA |
| 2 | 1 | 100000 | 20211128 | 4.15 | 360 | NA |
| 1 | 2 | 261440.87 | NA | 2.875 | 360 | NA |
| 2 | 1 | 100000 | 20210927 | NA | 360 | NA |
| 1 | 2 | 265109 | NA | 3.375 | 360 | NA |
| 1 | 2 | 244060.38 | NA | 2.875 | 360 | NA |


| 31 | 2 | 81069 | 20210211 | NA | 240 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 463500 | 20210506 | 2.875 | 360 | NA |
| 1 | 2 | 299250 | NA | 3.125 | 360 | NA |
| 1 | 2 | 439137 | NA | 3.5 | 360 | NA |
| 32 | 2 | 1125000 | 20210709 | NA | 360 | NA |
| 31 | 2 | 720000 | 20210703 | 2.875 | 360 | NA |
| 1 | 2 | 540000 | 20210628 | 2.875 | 360 | NA |
| 31 | 2 | 378569 | NA | 2.75 | 360 | NA |
| 1 | 2 | 343900 | 20210407 | 3.125 | 360 | NA |
| 1 | 2 | 548250 | NA | 2.875 | 360 | NA |
| 31 | 2 | 399500 | 20210217 | 2.99 | 360 | NA |
| 1 | 2 | 594000 | 20210201 | 2.875 | 360 | NA |
| 1 | 2 | 536000 | NA | 2.875 | 360 | NA |
| 1 | 2 | 548250 | 20210122 | 2.5 | 360 | NA |
| 31 | 2 | 453000 | 20201102 | 2.375 | 180 | NA |
| 31 | 2 | 384295.84 | NA | 2.625 | 360 | NA |
| 31 | 2 | 340000 | 20210816 | 3.35 | 120 | NA |
| 1 | 2 | 249775 | NA | 3.75 | 360 | NA |
| 1 | 2 | 415200 | NA | 3.125 | 360 | NA |
| 32 | 2 | 548250 | 20210405 | 3.99 | 360 | NA |
| 31 | 2 | 497000 | 20211026 | 2.625 | 360 | NA |
| 1 | 2 | 528000 | NA | 3 | 360 | NA |
| 31 | 2 | 480071 | 20210820 | 2.125 | 360 | NA |
| 1 | 2 | 135230 | 20210529 | 3.5 | 360 | NA |
| 1 | 2 | 274928 | NA | 3.125 | 360 | NA |
| 1 | 2 | 254308 | NA | 2.75 | 360 | NA |
| 1 | 2 | 189504 | NA | 3.125 | 360 | NA |
| 1 | 2 | 191703.56 | NA | 4.5 | 360 | NA |
| 1 | 2 | 148733.13 | NA | 3 | 360 | NA |
| 1 | 2 | 223000 | NA | 3.125 | 360 | NA |
| 1 | 2 | 152192 | NA | 2.625 | 360 | NA |
| 1 | 2 | 132606.53 | NA | 3.5 | 360 | NA |
| 1 | 2 | 171363.75 | NA | 3.625 | 360 | NA |
| 1 | 2 | 264588.85 | NA | 2.625 | 360 | NA |


| 31 | 2 | 129100 | 20210510 | 2.375 | 180 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 185100 | 20210127 | 2.625 | 180 | NA |
| 32 | 2 | 182500 | 20210123 | 2.875 | 360 | NA |
| 31 | 2 | 114300 | 20200923 | 3 | 180 | NA |
| 1 | 2 | 98188 | 20210724 | NA | 360 | NA |
| 31 | 1 | 15000 | 20210426 | NA | 360 | NA |
| 31 | 2 | 133000 | 20210511 | NA | 180 | NA |
| 31 | 2 | 130000 | 20210305 | 2.625 | 180 | NA |
| 1 | 2 | 407200 | 20200928 | 2.875 | 360 | NA |
| 31 | 2 | 447310 | 20210707 | NA | 60 | NA |
| 31 | 1 | 213818 | 20211012 | 3.65 | 360 | NA |
| 31 | 2 | 246000 | NA | 2.75 | 240 | NA |
| 32 | 2 | 165000 | NA | 2.75 | 240 | NA |
| 31 | 2 | 445000 | 20201111 | 2.99 | 360 | NA |
| 31 | 2 | 220000 | 20210326 | 3.99 | 360 | NA |
| 31 | 2 | 445000 | 20210729 | 3.4 | 36 | NA |
| 2 | 2 | 50000 | 20210330 | 4.35 | 360 | NA |
| 31 | 1 | 84747 | 20210313 | 3.45 | 360 | NA |
| 31 | 2 | 181000 | 20210312 | 3.09 | 180 | NA |
| 1 | 2 | 325193 | NA | 2.5 | 360 | NA |
| 1 | 2 | 281250 | 20210509 | 2.875 | 360 | NA |
| 31 | 2 | 130000 | 20210420 | 2.99 | 180 | NA |
| 1 | 2 | 275000 | 20210225 | NA | 360 | NA |
| 1 | 2 | 170724.96 | NA | 3.375 | 360 | NA |
| 1 | 2 | 169159 | NA | 3.125 | 360 | NA |
| 31 | 2 | 170102 | 20210628 | NA | 180 | NA |
| 1 | 2 | 316807.48 | NA | 3.75 | 360 | NA |
| 31 | 2 | 97700 | 20210522 | 2.59 | 120 | NA |
| 32 | 2 | 300000 | 20210825 | NA | 360 | NA |
| 31 | 2 | 127500 | 20201113 | 2.875 | 360 | NA |
| 1 | 2 | 193714.2 | NA | 3.875 | 360 | NA |
| 1 | 2 | 229890 | NA | 3.375 | 360 | NA |
| 31 | 2 | 121000 | 20200811 | 2.5 | 180 | NA |
| 31 | 2 | 212000 | 20210920 | NA | 360 | NA |


| 2 | 1 | 100000 | 20211112 | NA | 360 | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31 | 2 | 152000 | 20211112 | NA | 240 | NA |
| 1 | 2 | 155432.86 | NA | 4.625 | 360 | NA |
| 32 | 2 | 337500 | 20201223 | NA | 360 | NA |
| 2 | 1 | 50000 | 20210119 | NA | 360 | NA |
| 2 | 1 | 50000 | 20210301 | NA | 360 | NA |
| 31 | 2 | 232000 | 20210119 | 3 | 180 | NA |
| 32 | 2 | 288137.27 | NA | 4.625 | 360 | NA |
| 1 | 2 | 980000 | 20210610 | 2.97 | 61 | NA |
| 32 | 2 | 150000 | 20210927 | NA | 360 | NA |
| 32 | 2 | 184000 | 20210908 | 3.625 | 360 | NA |
| 31 | 2 | 266500 | 20210715 | 2.99 | 360 | NA |
| 31 | 2 | 125000 | 20201123 | 3.125 | 240 | NA |
| 1 | 2 | 460000 | NA | 2.75 | 360 | NA |
| 1 | 2 | 230000 | 20210309 | 2.25 | 180 | NA |
| 1 | 2 | 566100 | 20210216 | NA | 360 | NA |
| 1 | 2 | 520000 | NA | 3.125 | 360 | NA |
| 1 | 2 | 375500 | 20210214 | 2.625 | 360 | NA |
| 1 | 2 | 475250.88 | NA | 3.5 | 360 | NA |
| 1 | 2 | 522975 | NA | 2.75 | 360 | NA |
| 1 | 2 | 397500 | NA | 2.875 | 360 | NA |
| 2 | 1 | 121227 | 20211117 | 4.15 | 360 | NA |
| 31 | 2 | 393000 | NA | 2.625 | 360 | NA |
| 31 | 2 | 1049683 | 20201028 | 3.625 | 360 | NA |
| 1 | 2 | 532982.23 | NA | 2.99 | 360 | NA |
| 1 | 2 | 510000 | 20211025 | 2.625 | 360 | NA |
| 31 | 2 | 500500 | 20210810 | 3.125 | 360 | NA |
| 1 | 2 | 268122.37 | NA | 3.5 | 360 | NA |
| 31 | 2 | 100000 | 20210504 | 2.625 | 180 | NA |
| 1 | 2 | 246533.12 | NA | 3.75 | 360 | NA |
| 1 | 2 | 193216.85 | NA | 2.625 | 360 | NA |
| 31 | 2 | 59000 | 20211014 | 2.75 | 180 | NA |
| 1 | 2 | 399200 | NA | 3.125 | 360 | NA |
| 31 | 2 | 519039.67 | NA | 2.75 | 360 | NA |


| 1 | 2 | 492300 | NA |  | 3 | 360 |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 1 | 2 | NA |  |  |  |  |


| LR_LIEN_STATU | LR_PROPERTY_VALU | LR_CLTV | LR_DENIAL_REASON | LR_DENIAL_REASON: | LR_DENIAL_REASON | LR_DENIAL_REASON |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2665000 | 75.05 | 10 |  | . |  |
| 1 | 315000 | NA | 10 |  |  |  |
| 1 | 400000 | 55.75 | 10 |  |  |  |
| 1 | 340000 | 66.76 | 10 |  |  |  |
| 1 | NA | NA | 3 | 9 |  |  |
| 1 | 355000 | NA | 10 |  |  |  |
| 1 | 266000 | NA | 10 |  |  |  |
| 1 | NA | NA | 3 |  |  |  |
| 1 | 155000 | 80 | 10 |  |  |  |
| 1 | 275500 | NA | 10 |  |  |  |
| 1 | 368500 | 95 | 10 |  |  |  |
| 1 | 145000 | NA | 10 |  |  |  |
| 1 | 248000 | NA | 10 |  |  |  |
| 2 | NA | NA | 4 |  |  |  |
| 1 | 182500 | NA | 10 |  |  |  |
| 1 | 114000 | NA | 10 |  |  |  |
| 1 | 210000 | NA | 10 |  |  |  |
| 1 | 400000 | NA | 10 |  | . |  |
| 1 | 175000 | NA | 10 |  |  |  |
| 1 | 133000 | NA | 10 |  |  |  |
| 1 | 121500 | NA | 10 |  |  |  |
| 1 | 355000 | 52.113 | 9 |  | . |  |
| 1 | 140000 | NA | 10 |  |  |  |
| 1 | 118000 | 80 | 6 |  | . |  |
| 1 | 263000 | 95 | 10 |  | . |  |





| 1 | NA |  | NA | 3 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  | 530001 | NA | 10 |  |  |  |  |
| 1 |  | 390000 | NA | 10 |  |  |  |  |
| 1 |  | 585000 | NA | 10 |  |  |  |  |
| 1 |  | 150000 | NA | 10 |  |  |  |  |
| 1 |  | 760000 | 9.12 | 10 |  |  |  |  |
| 1 |  | 450000 | 79.56 | 10 |  |  |  |  |
| 1 |  | 580000 | NA | 10 |  |  |  |  |
| 1 |  | 900000 | 49.11 | 6 |  |  |  |  |
| 1 |  | 189000 | NA | 10 |  |  |  |  |
| 1 |  | 760000 | NA | 10 |  |  |  |  |
| 1 |  | 162000 | 61.73 | 10 |  |  |  |  |
| 2 |  | 300000 | 48.233 | 3 |  |  |  |  |
| 1 | NA |  | NA | 4 |  |  |  |  |
| 1 |  | 215000 | 80 | 10 |  |  |  |  |
| 1 |  | 165000 | NA | 10 |  |  |  |  |
| 1 |  | 190000 | NA | 10 |  |  |  |  |
| 1 |  | 220000 | NA | 10 |  |  |  |  |
| 1 |  | 150000 | NA | 10 |  |  |  |  |
| 1 |  | 905000 | 69.06 | 4 |  |  |  |  |
| 1 |  | 176000 | 69.6 | 10 |  |  |  |  |
| 1 |  | 160000 | 79.38 | 4 |  |  |  |  |
| 1 |  | 135000 | 65.59 | 10 |  |  |  |  |
| 1 |  | 200000 | 73.01 | 10 |  |  |  |  |
| 1 |  | 106200 | NA | 10 |  |  |  |  |
| 1 |  | 116000 | NA | 10 |  |  |  |  |
| 1 |  | 300000 | 54.83 | 10 |  |  |  |  |
| 1 |  | 195000 | 91.79 | 10 |  |  |  |  |
| 1 |  | 195000 | NA | 10 |  |  |  |  |
| 1 |  | 260000 | 88.46 | 10 |  |  |  |  |
| 1 |  | 175000 | NA | 10 |  |  |  |  |
| 1 |  | 126805 | NA | 10 |  |  |  |  |
| 1 |  | 140000 | 75.632 | 10 |  |  |  |  |


| 1 | NA |  | NA | 1 | 7 | , |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  | 122000 | 95 | 10 |  |  |  |  |
| 1 |  | 130000 | NA | 10 |  |  |  |  |
| 1 |  | 160000 | 70.69 | 10 |  |  |  |  |
| 1 |  | 234000 | 80 | 10 |  |  |  |  |
| 1 |  | 685000 | NA | 10 |  |  |  |  |
| 1 |  | 324900 | NA | 10 |  |  |  |  |
| 1 |  | 226000 | 72.47 | 10 |  |  |  |  |
| 2 | NA |  | NA | 4 |  |  |  |  |
| 1 |  | 800000 | NA | 10 |  |  |  |  |
| 1 |  | 646000 | 41.8 | 1 | 6 |  |  |  |
| 2 |  | 289000 | 100.219 | 4 |  |  |  |  |
| 1 |  | 217000 | 68.43 | 10 |  |  |  |  |
| 1 |  | 383000 | 71.28 | 10 |  |  |  |  |
| 1 |  | 829000 | NA | 10 |  |  |  |  |
| 1 |  | 489000 | NA | 10 |  |  |  |  |
| 1 |  | 700000 | 67.84 | 10 |  |  |  |  |
| 1 |  | 715000 | 13.986 | 10 |  |  |  |  |
| 1 |  | 600000 | NA | 10 |  |  |  |  |
| 1 |  | 139000 | NA | 10 |  |  |  |  |
| 1 |  | 190000 | NA | 10 |  |  |  |  |
| 1 |  | 260000 | NA | 10 |  |  |  |  |
| 1 |  | 280000 | 80 | 10 |  |  |  |  |
| 2 |  | 865000 | 80 | 10 |  |  |  |  |
| 1 |  | 560000 | NA | 10 |  |  |  |  |
| 1 |  | 1123000 | 80 | 10 |  |  |  |  |
| 1 |  | 165000 | NA | 10 |  |  |  |  |
| 1 |  | 1365000 | NA | 10 |  |  |  |  |
| 1 |  | 695000 | NA | 10 |  |  |  |  |
| 1 |  | 460000 | 51.888 | 10 |  |  |  |  |
| 1 |  | 185500 | NA | 10 |  |  |  |  |
| 1 | NA |  | NA | 1 |  |  |  |  |
| 2 | NA |  | NA | 1 |  |  |  |  |








| 1 | 463000 | NA | 10 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1275000 | 65.88 | 10 |  |  |  |
| 1 | 274000 | NA | 10 |  |  |  |
| 1 | 255000 | NA | 10 |  |  |  |
| 1 | 1086000 | NA | 10 |  |  |  |
| 1 | 770000 | NA | 10 |  |  |  |
| 1 | 615000 | 74.8 | 10 |  |  |  |
| 1 | 320000 | NA | 10 |  |  |  |
| 1 | 400000 | 25 | 4 |  |  |  |
| 1 | 220000 | 75.23 | 10 |  |  |  |
| 1 | 625000 | NA | 10 |  |  |  |
| 1 | 436000 | 64.45 | 10 |  |  |  |
| 1 | 277500 | NA | 10 |  |  |  |
| 1 | 770000 | NA | 10 |  |  |  |
| 2 |  | NA | 4 |  |  |  |
| 1 | 785000 | NA | 10 |  |  |  |
| 1 | 590000 | NA | 10 |  |  |  |
| 1 | 195000 | NA | 10 |  |  |  |
| 1 | 2100000 | 66.38 | 10 |  |  |  |
| 1 | 910000 | NA | 10 |  |  |  |
| 1 | 276000 | NA | 10 |  |  |  |
| 1 | 894000 | NA | 10 |  |  |  |
| 1 | 1675000 | 62.69 | 10 |  |  |  |
| 1 | 790000 | 41.139 | 4 |  |  |  |
| 1 | 1325000 | 62.26 | 10 |  |  |  |
| 1 | 725000 | 34.483 | 4 |  |  |  |
| 1 | 999999 | NA | 10 |  |  |  |
| 1 | 430000 | NA | 10 |  |  |  |
| 1 | 1600000 | 53.75 | 1 | 9. |  |  |
| 1 | 790000 | 41.13 | 1 |  |  |  |
| 1 | 258000 | NA | 10 |  |  |  |
| 1 | 875000 | 69 | 10 |  |  |  |
| 1 | 635000 | 89.76 | 10 |  |  |  |


| 1 | 860000 | NA | 10 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 802000 | NA | 10 |  |  | . |
| 1 | 525000 | NA | 10 |  |  |  |
| 1 | 650000 | 48.6 | 10 |  |  |  |
| 1 | 805000 | NA | 10 |  |  |  |
| 1 | 585000 | NA | 10 |  |  |  |
| 1 | 773000 | NA | 10 |  |  |  |
| 1 | 400000 | 45 | 1 |  |  |  |
| 1 | 535000 | NA | 10 |  |  |  |
| 1 | 1550000 | 61.94 | 10 |  |  |  |
| 1 | 520000 | 95 | 10 |  |  |  |
| 1 | 701000 | NA | 10 |  |  |  |
| 1 | 450000 | NA | 10 |  |  |  |
| 1 | 685000 | NA | 10 |  |  |  |
| 1 | 536000 | 80 | 10 |  |  |  |
| 1 | 1065000 | NA | 10 |  |  |  |
| 1 | 860000 | NA | 10 |  |  |  |
| 1 | 522000 | 80 | 10 |  |  |  |
| 1 | 1075000 | 77.4 | 1 | 6 | 6 |  |
| 2 | 975000 | 69.99 | 10 |  |  |  |
| 1 | 625000 | NA | 10 |  |  |  |
| 1 | 975000 | 61.74 | 10 |  |  |  |
| 1 | 1092000 | 85.49 | 10 |  |  |  |
| 1 | 508555 | NA | 10 |  |  |  |
| 1 | 765000 | 53.63 | 4 | 6 |  |  |
| 1 | 715000 | NA | 10 |  |  |  |
| 1 | 720000 | NA | 10 |  |  |  |
| 2 | 1100000 | 80 | 10 |  |  |  |
| 1 | 700000 | 85 | 10 |  |  |  |
| 1 | 1262588 | 6.336 | 4 |  |  |  |
| 1 | 312000 | NA | 10 |  |  |  |
| 1 | 1250000 | NA | 10 |  |  |  |
| 1 | 1620000 | 80 | 10 |  |  |  |






| 1 | 280000 | 71.88 | 10 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 300000 | 48.93 | 10 |  |  | . |
| 1 | 195000 | 90 | 10 |  |  |  |
| 1 | 120500 | NA | 10 |  |  |  |
| 1 | 360000 | 41.67 | 10 |  |  |  |
| 1 | 145000 | NA | 10 |  |  | . |
| 1 | 219900 | NA | 10 |  |  |  |
| 1 | 200000 | NA | 10 |  |  | , |
| 1 | 405000 | 95 | 10 |  |  |  |
| 1 | 510000 | NA | 10 |  |  |  |
| 2 | 355000 | 80 | 10 |  |  |  |
| 1 | 592500 | NA | 10 |  |  |  |
| 1 | 550000 | NA | 10 |  |  |  |
| 1 | 405000 | 80 | 3 | 6 | 69 |  |
| 1 | 2250000 | 76.5 | 10 |  |  | . |
| 1 | 345000 | NA | 10 |  |  |  |
| 1 | 208000 | 68.56 | 10 |  |  |  |
| 1 | 2570386 | 75 | 10 |  |  |  |
| 1 | 278000 | NA | 10 |  |  |  |
| 1 | 287000 | NA | 10 |  |  |  |
| 1 | 610000 | NA | 10 |  |  |  |
| 1 | 195000 | 66.7 | 10 |  |  |  |
| 1 | 193000 | 75.13 | 1 | 4 | 4 |  |
| 1 | 328000 | 82.3 | 10 |  |  |  |
| 1 | 1710000 | 40.83 | 10 |  |  |  |
| 1 | 215000 | NA | 10 |  |  |  |
| 1 | 255000 | 80 | 10 |  |  |  |
| 1 | 215000 | NA | 10 |  |  |  |
| 1 | 209000 | NA | 10 |  |  |  |
| 1 | 187000 | NA | 10 |  |  |  |
| 1 | 180000 | 66.67 | 10 |  |  |  |
| 1 | 160000 | NA | 10 |  |  |  |
| 1 | 175000 | NA | 10 |  |  |  |



| 1 | 550000 | NA | 10 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1250000 | NA | 10 |  |  |  |
| 1 | 1005000 | NA | 10 |  |  |  |
| 1 | 400000 | NA | 10 |  |  |  |
| 1 | 950000 | 48.89 | 10 |  |  |  |
| 1 | 840000 | 90 | 10 |  |  |  |
| 1 | 1230000 | NA | 10 |  |  |  |
| 1 | 708000 | 83.76 | 10 |  |  |  |
| 1 | 511000 | NA | 10 |  |  |  |
| 1 | 500000 | NA | 10 |  |  |  |
| 1 | 601000 | 75 | 10 |  |  |  |
| 1 | 1000000 | 70 | 10 |  |  |  |
| 1 | 730000 | 85 | 10 |  |  |  |
| 1 | 537500 | NA | 10 |  |  |  |
| 1 | 595000 | 54.2 | 10 |  |  |  |
| 1 | 737500 | 74.34 | 10 |  |  |  |
| 1 | 675000 | 80 | 10 |  |  |  |
| 1 | 298000 | 74.5 | 10 |  |  |  |
| 1 | 1049000 | 80 | 10 |  |  |  |
| 1 | 899000 | 90 | 10 |  |  |  |
| 1 | 1375000 | NA | 10 |  |  |  |
| 1 | 360000 | 77.22 | 10 |  |  |  |
| 1 | 1235000 | NA | 10 |  |  |  |
| 1 | 2200000 | 39.32 | 10 |  |  |  |
| 1 | 675000 | NA | 10 |  |  |  |
| 1 | 460000 | NA | 10 |  |  |  |
| 1 | 1740000 | 36.32 | 5 |  |  |  |
| 1 | 343000 | NA | 10 |  |  |  |
| 1 | 332000 | 80 | 10 |  |  |  |
| 1 | 1330000 | 80 | 10 |  |  |  |
| 1 | 1154000 | NA | 10 |  |  |  |
| 1 | 1350000 | 58.41 | 10 |  |  |  |
| 1 | 1907000 | NA | 10 |  |  |  |


| 1 | 485000 | 70.52 | 10. |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 205900 | NA | 10. |  |  |  |
| 1 | 515000 | 95 | 10. |  |  |  |
| 1 | 680000 | 67.42 | 10. |  |  |  |
| 1 | 935000 | 80 | 10. |  |  |  |
| 1 | 3265926 | 53.58 | 4. |  |  |  |
| 1 | 771150 | 85 | 10. |  |  |  |
| 1 | 430000 | NA | 10. |  |  |  |
| 1 | 360000 | 44.44 | 10. |  |  |  |
| 1 | 1350000 | 55.56 | 10. |  |  |  |
| 1 | 935000 | 25.64 | 10. |  |  |  |
| 1 | 550000 | 90 | 10. |  |  |  |
| 1 | 910000 | 65.8 | 10 |  |  |  |
| 1 | 972000 | 87.79 | 10. |  |  |  |
| 2 | 1800000 | 89.84 | 3. |  |  |  |
| 1 | 590000 | NA | 10. |  |  |  |
| 2 | NA | NA | 6 |  |  |  |
| 1 | 2053000 | 78.77 | 3 |  |  |  |
| 1 | 805000 | 80 | 10. |  |  |  |
| 1 | 380000 | 42.63 | 10. |  |  |  |
| 1 | 549900 | 90 | 10. |  |  |  |
| 1 | 825000 | 80 | 10 |  |  |  |
| 1 | 555000 | 75 | 10. |  |  |  |
| 1 | NA | NA | 9 | 1 |  |  |
| 1 | 240000 | 86.25 | 10. |  |  |  |
| 1 | 315000 | 90.48 | 10. |  |  |  |
| 1 | 400000 | 68.09 | 10. |  |  |  |
| 1 | 450000 | 76.27 | 10 |  |  |  |
| 1 | 780000 | NA | 10. |  |  |  |
| 1 | 250000 | 80 | 9 |  |  |  |
| 1 | 220000 | 71.36 | 10. |  |  |  |
| 1 | 405000 | NA | 10. |  |  |  |
| 1 | 110000 | 75 | 10. |  |  |  |


| 1 | 680000 | 81.06 | 10 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 945000 | 78.94 | 10 |  |  |  |
| 1 | 175000 | NA | 10 |  |  |  |
| 1 | 620000 | NA | 10 |  |  |  |
| 1 | 242500 | NA | 10 |  |  |  |
| 1 | 428600 | NA | 10 |  |  |  |
| 1 | 450000 | 80 | 10 |  |  |  |
| 1 | 400000 | 75 | 10 |  |  |  |
| 1 | 445000 | NA | 10 |  |  |  |
| 2 | 975000 | 79.96 | 10 |  |  |  |
| 1 | 340000 | 48.53 | 10 |  |  |  |
| 1 | 464500 | 80 | 10 |  |  |  |
| 1 | 750000 | 79.73 | 10 |  |  |  |
| 1 | 850000 | 55.41 | 10 |  |  |  |
| 1 | 542000 | 74.83 | 10 |  |  |  |
| 1 | 625000 | NA | 10 |  |  |  |
| 1 | 475000 | NA | 10 |  |  |  |
| 1 | 595000 | 67.23 | 10 |  |  |  |
| 1 | 325000 | 75 | 10 |  |  |  |
| 1 | 475000 | NA | 10 |  |  |  |
| 1 | 247000 | 90 | 10 |  |  |  |
| 1 | 138000 | 75 | 10 |  |  |  |
| 1 | 140000 | NA | 10 |  |  |  |
| 1 | 564000 | 73.58 | 10 |  |  |  |
| 2 | 400000 | 84.906 | 10 |  |  |  |
| 1 | 240000 | 80 | 10 |  |  |  |
| 1 | 575000 | 90 | 10 |  |  |  |
| 1 | 4700000 | 80 | 10 |  |  |  |
| 1 | 690000 | NA | 10 |  |  |  |
| 1 | 520000 | 38.17 | 1. |  |  |  |
| 1 | 935000 | 77.37 | 10 |  |  |  |
| 1 | 282000 | 95 | 10 |  |  | . |
| 1 | 190000 | 74.74 | 10 |  |  |  |



| 1 | 400000 | 73 | 10 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1210000 | 85 | 10 |  |  |  |
| 1 | 705000 | NA | 10 |  |  |  |
| 1 | 550000 | NA | 10 |  |  |  |
| 2 | 790000 | 89.99 | 10 |  |  |  |
| 2 | 2000000 | 97.413 | 4 |  |  |  |
| 1 | 1400000 | 79.89 | 10 |  |  |  |
| 1 | 545000 | 80 | 10 |  |  |  |
| 1 | 2371000 | 70 | 10 |  |  |  |
| 1 | 325000 | 75 | 10 |  |  |  |
| 1 | 475000 | NA | 10 |  |  |  |
| 1 | 840000 | 80 | 10 |  |  |  |
| 1 | 302500 | 90 | 10 |  |  |  |
| 1 | 750000 | 28.8 | 10 |  |  |  |
| 1 | 800000 | 68.53 | 10 |  |  |  |
| 2 | 1175000 | 79.99 | 10 |  |  |  |
| 1 | 522500 | 80 | 10 |  |  |  |
| 1 | 1200000 | 74.52 | 10 |  |  |  |
| 1 | 860000 | 75 | 10 |  |  |  |
| 1 |  | NA | 9 | 1 | 1 |  |
| 1 | 548750 | 75 | 10 |  |  |  |
| 1 | 815000 | NA | 10 |  |  |  |
| 1 | 910000 | 63.74 | 10 |  |  |  |
| 1 | 715000 | 65 | 10 |  |  |  |
| 1 | 1251000 | 80 | 10 |  |  |  |
| 1 | 588000 | NA | 10 |  |  |  |
| 1 | 395000 | NA | 10 |  |  |  |
| 1 | 400000 | NA | 10 |  |  |  |
| 1 | 1350000 | 66.67 | 10 |  |  |  |
| 1 | 1815000 | NA | 10 |  |  |  |
| 1 | 798000 | 90 | 10 |  |  |  |
| 1 | 400000 | 86.63 | 10 |  |  |  |
| 1 | 487500 | NA | 10 |  |  |  |


| 1 | 335000 | 80 | 10. |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 660000 | 77.73 | 10. |  |  |  |
| 1 | 465000 | NA | 10. |  |  |  |
| 1 | 450000 | 54.4 | 10. |  |  |  |
| 1 | 332235 | NA | 10. |  |  |  |
| 1 | 657500 | NA | 10. |  |  |  |
| 1 | 492000 | 86.8 | 10. |  |  |  |
| 1 | 3400000 | 44.12 | 10. |  |  |  |
| 1 | 530000 | NA | 10. |  |  |  |
| 2 | 1775000 | 57.106 | 1. |  |  |  |
| 1 | 625000 | NA | 10. |  |  |  |
| 1 | 340000 | 57.06 | 10. |  |  |  |
| 2 | 660000 | 84.99 | 10. |  |  |  |
| 1 | 1261000 | 39.65 | 10. |  |  |  |
| 1 | 1500000 | 80 | 10. |  |  |  |
| 1 | 5400000 | 70 | 10. |  |  |  |
| 1 | 1900000 | 66.01 | 10. |  |  |  |
| 1 | 871000 | 56.26 | 10. |  |  |  |
| 1 | 1615000 | NA | 10. |  |  |  |
| 1 | 637000 | 63.89 | 10. |  |  |  |
| 1 | 605000 | 90 | 10. |  |  |  |
| 1 | 1150000 | 75 | 10. |  |  |  |
| 1 | 326750 | NA | 10. |  |  |  |
| 1 | 1195000 | 80 | 10. |  |  |  |
| 1 | 3520000 | 58.73 | 10. |  |  |  |
| 1 | 400000 | 77 | 10. |  |  |  |
| 1 | 3120000 | 48.08 | 10. |  |  |  |
| 1 | 495000 | NA | 10. |  |  |  |
| 1 | 1540000 | 72.92 | 10. |  |  |  |
| 1 | 1530000 | 73.46 | 10. |  |  |  |
| 1 | 367000 | NA | 10. |  |  |  |
| 1 | 2800000 | 57.14 | 10. |  |  |  |
| 1 | 1650000 | 80 | 10. |  |  |  |


| 2 | 980000 | 89.996 | 10 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 475000 | 79.3 | 10 |  |  |  |
| 2 | 1608000 | 80 | 10 |  |  |  |
| 1 | 1350000 | 90 | 10 |  |  |  |
| 1 | 2450000 | 80 | 10 |  |  |  |
| 1 | 510000 | NA | 10 |  |  |  |
| 1 | 2035000 | 80 | 10 |  |  |  |
| 1 | 162000 | NA | 10 |  |  |  |
| 1 | 1275000 | 75 | 10 |  |  |  |
| 1 | 268900 | NA | 10 |  |  |  |
| 1 | 1800000 | NA | 10 |  |  |  |
| 1 | 350000 | 74.57 | 10 |  |  |  |
| 1 | 270000 | 67.73 | 10 |  |  |  |
| 1 | 202000 | NA | 10 |  |  |  |
| 1 | 1770000 | 43.28 | 6 |  |  |  |
| 1 | 231750 | NA | 10 |  |  |  |
| 1 | 1770000 | 43.11 | 1 |  |  |  |
| 1 | 460000 | NA | 10 |  |  |  |
| 1 | 1825000 | NA | 10 |  |  |  |
| 1 | 1500000 | 50 | 1 |  |  |  |
| 1 | 470000 | NA | 10 |  |  |  |
| 1 | 570000 | NA | 10 |  |  |  |
| 1 | 1543000 | 46.36 | 10 |  |  |  |
| 1 | 1575000 | 76.51 | 10 |  |  |  |
| 1 | 615000 | 80 | 10 |  |  |  |
| 1 | 775000 | 61.81 | 10 |  |  |  |
| 1 | 1997000 | NA | 10 |  |  |  |
| 1 | 1500000 | 75.73 | 10 |  |  |  |
| 1 | 1380000 | 68.1 | 10 |  |  |  |
| 1 | 1050000 | NA | 10 |  |  |  |
| 1 | 756000 | 79.89 | 10 |  |  |  |
| 1 | 701000 | 80 | 10 |  |  |  |
| 1 | 6500000 | 69.23 | 10 |  |  |  |
| 1 | 3400000 | 74.44 | 4 |  |  |  |


| 1 | 675000 | NA | 10 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | 700000 | 45.714 | 1. |  |  |  |
| 1 | 3325000 | 78.95 | 10 |  |  |  |
| 1 | 488000 | NA | 10 |  |  |  |
| 2 | 980000 | 90 | 10 |  |  |  |
| 1 | 1100000 | 46 | 10 |  |  |  |
| 1 | 525000 | 80 | 10 |  |  |  |
| 1 | 762500 | NA | 10 |  |  |  |
| 1 | 1200000 | 33.33 | 10 |  |  |  |
| 1 | 1165000 | 80 | 10 |  |  |  |
| 1 | 1685000 | NA | 10 |  |  |  |
| 1 | 612000 | 82.19 | 10 |  |  |  |
| 1 | 821000 | 59.98 | 10 |  |  |  |
| 1 | 326781 | NA | 10 |  |  |  |
| 1 | 797000 | 94.1 | 10 |  |  |  |
| 1 | 1860000 | 80 | 10 |  |  |  |
| 1 | 850000 | 80 | 10 |  |  |  |
| 1 | 690000 | 49.71 | 1. |  |  |  |
| 1 | 1325000 | 60 | 10 |  |  |  |
| 1 | 536000 | NA | 10 |  |  |  |
| 1 | 200000 | NA | 10 |  |  |  |
| 1 | 880000 | 73.59 | 10 |  |  |  |
| 1 | 651000 | 75.93 | 10 |  |  |  |
| 2 | 1300000 | 80 | 10 |  |  |  |
| 1 | 1300000 | 51.27 | 10 |  |  |  |
| 1 | 1468000 | 52.45 | 10 |  |  |  |
| 1 | 275000 | 74.64 | 10 |  |  |  |
| 1 | 1375000 | 51.53 | 10 |  |  |  |
| 1 | 315000 | 85 | 1 |  |  |  |
| 1 | 180000 | NA | 10 |  |  |  |
| 1 | 265000 | 49.06 | 10 |  |  |  |
| 1 | 275500 | NA | 10 |  |  |  |
| 1 | 285000 | 80 | 10 |  |  |  |
| 1 | 275000 | 40.55 | 10 |  |  | . |


| 1 | 220000 | NA | 10 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 171000 | NA | 10 |  |  |  |
| 1 | 189000 | NA | 10 |  |  |  |
| 1 | 255000 | 69.37 | 10 |  |  |  |
| 1 | 225000 | 64.89 | 10 |  |  |  |
| 1 | 167000 | 95 | 10 |  |  |  |
| 1 | 243000 | 80 | 10 |  |  |  |
| 1 | 320000 | NA | 10 |  |  |  |
| 1 | 220000 | 35.23 | 10 |  |  |  |
| 1 | 250000 | 49.4 | 6 |  |  |  |
| 1 | 250000 | NA | 10 |  |  |  |
| 1 | 533000 | 79.92 | 10 |  |  |  |
| 1 | 203750 | 70 | 10 |  |  |  |
| 1 | 168500 | NA | 10 |  |  |  |
| 2 | 650000 | 83.955 | 4 |  |  |  |
| 1 | 233000 | 63.519 | 10 |  |  |  |
| 1 | 1025000 | 80 | 10 |  |  |  |
| 1 | 246000 | 95 | 10 |  |  |  |
| 1 | 850000 | 80 | 10 |  |  |  |
| 1 | 248000 | 60.48 | 10 |  |  |  |
| 1 | 197000 | 84.77 | 10 |  |  |  |
| 1 | 725000 | 45.72 | 10 |  |  |  |
| 1 | 605000 | NA | 10 |  |  |  |
| 1 | 660000 | 71.36 | 10 |  |  |  |
| 1 | 260000 | NA | 10 |  |  |  |
| 1 | 1275000 | NA | 10 |  |  |  |
| 1 | 460000 | 75 | 10 |  |  |  |
| 1 | 270000 | NA | 10 |  |  |  |
| 2 | 810000 | 70.95 | 10 |  |  |  |
| 1 | 765000 | 112.42 | 4 |  |  |  |
| 1 | 239000 | 71.3 | 10 |  |  |  |
| 1 | 424000 | 76.67 | 10 |  |  | . |
| 1 | 861000 | NA | 10 |  |  |  |
| 1 | 1100000 | 107.96 | 4 |  |  |  |




| 1 | 289000 | NA | 10 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 545000 | 85.32 | 10 |  |  |  |
| 1 | 320000 | NA | 10 |  |  |  |
| 1 | 1400000 | 80 | 10 |  |  |  |
| 1 | 1347000 | 30.8 | 10 |  |  |  |
| 1 | 1400000 | 64.14 | 7 |  |  |  |
| 1 | 300000 | 57.85 | 10 |  |  |  |
| 1 | 700000 | 70.71 | 10 |  |  |  |
| 1 | 715000 | 80 | 10 |  |  |  |
| 2 | 800000 | 29.506 | 3 |  |  |  |
| 1 | 315000 | 79.37 | 1 |  |  |  |
| 1 | 313000 | 75 | 10 |  |  |  |
| 1 | 292500 | NA | 10 |  |  |  |
| 1 | 275000 | NA | 10 |  |  |  |
| 1 | 300000 | 95 | 4 |  |  |  |
| 2 | 900000 | 25.778 | 3 |  |  |  |
| 1 | 315000 | 75 | 10 |  |  |  |
| 1 | 307000 | 93.81 | 4 |  |  |  |
| 1 | 330000 | 72.12 | 10 |  |  |  |
| 1 | 312500 | NA | 10 |  |  |  |
| 1 | 483000 | NA | 10 |  |  |  |
| 1 | 465000 | 59.14 | 10 |  |  |  |
| 1 | 417000 | NA | 10 |  |  |  |
| 1 | 535000 | 80 | 10 |  |  |  |
| 1 | 289000 | NA | 10 |  |  |  |
| 1 | 438000 | NA | 10 |  |  |  |
| 1 | 455000 | 68.13 | 10 |  |  |  |
| 1 | 294000 | 90 | 10 |  |  |  |
| 1 | 326750 | NA | 10 |  |  |  |
| 1 | 475000 | 80 | 10 |  |  |  |
| 1 | 535000 | NA | 10 |  |  |  |
| 1 | 600000 | NA | 10 |  |  | . |
| 1 | 310000 | NA | 10 |  |  |  |
| 1 | 274000 | 75 | 10 |  |  |  |


| 2 | 410000 | 70 | 10 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 292000 | NA | 10 |  |  |  |
| 1 | 550000 | NA | 10 |  |  |  |
| 1 | 298000 | NA | 10 |  |  |  |
| 1 | 285000 | 70.17 | 10 |  |  |  |
| 1 | 1100000 | 90 | 10 |  |  |  |
| 1 | 297500 | NA | 10 |  |  |  |
| 1 | 1200000 | 28.25 | 10 |  |  |  |
| 1 | 625000 | NA | 10 |  |  |  |
| 1 | 510000 | NA | 10 |  |  |  |
| 1 | 3836000 | 70.65 | 6 |  |  |  |
| 1 | 550000 | 58.36 | 10 |  |  |  |
| 1 | 485000 | 58.76 | 10 |  |  |  |
| 1 | 681000 | NA | 10 |  |  |  |
| 2 | 495000 | 62.403 | 10 |  |  |  |
| 1 | 1265000 | 58.95 | 10 |  |  |  |
| 1 | 610000 | 70 | 10 |  |  |  |
| 1 | 826000 | NA | 10 |  |  |  |
| 1 | 1700000 | 54.35 | 10 |  |  |  |
| 1 | 419000 | 80 | 10 |  |  |  |
| 1 | 650000 | 60 | 10 |  |  |  |
| 1 | 479900 | NA | 10 |  |  |  |
| 1 | 840000 | 75.73 | 10 |  |  |  |
| 1 | 714000 | NA | 10 |  |  |  |
| 1 | 680000 | 80.24 | 10 |  |  |  |
| 1 | 360000 | 69.44 | 1 |  |  |  |
| 1 | 725000 | NA | 10 |  |  |  |
| 1 | 564900 | NA | 10 |  |  |  |
| 1 | 435000 | NA | 10 |  |  |  |
| 1 | 465000 | 95 | 10 |  |  |  |
| 1 | 681217 | 89.92 | 10 |  |  |  |
| 1 | 590000 | 76.95 | 10 |  |  |  |
| 1 | 680000 | NA | 10 |  |  |  |
| 1 | 750000 | NA | 10 |  |  | . |





| 1 |  | 330000 | NA | 10 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | NA |  | NA | 3 |  |  |  |  |
| 2 |  | 340000 | 119.064 | 4 |  |  |  |  |
| 1 |  | 310000 | 70 | 10 |  |  |  |  |
| 1 |  | 385000 | NA | 10 |  |  |  |  |
| 1 |  | 390000 | 74.87 | 10 |  |  |  |  |
| 1 |  | 420000 | NA | 10 |  |  |  |  |
| 1 |  | 495000 | 80.61 | 1 |  |  |  |  |
| 1 |  | 525000 | NA | 10 |  |  |  |  |
| 1 |  | 400000 | 43.88 | 10 |  |  |  |  |
| 1 |  | 475000 | NA | 10 |  |  |  |  |
| 1 |  | 595000 | 58.15 | 10 |  |  |  |  |
| 1 |  | 360000 | 69.444 | 10 |  |  |  |  |
| 1 |  | 326750 | NA | 10 |  |  |  |  |
| 1 |  | 375000 | NA | 10 |  |  |  |  |
| 1 |  | 435000 | NA | 10 |  |  |  |  |
| 2 |  | 365000 | 48.023 | 10 |  |  |  |  |
| 1 |  | 349000 | 95.66 | 10 |  |  |  |  |
| 1 |  | 340000 | 59.71 | 10 |  |  |  |  |
| 1 |  | 440000 | NA | 10 |  |  |  |  |
| 1 |  | 385000 | 64.935 | 10 |  |  |  |  |
| 1 |  | 310000 | NA | 10 |  |  |  |  |
| 1 |  | 320000 | 59.38 | 10 |  |  |  |  |
| 2 |  | 330000 | 92.471 | 4 |  |  |  |  |
| 1 |  | 400000 | 76.5 | 4 |  |  |  |  |
| 1 |  | 369000 | NA | 10 |  |  |  |  |
| 1 |  | 450000 | 68 | 4 |  |  |  |  |
| 1 |  | 276000 | NA | 10 |  |  |  |  |
| 2 |  | 384000 | 63.047 | 10 |  |  |  |  |
| 1 |  | 350000 | 73.71 | 10 |  |  |  |  |
| 2 | NA |  | NA | 4 |  |  |  |  |
| 1 |  | 550000 | NA | 10 |  |  |  |  |
| 1 |  | 500200 | 79.97 | 10 |  |  |  |  |
| 1 |  | 445000 | NA | 10 |  |  |  |  |








| 1 |  | 305000 | 100.16 | 4 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  | 344000 | NA | 10 |  |  |  |
| 1 |  | 365000 | NA | 10 |  |  |  |
| 2 | NA |  | NA | 3 |  |  |  |
| 1 |  | 326000 | NA | 10 |  |  |  |
| 1 | NA |  | NA | 10 |  |  |  |
| 1 |  | 480000 | NA | 10 |  |  |  |
| 1 |  | 360000 | 80 | 10 |  |  |  |
| 2 | NA |  | NA | 4 |  |  |  |
| 1 |  | 270000 | NA | 10 |  |  |  |
| 1 |  | 352000 | NA | 10 |  |  |  |
| 1 |  | 418466 | 59.445 | 1 |  |  |  |
| 1 |  | 310000 | 66.45 | 6 |  |  |  |
| 1 |  | 660000 | 90 | 10 |  |  |  |
| 1 |  | 355000 | 41.48 | 10 |  |  |  |
| 1 |  | 759000 | 90 | 10 |  |  |  |
| 1 |  | 764000 | 85 | 10 |  |  |  |
| 1 |  | 690000 | 79.42 | 10 |  |  |  |
| 1 |  | 418000 | NA | 10 |  |  |  |
| 1 |  | 702000 | 92.59 | 4 |  |  |  |
| 2 |  | 350000 | 58.431 | 10 |  |  |  |
| 2 | NA |  | NA | 1 |  |  |  |
| 1 |  | 518000 | NA | 10 |  |  |  |
| 1 |  | 420000 | NA | 10 |  |  |  |
| 1 |  | 346000 | NA | 10 |  |  |  |
| 2 | NA |  | NA | 3 | 1 |  |  |
| 1 |  | 310000 | 75 | 5 |  |  |  |
| 1 |  | 300000 | 36.667 | 10 |  |  |  |
| 1 |  | 360000 | 73.39 | 10 |  |  |  |
| 1 |  | 454000 | NA | 10 |  |  |  |
| 2 | NA |  | NA | 4 |  |  |  |
| 1 |  | 329900 | NA | 10 |  |  |  |
| 1 |  | 342000 | NA | 10 |  |  |  |
| 2 |  | 305000 | 95.082 | 4 |  |  |  |


| 1 | 410000 | NA | 10 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 340000 | 65.44 | 10 |  |  |  |
| 1 | 410000 | NA | 10 |  |  |  |
| 1 | 290000 | NA | 10 |  |  |  |
| 1 | 360000 | 27.778 | 3 |  |  |  |
| 1 | 325000 | 95 | 10 |  |  |  |
| 1 | 400000 | 48.25 | 10 |  |  |  |
| 1 | 400000 | 60 | 10 |  |  |  |
| 1 | 330000 | NA | 10 |  |  |  |
| 1 | 158000 | 80 | 10 |  |  |  |
| 1 | 550000 | NA | 10 |  |  |  |
| 1 | 925000 | 80 | 10 |  |  |  |
| 1 | 730000 | NA | 10 |  |  |  |
| 1 | 460000 | NA | 10 |  |  |  |
| 1 | 539000 | NA | 10 |  |  |  |
| 1 | 570000 | 41.165 | 10 |  |  |  |
| 1 | 525000 | NA | 10 |  |  |  |
| 1 | 565000 | NA | 10 |  |  |  |
| 1 | 625000 | NA | 10 |  |  |  |
| 1 | 177000 | NA | 10 |  |  |  |
| 1 | 180000 | NA | 10 |  |  |  |
| 1 | 197000 | 71.066 | 1 |  |  |  |
| 1 | 152000 | NA | 10 |  |  |  |
| 1 | 110000 | NA | 10 |  |  |  |
| 1 | 482000 | 80 | 10 |  |  |  |
| 1 | 467000 | 36.4 | 10 |  |  |  |
| 1 | 515000 | NA | 10 |  |  |  |
| 1 | 460000 | NA | 10 |  |  |  |
| 1 | 275000 | 29.091 | 10 |  |  |  |
| 1 | 500000 | NA | 10 |  |  |  |
| 1 | 500000 | NA | 10 |  |  |  |
| 1 | 735000 | 80 | 10 |  |  | . |
| 1 | 570000 | NA | 10 |  |  |  |
| 1 | 706000 | 77.66 | 10 |  |  |  |



| 1 | 360000 | 60 | 10 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 580520 | 80 | 10 |  |  |  |
| 1 | 375000 | 31.467 | 10 |  |  |  |
| 1 | 1371471 | 79.99 | 10 |  |  |  |
| 1 | 152500 | NA | 10 |  |  |  |
| 2 | 375000 | 52.8 | 1 |  |  |  |
| 2 | 875000 | 79.98 | 10 |  |  |  |
| 1 | 410000 | 80 | 10 |  |  |  |
| 1 | 522000 | 49.52 | 10 |  |  |  |
| 1 | 550000 | 27.091 | 1 |  |  |  |
| 1 | 615000 | 75 | 5 |  |  |  |
| 1 | 345000 | 17.391 | 6 |  |  |  |
| 1 | 670000 | NA | 10 |  |  |  |
| 1 | 595000 | NA | 10 |  |  |  |
| 1 | 525000 | 13.33 | 10 |  |  |  |
| 1 | 650000 | 59.23 | 10 |  |  |  |
| 1 | 850000 | NA | 10 |  |  |  |
| 1 | 605000 | 45.21 | 10 |  |  |  |
| 1 | 873000 | NA | 10 |  |  |  |
| 1 | 550000 | 49.27 | 10 |  |  |  |
| 1 | 950000 | 70.29 | 10 |  |  |  |
| 1 | 875000 | 90 | 10 |  |  |  |
| 1 | 390000 | 95 | 10 |  |  |  |
| 1 | 730000 | 75.1 | 10 |  |  |  |
| 1 | 1000000 | 90 | 10 |  |  |  |
| 1 | 539000 | NA | 10 |  |  |  |
| 2 | 1040000 | 86.54 | 10 |  |  |  |
| 1 | 1775000 | 70 | 10 |  |  |  |
| 1 | 656000 | 71.8 | 10 |  |  |  |
| 1 | 480000 | NA | 10 |  |  |  |
| 1 | 340000 | 71.235 | 1 |  |  |  |
| 1 | 297000 | NA | 10 |  |  | . |
| 1 | 422500 | NA | 10 |  |  |  |
| 1 | 370000 | NA | 10 |  |  |  |




| 2 | 318000 | 76.913 | 10 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 386000 | NA | 10 |  |  |  |
| 1 | 380000 | 40.79 | 10 |  |  |  |
| 1 | 215000 | NA | 10 |  |  |  |
| 1 | 300000 | 74.33 | 10 |  |  |  |
| 1 | 275000 | 45.818 | 10 |  |  |  |
| 1 | 392500 | NA | 10 |  |  |  |
| 1 | 350000 | 84.57 | 4 | 5 |  |  |
| 1 | 315000 | 69.21 | 10 |  |  |  |
| 1 | 370000 | NA | 10 |  |  |  |
| 1 | 392000 | 76.02 | 10 |  |  |  |
| 1 | 319000 | 100.07 | 10 |  |  |  |
| 1 | 289000 | 60.554 | 10 |  |  |  |
| 1 | 500000 | NA | 10 |  |  |  |
| 1 | 360000 | 55.722 | 1 |  |  |  |
| 1 | 360000 | NA | 10 |  |  |  |
| 1 | 330000 | 20.138 | 3 |  |  |  |
| 1 | 240000 | 45 | 10 |  |  |  |
| 1 | 315000 | NA | 10 |  |  |  |
| 1 | 288000 | 60.322 | 10 |  |  |  |
| 1 | 235000 | 45.957 | 1 |  |  |  |
| 1 | 250000 | 70 | 3 |  |  |  |
| 1 | 434000 | NA | 10 |  |  |  |
| 1 | 300000 | NA | 10 |  |  |  |
| 1 | 364000 | NA | 10 |  |  |  |
| 1 | 285000 | NA | 10 |  |  |  |
| 2 | 265000 | 79.721 | 10 |  |  |  |
| 1 | 440000 | 78.86 | 10 |  |  |  |
| 1 | 300000 | NA | 10 |  |  |  |
| 1 | 377000 | 60.743 | 10 |  |  |  |
| 1 | 285000 | NA | 10 |  |  |  |
| 2 | 307000 | 88.35 | 10 |  |  |  |
| 1 | 492500 | NA | 10 |  |  |  |
| 2 | 350000 | 52.857 | 1. |  |  | . |




| 1 | 270000 | 47.63 | 10 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 240000 | 80 | 10 |  |  |  |
| 2 | 176000 | 76.705 | 10 |  |  |  |
| 1 | 176000 | 34.091 | 10 |  |  |  |
| 1 | 240000 | 60.83 | 3 |  |  |  |
| 1 | 230000 | NA | 10 |  |  |  |
| 1 | 334000 | 64.37 | 10 |  |  |  |
| 1 | 335000 | 71.64 | 7 |  |  |  |
| 1 | 260000 | NA | 10 |  |  |  |
| 1 | 320000 | 74.38 | 4 |  |  |  |
| 1 | 262000 | 13.691 | 10 |  |  |  |
| 1 | 325000 | 59.077 | 3 |  |  |  |
| 1 | 295000 | NA | 10 |  |  |  |
| 2 | 400000 | 100.921 | 1 |  |  |  |
| 1 | 230000 | 6.043 | 9 | 1. |  |  |
| 1 | 310000 | NA | 10 |  |  |  |
| 2 |  | NA | 4 |  |  |  |
| 1 | 435000 | 90 | 10 |  |  |  |
| 1 | 290000 | NA | 10 |  |  |  |
| 1 | 430000 | NA | 10 |  |  |  |
| 1 | 345000 | NA | 10 |  |  |  |
| 1 | 265000 | NA | 10 |  |  |  |
| 1 | 235000 | 100 | 3 |  |  |  |
| 2 | 292000 | 58.498 | 10 |  |  |  |
| 1 | 241000 | 68.46 | 10 |  |  |  |
| 1 | 320000 | 72.81 | 10 |  |  |  |
| 1 | 380000 | NA | 10 |  |  |  |
| 2 | 330000 | 79.091 | 1 |  |  |  |
| 1 | 330000 | 56.364 | 1 |  |  |  |
| 1 | 381200 | NA | 10 |  |  |  |
| 1 | 407000 | NA | 10 |  |  |  |
| 1 | 470000 | 82.27 | 10 |  |  |  |
| 1 | 410000 | 88.66 | 4 |  |  |  |
| 1 | 325000 | 62.46 | 10 |  |  |  |






| 2 | 1370000 | 71.61 | 10 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 290000 | NA | 10 |  |  |  |
| 2 | 345000 | 125.797 | 4 |  |  |  |
| 1 | 328000 | NA | 10 |  |  |  |
| 1 | 210000 | NA | 10 |  |  |  |
| 1 | 179000 | 87.15 | 3 |  |  |  |
| 1 | 415000 | NA | 10 |  |  |  |
| 1 | 345000 | NA | 10 |  |  |  |
| 1 | 250000 | 13.52 | 3 |  |  |  |
| 1 | 178900 | NA | 10 |  |  |  |
| 1 | 258000 | 58.14 | 1 |  |  |  |
| 2 | 180000 | 18.614 | 10 |  |  |  |
| 1 | 155000 | 80 | 10 |  |  |  |
| 1 |  | NA | 4 |  |  |  |
| 1 | 465000 | NA | 10 |  |  |  |
| 1 | 450000 | NA | 10 |  |  |  |
| 1 | 855000 | NA | 10 |  |  |  |
| 1 | 835000 | NA | 10 |  |  |  |
| 1 | 2150000 | 80 | 10 |  |  |  |
| 1 | 1335000 | 80 | 10 |  |  |  |
| 1 | 1800000 | 74.64 | 10 |  |  |  |
| 1 | 1047000 | 75 | 10 |  |  |  |
| 1 | 486500 | NA | 10 |  |  |  |
| 2 | 1765000 | 70 | 10 |  |  |  |
| 1 | 416000 | NA | 10 |  |  |  |
| 1 | 296000 | NA | 10 |  |  |  |
| 1 | 500000 | NA | 10 |  |  |  |
| 1 | 810000 | NA | 10 |  |  |  |
| 1 | 458000 | 77.18 | 10 |  |  |  |
| 1 | 445000 | NA | 10 |  |  |  |
| 1 | 294500 | NA | 10 |  |  |  |
| 1 | 450000 | NA | 10 |  |  |  |
| 1 | 590000 | 80 | 10 |  |  |  |
| 2 | 710000 | 79.99 | 10 |  |  | . |




| 1 | 447500 | NA | 10 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 598000 | 71.91 | 10 |  |  |  |
| 1 | 740000 | 74.32 | 10 |  |  |  |
| 1 | 585000 | 80 | 10 |  |  |  |
| 1 | 727000 | NA | 10 |  |  |  |
| 1 | 1500000 | 52.07 | 10 |  |  |  |
| 1 | 630000 | NA | 10 |  |  |  |
| 1 | 300000 | NA | 10 |  |  |  |
| 1 | 520000 | 80 | 10 |  |  |  |
| 1 | 694900 | 78.86 | 10 |  |  |  |
| 1 | 525000 | NA | 10 |  |  |  |
| 1 | 505000 | NA | 10 |  |  |  |
| 1 | 735000 | 85 | 10 |  |  |  |
| 1 | 715000 | 80 | 10 |  |  |  |
| 2 | 440000 | 84.98 | 10 |  |  |  |
| 1 | 1150000 | 74.78 | 10 |  |  |  |
| 1 | 561000 | NA | 10 |  |  |  |
| 1 | 700000 | NA | 10 |  |  |  |
| 1 | 717000 | 59.97 | 10 |  |  |  |
| 1 | 725000 | NA | 10 |  |  |  |
| 1 | 600000 | NA | 10 |  |  |  |
| 1 | 655000 | 85 | 10 |  |  |  |
| 2 | 855000 | 90 | 4 |  |  |  |
| 1 | 800000 | 90 | 10 |  |  |  |
| 1 | 614000 | 80 | 10 |  |  |  |
| 2 | 593000 | 79.99 | 10 |  |  |  |
| 1 | 665000 | 90 | 10 |  |  |  |
| 1 | 430000 | NA | 10 |  |  |  |
| 1 | 700000 | NA | 10 |  |  |  |
| 1 | 408000 | NA | 10 |  |  |  |
| 1 | 1000000 | 73.67 | 10 |  |  |  |
| 1 | 797500 | 80 | 10 |  |  |  |
| 1 | 545000 | NA | 10 |  |  | . |
| 1 | 695000 | 78.89 | 10 |  |  | . |


| 1 | 535000 | 77.94 | 10 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 615000 | NA | 10 |  |  |  |
| 1 | 262500 | NA | 10 |  |  |  |
| 1 | 700000 | NA | 10 |  |  |  |
| 1 | 497500 | NA | 10 |  |  |  |
| 1 | 815000 | 5.553 | 9 |  |  |  |
| 1 | 620000 | 90 | 10 |  |  |  |
| 1 | 1200000 | NA | 10 |  |  |  |
| 1 | 1300000 | 53.77 | 10 |  |  |  |
| 1 | 292400 | NA | 10 |  |  |  |
| 1 | 1170000 | 64.27 | 10 |  |  |  |
| 1 | 695000 | NA | 10 |  |  |  |
| 1 | 425000 | NA | 10 |  |  |  |
| 1 | 892500 | 85 | 10 |  |  |  |
| 1 | 510000 | 80 | 10 |  |  |  |
| 1 | 545000 | 85 | 10 |  |  |  |
| 1 | 1250000 | 52 | 10 |  |  |  |
| 1 | 515000 | 80 | 10 |  |  |  |
| 1 | 852000 | 65.96 | 10 |  |  |  |
| 1 | 186000 | NA | 10 |  |  |  |
| 1 | 326000 | NA | 10 |  |  |  |
| 1 | 535000 | 80 | 10 |  |  |  |
| 1 | 483000 | NA | 10 |  |  |  |
| 1 | 445000 | 90 | 10 |  |  |  |
| 1 | 597000 | 98.19 | 10 |  |  |  |
| 1 | 633000 | NA | 10 |  |  |  |
| 1 | 420000 | 77.48 | 10 |  |  |  |
| 1 | 1200000 | 19.63 | 10 |  |  |  |
| 1 | 870000 | 82.87 | 10 |  |  |  |
| 1 | 520000 | 40.1 | 10 |  |  |  |
| 1 | 615000 | NA | 10 |  |  |  |
| 1 | 748500 | NA | 10 |  |  |  |
| 1 | 120000 | 81.49 | 3 |  |  |  |
| 1 | 1130000 | 75 | 10 |  |  |  |


| 1 | 1015000 | 81.38 | 10 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1425000 | 80 | 1 |  |  |  |
| 1 | 1090000 | 85 | 10 |  |  |  |
| 1 | 262000 | NA | 10 |  |  |  |
| 1 | 950000 | NA | 10 |  |  |  |
| 1 | 475000 | 95 | 10 |  |  |  |
| 2 |  | NA | 1 |  |  |  |
| 1 | 500000 | 50 | 4 |  |  |  |
| 1 | 1225000 | 55.32 | 10 |  |  |  |
| 1 | 1210000 | 73.72 | 10 |  |  |  |
| 1 | 950000 | NA | 10 |  |  |  |
| 1 | 1850000 | NA | 10 |  |  |  |
| 1 | 700000 | 32.86 | 10 |  |  |  |
| 1 | 1250000 | 54.6 | 10 |  |  |  |
| 1 | 600000 | NA | 10 |  |  |  |
| 1 | 1450000 | 75 | 10 |  |  |  |
| 1 | 870000 | 11.49 | 10 |  |  |  |
| 1 | 750000 | NA | 10 |  |  |  |
| 1 | 225000 | NA | 10 |  |  |  |
| 2 | 835000 | 70 | 10 |  |  |  |
| 1 | 747000 | 83.19 | 10 |  |  |  |
| 1 | 800000 | 75 | 10 |  |  |  |
| 1 | 625000 | NA | 10 |  |  |  |
| 1 | 600000 | NA | 10 |  |  |  |
| 1 | 565000 | NA | 10 |  |  |  |
| 1 | 890000 | 68.54 | 10 |  |  |  |
| 1 | 542500 | NA | 10 |  |  |  |
| 1 | 967000 | 70.84 | 10 |  |  |  |
| 1 | 730000 | NA | 10 |  |  |  |
| 1 | 547000 | NA | 10 |  |  |  |
| 2 | 1500000 | 81.25 | 1 |  |  |  |
| 1 | 880000 | 68.75 | 9 |  |  | . |
| 1 | 410000 | 90 | 10 |  |  |  |
| 1 | 310000 | NA | 10 |  |  |  |



| 1 | 208000 | 73.945 | 10 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 205000 | 70 | 10 |  |  |  |
| 1 | 325000 | 19.954 | 10 |  |  |  |
| 1 | 360000 | 40.278 | 10 |  |  |  |
| 1 | 325000 | 61.888 | 3 |  |  |  |
| 1 | 255000 | NA | 10 |  |  |  |
| 2 |  | NA | 4 |  |  |  |
| 1 | 300000 | 10.333 | 4 |  |  |  |
| 1 | 305000 | 67.213 | 1 |  |  |  |
| 1 | 299000 | NA | 10 |  |  |  |
| 1 | 240000 | 68.75 | 3 |  |  |  |
| 1 | 385000 | NA | 10 |  |  |  |
| 1 | 365000 | NA | 10 |  |  |  |
| 1 | 286000 | 69.868 | 3 |  |  |  |
| 1 | 190000 | NA | 10 |  |  |  |
| 1 | 245000 | 49.39 | 10 |  |  |  |
| 1 | 193000 | 59.953 | 10 |  |  |  |
| 2 | 285000 | 69.98 | 10 |  |  |  |
| 1 | 450000 | NA | 10 |  |  |  |
| 2 | 292000 | 70.548 | 10 |  |  |  |
| 1 | 360000 | 32.264 | 10 |  |  |  |
| 1 | 326000 | NA | 10 |  |  |  |
| 1 | 390000 | NA | 10 |  |  |  |
| 1 | 420000 | 55.76 | 10 |  |  |  |
| 1 | 380000 | 70 | 10 |  |  |  |
| 1 | 330000 | 50.78 | 10 |  |  |  |
| 1 | 228000 | NA | 10 |  |  |  |
| 1 | 125000 | 75 | 10 |  |  |  |
| 1 | 366000 | 40.984 | 10 |  |  |  |
| 1 | 206000 | 26.699 | 1. |  |  |  |
| 2 | 290000 | 90 | 10 |  |  |  |
| 1 | 322000 | 80 | 10 |  |  | . |
| 1 | 215000 | 14.249 | 10 |  |  |  |
| 1 | 380000 | 32.895 | 10 |  |  |  |



| 1 |  | 305000 | NA | 10 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  | 300000 | NA | 10 |  |  |  |
| 1 |  | 334000 | NA | 10 |  |  |  |
| 1 |  | 381000 | 52.493 | 10 |  |  |  |
| 1 |  | 288000 | 99.08 | 10 |  |  |  |
| 1 |  | 240000 | NA | 10 |  |  |  |
| 1 |  | 349000 | NA | 10 |  |  |  |
| 1 |  | 170000 | NA | 10 |  |  |  |
| 1 |  | 270000 | 79.63 | 3. |  |  |  |
| 1 |  | 205000 | NA | 10 |  |  |  |
| 2 |  | 227000 | NA | 3 |  |  |  |
| 1 |  | 210000 | 47.619 | 1 |  |  |  |
| 1 |  | 300000 | 26 | 4 |  |  |  |
| 1 |  | 299000 | 83.612 | 4 |  |  |  |
| 2 |  | 300000 | 24.246 | 1 |  |  |  |
| 2 |  | 321998 | 80 | 3 | 1. |  |  |
| 1 |  | 240000 | 70.833 | 10 |  |  |  |
| 1 |  | 250000 | NA | 10 |  |  |  |
| 1 |  | 253000 | NA | 10 |  |  |  |
| 1 | NA |  | NA | 4 |  |  |  |
| 1 |  | 340000 | NA | 10 |  |  |  |
| 1 |  | 100000 | 60 | 3 |  |  |  |
| 1 |  | 354000 | 76.615 | 10 |  |  |  |
| 1 |  | 359089 | 37.986 | 3 |  |  |  |
| 1 |  | 341000 | NA | 10 |  |  |  |
| 1 |  | 320000 | NA | 10 |  |  |  |
| 1 |  | 164300 | 56.299 | 1 |  |  |  |
| 1 |  | 350000 | 21.6 | 10 |  |  |  |
| 1 |  | 320000 | 15.625 | 10 |  |  |  |
| 1 |  | 255000 | 34.118 | 3 |  |  |  |
| 1 |  | 275000 | NA | 10 |  |  |  |
| 1 |  | 175000 | 45.714 | 10 |  |  |  |
| 2 |  | 222000 | 92.191 | 4 | 6. |  |  |
|  | NA |  | NA | 3 |  |  |  |






| 1 | 196000 | NA | 10 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 357000 | 63.03 | 10 |  |  |  |
| 1 | 475000 | 51.83 | 10 |  |  |  |
| 1 | 262500 | 70.1 | 10 |  |  | . |
| 1 | 280000 | 95 | 1 |  |  |  |
| 1 | 479000 | NA | 10 |  |  |  |
| 1 | 288000 | 72.4 | 10 |  |  |  |
| 1 | 370000 | NA | 10 |  |  |  |
| 1 | 280000 | 72.5 | 10 |  |  |  |
| 1 | 226900 | NA | 10 |  |  |  |
| 1 | 450000 | NA | 10 |  |  |  |
| 1 | 710000 | NA | 10 |  |  |  |
| 1 | 275000 | NA | 10 |  |  |  |
| 1 | 210000 | NA | 10 |  |  |  |
| 1 | 631050 | NA | 10 |  |  |  |
| 1 | 617000 | 80 | 10 |  |  |  |
| 1 | 264000 | 66.67 | 10 |  |  |  |
| 1 | 264000 | 59.09 | 4 |  |  |  |
| 1 | 610000 | NA | 10 |  |  |  |
| 1 | 540000 | 80 | 10 |  |  |  |
| 1 | 239900 | NA | 10 |  |  |  |
| 1 | 450000 | 62.02 | 10 |  |  |  |
| 1 | 530000 | NA | 10 |  |  |  |
| 1 | 475000 | NA | 10 |  |  |  |
| 1 | 528000 | 41.95 | 10 |  |  |  |
| 1 | 355000 | 94.37 | 10 |  |  |  |
| 1 | 215000 | 72.33 | 10 |  |  |  |
| 1 | 460000 | 87.07 | 10 |  |  |  |
| 1 | 350000 | 75 | 10 |  |  |  |
| 1 | 270000 | NA | 10 |  |  |  |
| 1 | 285000 | 77.89 | 10 |  |  |  |
| 1 | 240000 | 91.07 | 7 |  |  |  |
| 1 | 315000 | NA | 10 |  |  | . |
| 1 | 260000 | NA | 10 |  |  | . |




| 2 | NA |  | NA | 3 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  | 270000 | 35.852 | 4 |  |  |  |
| 1 |  | 425000 | 35.74 | 10 |  |  |  |
| 1 |  | 735000 | 60.14 | 10 |  |  |  |
| 1 |  | 2282552 | 38.33 | 10 |  |  |  |
| 1 |  | 400000 | 45.67 | 6 |  |  |  |
| 1 |  | 535000 | NA | 10 |  |  |  |
| 1 |  | 900000 | NA | 10 |  |  |  |
| 1 |  | 1672581 | 65 | 6 |  |  |  |
| 1 |  | 340000 | NA | 10 |  |  |  |
| 1 |  | 1472156 | 50.95 | 10 |  |  |  |
| 1 |  | 2000000 | 70 | 10 |  |  |  |
| 1 |  | 1225345 | 80 | 4 |  |  |  |
| 1 |  | 360000 | 90 | 10 |  |  |  |
| 1 |  | 738000 | NA | 10 |  |  |  |
| 2 |  | 1015000 | 80 | 10 |  |  |  |
| 2 | NA |  | NA | 4 |  |  |  |
| 1 | NA |  | NA | 3 |  |  |  |
| 1 |  | 250000 | 60.4 | 10 |  |  |  |
| 1 |  | 535000 | 75 | 10 |  |  |  |
| 1 |  | 357000 | 95 | 10 |  |  |  |
| 1 |  | 300000 | 83.33 | 1 | 6 |  |  |
| 1 |  | 950000 | 50 | 10 |  |  |  |
| 1 |  | 1810000 | 80 | 10 |  |  |  |
| 1 |  | 932000 | 70 | 10 |  |  |  |
| 1 |  | 720000 | 44.03 | 6 |  |  |  |
| 1 |  | 1625000 | 63.08 | 10 |  |  |  |
| 1 | NA |  | NA | 6 |  |  |  |
| 2 |  | 320000 | 69.99 | 10 |  |  |  |
| 1 |  | 275000 | NA | 10 |  |  |  |
| 1 |  | 745000 | 59.73 | 10 |  |  |  |
| 1 |  | 415000 | NA | 10 |  |  |  |
| 1 |  | 555000 | 80 | 10 |  |  |  |
| 1 |  | 207500 | NA | 10. |  | - |  |




| 1 | 352000 | 80 | 10 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 440000 | 59 | 10 |  |  |  |
| 1 | 625000 | NA | 10 |  |  | . |
| 1 | 575000 | 80 | 1 |  |  |  |
| 1 | 300000 | 75 | 10 |  |  |  |
| 1 | 530000 | 63.11 | 10 |  |  |  |
| 1 | 1000000 | NA | 10 |  |  |  |
| 1 | 760000 | 59.34 | 10 |  |  |  |
| 1 | 405000 | 79.09 | 10 |  |  |  |
| 2 | 405000 | 79.09 | 10 |  |  |  |
| 1 | 750000 | 60 | 6 |  |  |  |
| 2 | NA | NA | 4 |  |  |  |
| 1 | 420000 | 51.86 | 10 |  |  |  |
| 1 | 577500 | 75 | 10 |  |  |  |
| 1 | 434000 | 56.68 | 10 |  |  |  |
| 1 | 77320 | NA | 10 |  |  |  |
| 1 | 299900 | 95 | 1. |  |  |  |
| 1 | 255000 | NA | 10 |  |  |  |
| 2 | NA | NA | 3 |  |  |  |
| 1 | 299900 | 95 | 1 | 5 |  |  |
| 1 | 514000 | 80 | 10 |  |  |  |
| 1 | 625000 | NA | 10 |  |  |  |
| 1 | 98000 | 80 | 10 |  |  |  |
| 1 | 900000 | 87.15 | 10 |  |  |  |
| 1 | 450000 | NA | 10 |  |  |  |
| 1 | 235000 | NA | 10 |  |  | . |
| 1 | 279000 | 80 | 10 |  |  |  |
| 1 | 272500 | NA | 10 |  |  |  |
| 1 | 580000 | NA | 10 |  |  |  |
| 1 | 400000 | NA | 10 |  |  |  |
| 1 | 1025000 | 80 | 9 | 3 | 4 | . |
| 1 | 270000 | 83.93 | 10 |  |  | . |
| 1 | 193000 | NA | 10 |  |  |  |
| 1 | 237000 | NA | 10 |  |  |  |


| 1 |  | 177000 | NA | 10 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  | 290000 | NA | 10 |  |  |  |  |
| 1 |  | 730000 | 90 | 10 |  |  |  |  |
| 2 | NA |  | NA | 4 |  |  |  |  |
| 1 |  | 570000 | 53.51 | 10 |  |  |  |  |
| 1 |  | 480000 | 62.71 | 5 |  |  |  |  |
| 1 |  | 200000 | 53.5 | 7 |  |  |  |  |
| 1 |  | 175000 | NA | 10 |  |  |  |  |
| 1 |  | 315000 | 76.83 | 10 |  |  |  |  |
| 1 |  | 257000 | NA | 10 |  |  |  |  |
| 1 |  | 245000 | NA | 10 |  |  |  |  |
| 1 |  | 257750 | NA | 10 |  |  |  |  |
| 1 |  | 252000 | NA | 10 |  |  |  |  |
| 1 |  | 330000 | NA | 10 |  |  |  |  |
| 1 |  | 329000 | 79.41 | 10 |  |  |  |  |
| 2 |  | 270000 | 88.889 | 3 |  |  |  |  |
| 1 |  | 255000 | NA | 10 |  |  |  |  |
| 1 |  | 520000 | 55.77 | 10 |  |  |  |  |
| 1 |  | 209900 | NA | 10 |  |  |  |  |
| 2 |  | 1500000 | 69.95 | 10 |  |  |  |  |
| 1 |  | 1500000 | 69.95 | 10 |  |  |  |  |
| 1 |  | 226000 | 58.41 | 10 |  |  |  |  |
| 1 |  | 305000 | NA | 10 |  |  |  |  |
| 2 | NA |  | NA | 3 |  |  |  |  |
| 1 |  | 700000 | 68.21 | 4 |  |  |  |  |
| 1 |  | 190000 | NA | 10 |  |  |  |  |
| 2 | NA |  | NA | 1 |  |  |  |  |
| 1 |  | 399000 | NA | 10 |  |  |  |  |
| 1 |  | 380000 | 95 | 10 |  |  |  |  |
| 1 |  | 2110000 | 47.37 | 10 |  |  |  |  |
| 1 |  | 1450000 | NA | 10 |  |  |  |  |
| 2 |  | 1400000 | 81.375 | 4 |  |  |  |  |
| 1 |  | 325000 | 59.23 | 10 |  |  |  |  |
| 1 |  | 124900 | 90 | 10 |  |  |  | . |


| 1 | NA | NA | 6 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 156000 | NA | 10 |  |  |  |
| 1 | 130000 | NA | 10 |  |  | . |
| 1 | 607500 | 80 | 1 | 4 | 9 |  |
| 2 | NA | NA | 3 |  |  |  |
| 1 | 359000 | NA | 10 |  |  |  |
| 1 | 120000 | NA | 10 |  |  |  |
| 1 | 299628 | 23.362 | 9 |  |  |  |
| 1 | 289900 | 97 | 1 | 5 |  |  |
| 1 | 180000 | 80 | 10 |  |  |  |
| 1 | 1116000 | 65 | 10 |  |  |  |
| 1 | 190000 | 67.89 | 10 |  |  |  |
| 1 | 250000 | NA | 10 |  |  |  |
| 1 | 290000 | NA | 10 |  |  |  |
| 1 | 120000 | 100 | 1 |  |  |  |
| 1 | 525000 | NA | 10 |  |  |  |
| 1 | 164500 | NA | 10 |  |  |  |
| 1 | 347000 | NA | 10 |  |  |  |
| 1 | 150000 | 66.667 | 4 |  |  |  |
| 1 | 115000 | 69.565 | 1 |  |  |  |
| 1 | 385000 | NA | 10 |  |  |  |
| 1 | 288000 | 39.93 | 10 |  |  |  |
| 1 | 298000 | 56.12 | 10 |  |  |  |
| 1 | 1475000 | 56.47 | 10 |  |  |  |
| 1 | 115000 | NA | 10 |  |  |  |
| 1 | 170000 | 37.65 | 1 |  |  |  |
| 1 | 170000 | 38 | 6 |  |  |  |
| 1 | 545200 | NA | 10 |  |  |  |
| 1 | 133000 | NA | 10 |  |  |  |
| 1 | 300000 | NA | 10 |  |  |  |
| 1 | 200000 | NA | 10 |  |  |  |
| 1 | 190000 | NA | 10 |  |  |  |
| 1 | 190000 | NA | 10 |  |  |  |
| 1 | 440000 | NA | 10 |  |  |  |



| 1 |  | 120000 | 80 | 10 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  | 120000 | 81.342 | 4 |  |  |  |
| 1 |  | 400000 | 21.263 | 4 |  |  |  |
| 1 | NA |  | NA | 3 |  |  |  |
| 1 |  | 200000 | NA | 10 |  |  |  |
| 1 |  | 169900 | NA | 10 |  |  |  |
| 1 |  | 230000 | NA | 10 |  |  |  |
| 1 |  | 129900 | NA | 10 |  |  |  |
| 1 |  | 179000 | NA | 10 |  |  |  |
| 1 |  | 169000 | 97 | 10 |  |  |  |
| 2 | NA |  | NA | 3 |  |  |  |
| 1 |  | 270000 | 64.44 | 10 |  |  |  |
| 1 |  | 345000 | NA | 10 |  |  |  |
| 1 |  | 240000 | NA | 10 |  |  |  |
| 1 |  | 299900 | NA | 10 |  |  |  |
| 1 |  | 450000 | 71.11 | 10 |  |  |  |
| 2 | NA |  | NA | 4 |  |  |  |
| 1 |  | 450000 | 80 | 4 | 9 |  |  |
| 1 |  | 147000 | NA | 10 |  |  |  |
| 1 |  | 510000 | 80 | 10 |  |  |  |
| 1 |  | 185000 | NA | 10 |  |  |  |
| 1 |  | 85000 | 89.82 | 10 |  |  |  |
| 1 |  | 250000 | 74 | 1 | 4 |  |  |
| 1 |  | 230000 | 69.57 | 10 |  |  |  |
| 1 |  | 210000 | 59.52 | 10 |  |  |  |
| 1 |  | 210000 | 57.14 | 7 |  |  |  |
| 1 |  | 113000 | 97.79 | 4 |  |  |  |
| 1 |  | 390000 | NA | 10 |  |  |  |
| 1 |  | 250000 | 44.2 | 3 |  |  |  |
| 1 | NA |  | NA | 4 |  |  |  |
| 1 |  | 160000 | 95 | 10 |  |  |  |
| 1 |  | 260000 | NA | 10 |  |  |  |
| 1 |  | 290000 | 109.58 | 4 | 5 | 5 |  |
| 1 |  | 251000 | NA | 10 |  |  |  |




| 2 | NA |  | NA | 4 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  | 160000 | 93.75 | 4 |  |  |  |  |
| 1 |  | 164900 | NA | 10 |  |  |  |  |
| 1 |  | 210000 | 59.06 | 10 |  |  |  |  |
| 1 |  | 120000 | 56.25 | 10 |  |  |  |  |
| 1 |  | 370000 | 54.05 | 4 |  |  |  |  |
| 1 |  | 135000 | NA | 10 |  |  |  |  |
| 1 |  | 182000 | NA | 10 |  |  |  |  |
| 1 |  | 115000 | 70 | 10 |  |  |  |  |
| 1 |  | 185000 | NA | 10 |  |  |  |  |
| 1 |  | 240000 | NA | 10 |  |  |  |  |
| 1 |  | 220500 | NA | 10 |  |  |  |  |
| 2 | NA |  | NA | 4 |  |  |  |  |
| 1 |  | 137400 | NA | 10 |  |  |  |  |
| 1 |  | 247500 | NA | 10 |  |  |  |  |
| 1 |  | 85000 | 96.82 | 10 |  |  |  |  |
| 1 |  | 249900 | NA | 10 |  |  |  |  |
| 1 |  | 120000 | NA | 10 |  |  |  |  |
| 1 |  | 285000 | NA | 10 |  |  |  |  |
| 1 |  | 123000 | 40.256 | 3 |  |  |  |  |
| 1 |  | 175000 | 80 | 10 |  |  |  |  |
| 1 |  | 199000 | 98.19 | 10 |  |  |  |  |
| 1 |  | 254000 | NA | 10 |  |  |  |  |
| 1 |  | 179500 | NA | 10 |  |  |  |  |
| 1 |  | 185000 | NA | 10 |  |  |  |  |
| 1 |  | 250000 | NA | 10 |  |  |  |  |
| 2 |  | 170000 | 81.199 | 10 |  |  |  |  |
| 2 | NA |  | NA | 3 |  |  |  |  |
| 2 | NA |  | NA | 1 |  |  |  |  |
| 1 |  | 80000 | NA | 10 |  |  |  |  |
| 1 |  | 270000 | 93.33 | 10 |  |  |  |  |
| 1 |  | 165000 | NA | 10 |  |  |  |  |
| 1 |  | 270000 | NA | 10 |  |  |  |  |
| 1 |  | 196000 | NA | 10 |  |  |  | . |


| 1 |  | 118000 | NA | 10 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | NA |  | NA | 4 |  |  |  |  |
| 1 |  | 110000 | NA | 10 |  |  |  |  |
| 1 |  | 164000 | NA | 10 |  |  |  |  |
| 1 |  | 184000 | NA | 10 |  |  |  |  |
| 1 |  | 190000 | NA | 10 |  |  |  |  |
| 1 |  | 155900 | NA | 10 |  |  |  |  |
| 1 |  | 110000 | NA | 10 |  |  |  |  |
| 1 | NA |  | NA | 3 |  |  |  |  |
| 1 |  | 240000 | 81.5 | 10 |  |  |  |  |
| 1 |  | 205000 | NA | 10 |  |  |  |  |
| 1 |  | 170000 | 97 | 9 |  |  |  |  |
| 1 |  | 205000 | NA | 10 |  |  |  |  |
| 1 |  | 299900 | 100.19 | 4 |  |  |  |  |
| 1 |  | 177500 | NA | 10 |  |  |  |  |
| 1 |  | 167500 | NA | 10 |  |  |  |  |
| 1 |  | 220000 | 78.64 | 10 |  |  |  |  |
| 1 |  | 167500 | NA | 10 |  |  |  |  |
| 2 | NA |  | NA | 3 |  |  |  |  |
| 2 | NA |  | NA | 4 |  |  |  |  |
| 1 | NA |  | NA | 4 |  |  |  |  |
| 2 |  | 250000 | 16 | 4 |  |  |  |  |
| 2 | NA |  | NA | 4 |  |  |  |  |
| 2 | NA |  | NA | 4 |  |  |  |  |
| 1 |  | 210000 | NA | 10 |  |  |  |  |
| 1 |  | 180000 | 13.889 | 9 |  |  |  |  |
| 1 |  | 180000 | 76.948 | 10 |  |  |  |  |
| 1 |  | 230000 | NA | 10 |  |  |  |  |
| 1 |  | 170000 | 40.138 | 3 |  |  |  |  |
| 1 |  | 264900 | NA | 10 |  |  |  |  |
| 2 |  | 282000 | 47.821 | 10 |  |  |  |  |
| 1 |  | 165500 | NA | 10 |  |  |  |  |
| 1 |  | 165000 | NA | 10 |  |  |  |  |
| 1 |  | 260000 | NA | 10 |  |  |  | . |


| 1 |  | 125000 | NA | 10 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  | 255000 | 58.431 | 10 |  |  |  |  |
| 1 |  | 280000 | NA | 10 |  |  |  |  |
| 1 |  | 285000 | NA | 10 |  |  |  |  |
| 1 |  | 205000 | 88.063 | 4 |  |  |  |  |
| 1 | NA |  | NA | 4 |  |  |  |  |
| 1 |  | 149900 | NA | 10 |  |  |  |  |
| 1 | NA |  | NA | 3 |  |  |  |  |
| 1 |  | 270000 | NA | 10 |  |  |  |  |
| 1 |  | 220000 | 65.909 | 10 |  |  |  |  |
| 1 | NA |  | NA | 3 |  |  |  |  |
| 1 |  | 140000 | 86.07 | 10 |  |  |  |  |
| 1 | NA |  | NA | 1. |  |  |  |  |
| 1 |  | 230000 | NA | 10 |  |  |  |  |
| 1 |  | 280000 | 70 | 10 |  |  |  |  |
| 1 |  | 243000 | 71.6 | 10 |  |  |  |  |
| 1 |  | 97000 | NA | 10 |  |  |  |  |
| 2 | NA |  | NA | 4 |  |  |  |  |
| 2 |  | 380000 | 86.842 | 4 |  |  |  |  |
| 1 |  | 170000 | 47.059 | 3 |  |  |  |  |
| 1 |  | 279000 | 100.34 | 10 |  |  |  |  |
| 2 |  | 375000 | 99.23 | 4 |  |  |  |  |
| 1 |  | 118000 | NA | 10 |  |  |  |  |
| 1 |  | 210000 | NA | 10 |  |  |  |  |
| 1 |  | 99000 | NA | 10 |  |  |  |  |
| 1 |  | 265000 | NA | 10 |  |  |  |  |
| 1 |  | 200000 | 52.25 | 10 |  |  |  |  |
| 1 |  | 226000 | NA | 10 |  |  |  |  |
| 1 |  | 195000 | NA | 10 |  |  |  |  |
| 1 |  | 195000 | NA | 10 |  |  |  |  |
| 1 |  | 180000 | 73.89 | 10 |  |  |  |  |
| 1 |  | 236000 | NA | 10 |  |  |  |  |
| 1 |  | 174000 | 97 | 10 |  |  |  |  |
| 1 |  | 177000 | NA | 10 |  |  |  | . |






| 1 |  | 160000 | NA | 10 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | NA |  | NA | 3 |  |  |  |
| 1 |  | 200000 | 35.75 | 10 |  |  |  |
| 1 |  | 200000 | 40 | 3 |  |  |  |
| 1 |  | 172000 | NA | 10 |  |  |  |
| 2 |  | 165000 | 59.271 | 10 |  |  |  |
| 1 |  | 165000 | 47.15 | 10 |  |  |  |
| 1 |  | 200000 | NA | 10 |  |  |  |
| 1 |  | 205000 | 72.2 | 10 |  |  |  |
| 1 |  | 145000 | NA | 10 |  |  |  |
| 1 |  | 185000 | 95 | 10 |  |  |  |
| 1 |  | 85000 | 80 | 10 |  |  |  |
| 1 | NA |  | NA | 9 |  |  |  |
| 1 |  | 132000 | 75.758 | 3 |  |  |  |
| 1 |  | 125000 | 80 | 10 |  |  |  |
| 1 |  | 99900 | NA | 10 |  |  |  |
| 1 |  | 85000 | NA | 10 |  |  |  |
| 1 |  | 100000 | 63.57 | 7 |  |  |  |
| 1 |  | 195000 | NA | 10 |  |  |  |
| 1 |  | 124000 | NA | 10 |  |  |  |
| 1 |  | 108000 | 61.787 | 10 |  |  |  |
| 1 |  | 120000 | 12.5 | 10 |  |  |  |
| 1 | NA |  | NA | 3 |  |  |  |
| 1 |  | 180000 | 98.33 | 9 |  |  |  |
| 1 |  | 195000 | 39.49 | 10 |  |  |  |
| 1 |  | 145000 | 101.14 | 10 |  |  |  |
| 1 |  | 110000 | NA | 10 |  |  |  |
| 1 |  | 130000 | 94.63 | 7 |  |  |  |
| 1 |  | 88000 | 80 | 10 |  |  |  |
| 1 |  | 130000 | 98.19 | 7 |  |  |  |
| 2 | NA |  | NA | 3 |  |  |  |
| 1 |  | 153000 | 71.9 | 1 | 3 |  |  |
| 1 |  | 160000 | NA | 10 |  |  |  |
| 1 |  | 164000 | NA | 10 |  |  |  |









| 1 | 270000 | NA | 10 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 294000 | NA | 10 |  |  |  |
| 1 | 255000 | 76.08 | 10 |  |  |  |
| 1 | 225000 | 52.22 | 10 |  |  |  |
| 1 | 303000 | NA | 10 |  |  |  |
| 2 | 250000 | 56.8 | 3 |  |  |  |
| 1 | 260000 | NA | 10 |  |  |  |
| 1 | 304000 | NA | 10 |  |  |  |
| 1 | 330000 | NA | 10 |  |  |  |
| 1 | 375000 | NA | 10 |  |  |  |
| 1 | 250000 | NA | 10 |  |  |  |
| 1 | 270000 | 59.93 | 10 |  |  |  |
| 1 | 275000 | 58.909 | 10 |  |  |  |
| 1 | 276900 | 79.78 | 10 |  |  |  |
| 1 | 250000 | 54.8 | 10 |  |  |  |
| 1 | 185000 | NA | 10 |  |  |  |
| 1 | 360000 | 55.556 | 1. |  |  |  |
| 1 | 380000 | NA | 10 |  |  |  |
| 1 | 259900 | 95 | 10 |  |  |  |
| 1 | 280000 | 80 | 10 |  |  |  |
| 1 | 315000 | 73.33 | 10 |  |  |  |
| 1 | 316000 | NA | 10 |  |  |  |
| 1 | 325000 | NA | 10 |  |  |  |
| 1 | 277500 | NA | 10 |  |  |  |
| 1 | 302000 | NA | 10 |  |  |  |
| 1 | 370000 | NA | 10 |  |  |  |
| 1 | 224000 | NA | 10 |  |  |  |
| 1 | 212000 | 79.25 | 10 |  |  |  |
| 1 | 240000 | 16.326 | 10 |  |  |  |
| 1 | 258000 | NA | 10 |  |  |  |
| 2 | 325000 | 79.53 | 1 |  |  |  |
| 1 | 700000 | NA | 10 |  |  |  |
| 1 | 390000 | 100.07 | 4 |  |  |  |
| 1 | 248000 | NA | 10 |  |  |  |


| 2 | NA |  | NA | 4 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  | 245000 | NA | 10 |  |  |  |
| 1 |  | 370000 | 80 | 10 |  |  | . |
| 2 |  | 275000 | 85.692 | 1 | 4 |  |  |
| 1 |  | 320000 | 80 | 10 |  |  |  |
| 1 |  | 200000 | 63.25 | 10 |  |  |  |
| 1 |  | 315000 | 56.83 | 10 |  |  |  |
| 1 |  | 290000 | 20.69 | 10 |  |  |  |
| 1 |  | 280000 | 60 | 10 |  |  |  |
| 1 |  | 255000 | NA | 10 |  |  |  |
| 1 |  | 197000 | NA | 10 |  |  |  |
| 1 |  | 300000 | 50 | 10 |  |  | . |
| 1 |  | 280000 | 58.21 | 10 |  |  |  |
| 1 |  | 272000 | NA | 10 |  |  |  |
| 1 |  | 235000 | NA | 10 |  |  |  |
| 1 |  | 200000 | NA | 10 |  |  |  |
| 1 |  | 305100 | 80 | 10 |  |  |  |
| 1 |  | 250000 | NA | 10 |  |  |  |
| 1 |  | 260000 | 51.92 | 3 |  |  |  |
| 1 |  | 300000 | 80 | 1 | 3 |  |  |
| 1 |  | 300000 | NA | 10 |  |  |  |
| 1 | NA |  | NA | 3 |  |  |  |
| 1 |  | 220000 | NA | 10 |  |  |  |
| 1 |  | 219900 | NA | 10 |  |  |  |
| 1 |  | 280000 | NA | 10 |  |  |  |
| 1 |  | 235000 | 82.13 | 1 |  |  |  |
| 1 |  | 265000 | NA | 10 |  |  |  |
| 1 |  | 295000 | 73.9 | 1 |  |  |  |
| 1 |  | 277000 | 86.64 | 1 | 5 | 9 |  |
| 1 |  | 380000 | 44.737 | 3 |  |  |  |
| 1 | NA |  | NA | 6 |  |  |  |
| 1 |  | 335000 | 80 | 10 |  |  | . |
| 1 |  | 860000 | 33.37 | 10 |  |  |  |
| 1 |  | 280000 | 17.857 | 4 |  |  |  |


| 1 | 235000 | 82.98 | 4 | 6 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 530000 | 60 | 10 |  |  |  |
| 1 | 400000 | 45.25 | 10 |  |  |  |
| 1 | 350000 | 72 | 10 |  |  |  |
| 1 | 235000 | 90 | 10 |  |  |  |
| 1 | 500000 | 70 | 10 |  |  |  |
| 1 | 328000 | 85 | 10 |  |  |  |
| 1 | 355000 | NA | 10 |  |  |  |
| 1 | 500000 | 76.84 | 10 |  |  |  |
| 1 | 480000 | 33.54 | 10 |  |  |  |
| 1 | 600000 | 34.25 | 10 |  |  |  |
| 1 | 240000 | 80 | 10 |  |  |  |
| 1 | 545000 | 59.27 | 10 |  |  |  |
| 1 | 345000 | 75 | 10 |  |  |  |
| 1 | 560000 | 63 | 10 |  |  |  |
| 1 | 275000 | 72.73 | 4 |  |  |  |
| 1 | 400000 | 59.44 | 10 |  |  |  |
| 1 | 410000 | 55.37 | 10 |  |  |  |
| 1 | 256000 | NA | 10 |  |  |  |
| 1 | 360000 | 73.94 | 10 |  |  |  |
| 1 | 435000 | NA | 10 |  |  |  |
| 1 | 365000 | 80 | 6 |  |  |  |
| 1 | 220000 | 43.552 | 10 |  |  |  |
| 1 | 220000 | 65 | 10 |  |  |  |
| 2 |  | NA | 4 |  |  |  |
| 1 | 169000 | NA | 10 |  |  |  |
| 1 | 260000 | NA | 10 |  |  |  |
| 1 | 550000 | 80 | 4 |  |  |  |
| 1 | 318000 | 80 | 10 |  |  |  |
| 1 | 360000 | 80 | 10 |  |  |  |
| 1 | 605000 | 99.17 | 4 |  |  |  |
| 1 | 260000 | NA | 10 |  |  |  |
| 1 | 310000 | NA | 10 |  |  |  |
| 1 | 430000 | 18.372 | 1 |  |  |  |








| 1 | 240000 | NA | 10 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 315000 | NA | 10 |  |  |  |
| 1 | 270000 | NA | 10 |  |  |  |
| 1 | 245000 | 59.592 | 3 |  |  |  |
| 1 | 260000 | NA | 10 |  |  |  |
| 2 |  | NA | 4 |  |  |  |
| 1 | 269900 | NA | 10 |  |  |  |
| 1 | 180000 | 60.28 | 10 |  |  |  |
| 1 | 280000 | NA | 10 |  |  |  |
| 1 | 270000 | 38.294 | 10 |  |  |  |
| 1 | 245000 | NA | 10 |  |  |  |
| 1 | 180000 | NA | 10 |  |  |  |
| 1 | 272000 | NA | 10 |  |  |  |
| 1 | 270000 | NA | 10 |  |  |  |
| 1 | 310000 | 80 | 10 |  |  |  |
| 1 | 160000 | NA | 10 |  |  |  |
| 1 | 203000 | 66.07 | 10 |  |  |  |
| 1 | 215000 | NA | 10 |  |  |  |
| 2 | 275000 | 69.959 | 10 |  |  |  |
| 1 | 275000 | 51.777 | 10 |  |  |  |
| 1 | 255000 | NA | 10 |  |  |  |
| 1 | 240000 | 62.5 | 1. |  |  |  |
| 1 | 270000 | 60 | 10 |  |  |  |
| 1 | 145000 | NA | 10 |  |  |  |
| 1 | 200000 | NA | 10 |  |  |  |
| 1 | 245000 | 95 | 10 |  |  |  |
| 1 | 345000 | NA | 10 |  |  |  |
| 1 | 270000 | 98.19 | 10 |  |  |  |
| 1 | 270000 | NA | 10 |  |  |  |
| 1 | 225000 | NA | 10 |  |  |  |
| 1 | 250000 | 57.4 | 10 |  |  |  |
| 1 | 212500 | NA | 10 |  |  |  |
| 2 | 280000 | 88.278 | 3 |  |  |  |
| 1 | 296000 | 51.268 | 10 |  |  | . |


| 2 | NA |  | NA | 3 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  | 331000 | NA | 10 |  |  |  |
| 2 |  | 185000 | 111.394 | 4 |  |  |  |
| 1 |  | 161000 | 51.818 | 10 |  |  |  |
| 1 |  | 235000 | 62.979 | 10 |  |  |  |
| 1 |  | 277000 | NA | 10 |  |  |  |
| 1 |  | 3000000 | 49.07 | 10 |  |  |  |
| 1 |  | 370000 | NA | 10 |  |  |  |
| 1 |  | 262400 | 66.692 | 3 |  |  |  |
| 2 | NA |  | NA | 9 |  |  |  |
| 1 |  | 245903 | NA | 3 |  |  |  |
| 1 |  | 227000 | NA | 10 |  |  |  |
| 1 |  | 200000 | 75.5 | 3 |  |  |  |
| 1 |  | 281000 | NA | 10 |  |  |  |
| 1 |  | 280000 | NA | 10 |  |  |  |
| 1 |  | 259900 | NA | 10 |  |  |  |
| 1 |  | 700000 | 78.57 | 4 | 3 | 9 | 9 |
| 1 |  | 172000 | 84.302 | 4 |  |  |  |
| 1 |  | 205000 | 66.537 | 10 |  |  |  |
| 1 |  | 247000 | NA | 10 |  |  |  |
| 1 |  | 167000 | NA | 10 |  |  |  |
| 1 |  | 270000 | NA | 10 |  |  |  |
| 1 |  | 190000 | NA | 10 |  |  |  |
| 1 | NA |  | NA | 3 |  |  |  |
| 1 |  | 172000 | NA | 10 |  |  |  |
| 1 |  | 355000 | NA | 10 |  |  |  |
| 1 |  | 440500 | 80 | 9 |  |  |  |
| 1 |  | 302000 | NA | 10 |  |  |  |
| 1 |  | 665000 | 80 | 10 |  |  |  |
| 1 |  | 630000 | 79.21 | 10 |  |  |  |
| 1 |  | 280000 | 31.547 | 10 |  |  |  |
| 1 |  | 192000 | NA | 10 |  |  |  |
| 1 |  | 160000 | 16.25 | 3 |  | . |  |
| 1 |  | 209700 | NA | 10 |  | . |  |




| 1 | 85000 | 95 | 10 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 107000 | 79.439 | 3 |  |  |  |
| 1 | 165000 | NA | 10 |  |  |  |
| 1 | 189000 | NA | 10 |  |  |  |
| 1 | 160000 | NA | 10 |  |  |  |
| 1 | 155000 | NA | 10 |  |  |  |
| 1 | 95000 | 73.684 | 3 |  |  |  |
| 1 | 125000 | NA | 10 |  |  |  |
| 1 | 230000 | NA | 10 |  |  |  |
| 1 | 315000 | NA | 10 |  |  |  |
| 1 | 245000 | NA | 10 |  |  |  |
| 1 | 168585 | 41.522 | 4 |  |  |  |
| 1 | 200000 | NA | 10 |  |  |  |
| 1 | 81000 | 80 | 10 |  |  |  |
| 1 | 122104 | 36.854 | 4 |  |  |  |
| 1 | 165000 | 71.515 | 10 |  |  |  |
| 1 | 120000 | NA | 10 |  |  |  |
| 1 | 320000 | 90 | 1 | 5 |  |  |
| 1 | 185000 | NA | 10 |  |  |  |
| 1 | 240000 | 51.25 | 1. |  |  |  |
| 1 | 240000 | 56.58 | 10 |  |  |  |
| 1 | 220000 | 49.43 | 1 | 3 | 5 |  |
| 1 | 250000 | NA | 10 |  |  |  |
| 1 | 169000 | NA | 10 |  |  |  |
| 1 | 232000 | NA | 10 |  |  |  |
| 1 | 190000 | NA | 10 |  |  |  |
| 1 | 235000 | NA | 10 |  |  |  |
| 1 | 275000 | NA | 10 |  |  |  |
| 1 | 190000 | 71.58 | 10 |  |  |  |
| 1 | 210000 | NA | 10 |  |  |  |
| 1 | 850000 | 50 | 1 | 9 |  |  |
| 1 | 100000 | 151.5 | 4 |  |  |  |
| 1 | 249000 | NA | 10 |  |  |  |
| 2 | 400000 | 57.311 | 3 |  |  |  |





| 1 |  | 223000 | NA | 10 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  | 254900 | NA | 10 |  |  |  |
| 1 |  | 255000 | NA | 10 |  |  |  |
| 1 |  | 237000 | NA | 10 |  |  |  |
| 1 |  | 310000 | 54.19 | 10 |  |  |  |
| 1 |  | 190000 | 86.05 | 1 | 5 |  |  |
| 1 |  | 220000 | NA | 10 |  |  |  |
| 1 |  | 167000 | 70.12 | 10 |  |  |  |
| 1 |  | 191573 | NA | 10 |  |  |  |
| 1 |  | 205000 | 75.61 | 6 | 9 |  |  |
| 1 |  | 205000 | 80 | 3 |  |  |  |
| 1 |  | 300000 | 76.667 | 3 |  |  |  |
| 1 |  | 198900 | NA | 10 |  |  |  |
| 1 |  | 255000 | 80 | 10 |  |  |  |
| 1 |  | 192000 | 78.05 | 10 |  |  |  |
| 1 |  | 200000 | 95 | 10 |  |  |  |
| 1 |  | 230000 | NA | 10 |  |  |  |
| 2 |  | 260000 | 30.038 | 10 |  |  |  |
| 1 |  | 260000 | 80.769 | 3 |  |  |  |
| 1 |  | 289000 | NA | 10 |  |  |  |
| 2 | NA |  | NA | 9 |  |  |  |
| 1 |  | 90000 | NA | 10 |  |  |  |
| 1 |  | 322000 | NA | 10 |  |  |  |
| 2 | NA |  | NA | 4 |  |  |  |
| 1 |  | 207000 | NA | 10 |  |  |  |
| 1 |  | 215000 | 78.14 | 3 |  |  |  |
| 1 |  | 240000 | NA | 10 |  |  |  |
| 1 |  | 273000 | 95 | 6 |  |  |  |
| 1 |  | 265000 | NA | 10 |  |  |  |
| 1 |  | 299000 | NA | 10 |  |  |  |
| 2 |  | 225000 | 84.351 | 10 |  |  |  |
| 1 |  | 225000 | 68.593 | 1 |  |  |  |
| 2 | NA |  | NA | 3 |  |  |  |
| 2 |  | 260000 | 80.769 | 3. |  |  |  |


| 2 | 255000 | 90 | 10 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 255000 | NA | 10 |  |  |  |
| 1 | 209000 | 45.45 | 10 |  |  |  |
| 1 | 150000 | 90 | 9 |  |  |  |
| 1 | 279000 | NA | 10 |  |  |  |
| 2 | 208500 | 80 | 10 |  |  |  |
| 1 | 270000 | 57.97 | 10 |  |  |  |
| 1 | 221000 | NA | 10 |  |  |  |
| 1 | 300000 | 100 | 10 |  |  |  |
| 1 | 286000 | 80 | 10 |  |  |  |
| 1 | 290000 | 100 | 4 |  |  |  |
| 1 | 295000 | NA | 10 |  |  |  |
| 1 | 230000 | 73.04 | 10 |  |  |  |
| 1 | 250000 | NA | 10 |  |  |  |
| 1 | 211500 | NA | 10 |  |  |  |
| 1 | 200000 | 59.817 | 3 |  |  |  |
| 1 | 230000 | NA | 10 |  |  |  |
| 1 | 245000 | 63.673 | 4 |  |  |  |
| 1 | 259000 | NA | 10 |  |  |  |
| 1 | 300000 | NA | 10 |  |  |  |
| 1 | 315000 | 69.84 | 10 |  |  |  |
| 1 | 192000 | NA | 10 |  |  |  |
| 1 | 244000 | NA | 10 |  |  |  |
| 2 | 173000 | 80 | 10 |  |  |  |
| 2 | 320000 | 26.266 | 10 |  |  |  |
| 2 | 236000 | 49.73 | 10 |  |  |  |
| 1 | 220000 | 34.09 | 10 |  |  |  |
| 1 | 202000 | NA | 10 |  |  |  |
| 1 | 280000 | 95 | 10 |  |  |  |
| 1 | 230000 | 75 | 10 |  |  |  |
| 1 | 229900 | NA | 10 |  |  |  |
| 1 | 270000 | 93.33 | 10 |  |  |  |
| 1 | 275000 | NA | 10 |  |  |  |
| 1 | 182000 | NA | 10 |  |  | . |


| 1 |  | 260000 | NA | 10 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | NA |  | NA | 3 |  |  |  |
| 1 |  | 245000 | 29.796 | 10 |  |  |  |
| 2 | NA |  | NA | 3 |  |  |  |
| 1 |  | 280000 | NA | 10 |  |  |  |
| 1 |  | 211000 | NA | 10 |  |  |  |
| 1 |  | 287500 | 95 | 10 |  |  | . |
| 1 |  | 260000 | NA | 10 |  |  |  |
| 1 |  | 180000 | 77.78 | 10 |  |  |  |
| 1 |  | 162000 | NA | 10 |  |  |  |
| 1 |  | 275000 | NA | 10 |  |  |  |
| 1 |  | 175000 | NA | 10 |  |  |  |
| 1 |  | 200000 | 68 | 4 |  |  |  |
| 1 |  | 265000 | 80 | 10 |  |  |  |
| 1 |  | 290000 | 80 | 10 |  |  |  |
| 1 |  | 254000 | 52.83 | 10 |  |  |  |
| 1 |  | 360000 | NA | 10 |  |  |  |
| 1 |  | 150000 | 80 | 3 | 1 | 9 |  |
| 1 |  | 230000 | NA | 10 |  |  |  |
| 1 |  | 220000 | NA | 10 |  |  |  |
| 1 |  | 216500 | NA | 10 |  |  |  |
| 2 | NA |  | NA | 9 |  |  |  |
| 2 | NA |  | NA | 4 |  |  |  |
| 2 | NA |  | NA | 4 |  |  |  |
| 1 |  | 160000 | NA | 10 |  |  |  |
| 1 |  | 95000 | NA | 10 |  |  |  |
| 1 |  | 245000 | 68.57 | 6 |  |  |  |
| 1 |  | 365000 | 73.32 | 10 |  |  |  |
| 2 | NA |  | NA | 3 |  |  |  |
| 1 |  | 299900 | NA | 10 |  |  | . |
| 1 |  | 265000 | NA | 10 |  |  |  |
| 2 |  | 170000 | 72.941 | 4 |  |  |  |
| 1 |  | 220000 | NA | 10 |  |  |  |
| 1 |  | 100000 | NA | 10 |  |  |  |



| 1 | 265000 | NA | 10 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 299000 | NA | 10 |  |  |  |
| 1 | 243500 | NA | 10 |  |  |  |
| 1 | 250000 | 66.8 | 10 |  |  |  |
| 1 | 270000 | 70.37 | 10 |  |  |  |
| 1 | 185000 | 60.27 | 10 |  |  |  |
| 1 | 97000 | 72.909 | 1. |  |  |  |
| 1 | 275000 | NA | 10 |  |  |  |
| 1 | 180000 | 40.56 | 10 |  |  |  |
| 1 | 200000 | NA | 10 |  |  |  |
| 1 | 220000 | NA | 10 |  |  |  |
| 1 | 135000 | NA | 10 |  |  |  |
| 1 | 183000 | 43.99 | 10 |  |  |  |
| 1 | 237000 | NA | 10 |  |  |  |
| 1 | 183000 | NA | 10 |  |  |  |
| 1 | 255000 | NA | 10 |  |  |  |
| 1 | 295000 | 67.8 | 10 |  |  |  |
| 1 | 235000 | NA | 10 |  |  |  |
| 1 | 240000 | NA | 10 |  |  |  |
| 1 | 179000 | NA | 10 |  |  |  |
| 1 | 260000 | NA | 10 |  |  |  |
| 1 | 167000 | NA | 10 |  |  |  |
| 1 | 156000 | NA | 10 |  |  |  |
| 1 | 77000 | 95 | 1. |  |  |  |
| 1 | 195000 | 77.85 | 10 |  |  |  |
| 1 | 249900 | NA | 10 |  |  |  |
| 1 | 259000 | NA | 10 |  |  |  |
| 1 | 159500 | NA | 10 |  |  |  |
| 1 | 180500 | NA | 10 |  |  |  |
| 1 | 208000 | NA | 10 |  |  |  |
| 1 | 210000 | NA | 10 |  |  |  |
| 1 | 185500 | NA | 10 |  |  |  |
| 1 | 181000 | NA | 10 |  |  |  |
| 1 | 250000 | NA | 10 |  |  | . |


| 1 |  | 517000 | 59.95 | 10 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | NA |  | NA | 3 |  |  |  |  |
| 1 |  | 200000 | 79 | 10 |  |  |  |  |
| 1 |  | 1035000 | 75 | 10 |  |  |  |  |
| 1 |  | 390000 | 66.67 | 10 |  |  |  |  |
| 1 |  | 440000 | NA | 10 |  |  |  |  |
| 1 |  | 350000 | NA | 10 |  |  |  |  |
| 2 |  | 525000 | 80 | 10 |  |  |  |  |
| 2 |  | 405000 | 114.321 | 4 |  |  |  |  |
| 1 |  | 835000 | 79 | 10 |  |  |  |  |
| 1 |  | 307000 | 74.36 | 10 |  |  |  |  |
| 1 |  | 400000 | 49.48 | 10 |  |  |  |  |
| 1 |  | 405000 | 80.25 | 10 |  |  |  |  |
| 1 |  | 83200 | 80 | 10 |  |  |  |  |
| 1 |  | 340000 | 32.35 | 3 |  |  |  |  |
| 1 |  | 380000 | 59.74 | 10 |  |  |  |  |
| 1 |  | 397000 | NA | 10 |  |  |  |  |
| 1 |  | 255000 | 68.627 | 1 |  |  |  |  |
| 1 |  | 575000 | NA | 10 |  |  |  |  |
| 2 |  | 393000 | 57.539 | 10 |  |  |  |  |
| 1 |  | 280000 | NA | 10 |  |  |  |  |
| 1 |  | 290000 | NA | 10 |  |  |  |  |
| 1 |  | 200000 | 46.567 | 10 |  |  |  |  |
| 1 |  | 524000 | 94 | 10 |  |  |  |  |
| 1 |  | 450000 | 38.8 | 10 |  |  |  |  |
| 2 | NA |  | NA | 3 |  |  |  |  |
| 2 |  | 335000 | 80 | 10 |  |  |  |  |
| 1 |  | 700000 | 69.85 | 10 |  |  |  |  |
| 1 |  | 675000 | 73.19 | 1 |  |  |  |  |
| 1 |  | 335000 | 80 | 10 |  |  |  |  |
| 1 |  | 400000 | 54.3 | 10 |  |  |  |  |
| 1 |  | 430000 | NA | 10 |  |  |  |  |
| 1 |  | 315000 | NA | 10 |  |  |  |  |
| 1 |  | 437500 | NA | 10 |  |  |  |  |


| 1 | 435000 | NA | 10 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | 554000 | 90 | 10 |  |  |  |
| 1 | 325000 | NA | 10 |  |  |  |
| 1 | 420000 | NA | 10 |  |  |  |
| 2 | 454000 | 34.69 | 10 |  |  |  |
| 2 | 338000 | 79.439 | 4 |  |  |  |
| 1 | 375000 | 71.73 | 10 |  |  |  |
| 2 | 315000 | 54.344 | 10 |  |  |  |
| 1 | 260000 | 80 | 10 |  |  |  |
| 1 | 550000 | NA | 10 |  |  |  |
| 1 | 269900 | NA | 10 |  |  |  |
| 1 | 153000 | 92.94 | 4 |  |  |  |
| 1 | 115000 | 90 | 10 |  |  | . |
| 1 | 205000 | NA | 10 |  |  |  |
| 1 | 120000 | NA | 10 |  |  |  |
| 1 | 380000 | NA | 10 |  |  |  |
| 1 | 310000 | 9.161 | 10 |  |  |  |
| 1 | 335000 | NA | 10 |  |  |  |
| 1 | 415000 | NA | 10 |  |  |  |
| 1 | 510000 | NA | 10 |  |  |  |
| 1 | 400000 | 61.25 | 10 |  |  |  |
| 1 | 350000 | NA | 10 |  |  |  |
| 1 | 515000 | NA | 10 |  |  |  |
| 1 | 185000 | NA | 10 |  |  |  |
| 1 | 300000 | 44 | 10 |  |  |  |
| 1 | 407500 | 62.12 | 10 |  |  |  |
| 1 | 375000 | NA | 10 |  |  |  |
| 1 | 146000 | NA | 10 |  |  |  |
| 1 | 260000 | NA | 10 |  |  |  |
| 1 | 190000 | NA | 10 |  |  |  |
| 1 | 260000 | NA | 10 |  |  |  |
| 1 | 135000 | NA | 10 |  |  |  |
| 1 | 155100 | NA | 10 |  |  | . |
| 1 | 200000 | 57.5 | 4 |  |  | . |


| 1 |  | 224900 | NA | 10 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  | 260000 | NA | 10 |  |  |  |
| 1 |  | 198000 | 80 | 10 |  |  |  |
| 1 |  | 140000 | 39.29 | 10 |  |  |  |
| 1 |  | 270000 | 60 | 10 |  |  |  |
| 1 |  | 120000 | NA | 10 |  |  |  |
| 1 |  | 195000 | NA | 10 |  |  |  |
| 1 |  | 405300 | NA | 10 |  |  |  |
| 1 |  | 750000 | 49.73 | 6 | 7 |  |  |
| 2 |  | 190000 | 67.154 | 10 |  |  |  |
| 1 |  | 180000 | 46.111 | 9 |  |  |  |
| 1 |  | 200000 | 41.25 | 10 |  |  |  |
| 1 |  | 92500 | 59.46 | 1 | 4 |  |  |
| 1 |  | 119000 | 67.23 | 1 | 4 |  |  |
| 1 |  | 165000 | 63.64 | 10 |  |  |  |
| 1 |  | 129000 | NA | 10 |  |  |  |
| 1 |  | 294750 | NA | 10 |  |  |  |
| 1 |  | 58000 | 103.45 | 4 |  |  |  |
| 1 |  | 250000 | NA | 10 |  |  |  |
| 1 |  | 274000 | NA | 10 |  |  |  |
| 1 |  | 160000 | 85.63 | 10 |  |  |  |
| 2 | NA |  | NA | 3 |  |  |  |
| 1 | NA |  | NA | 3 |  |  |  |
| 2 |  | 210000 | 65.19 | 9 |  |  |  |
| 1 |  | 245000 | 65.31 | 10 |  |  |  |
| 1 |  | 283900 | NA | 10 |  |  |  |
| 1 |  | 255000 | 95 | 10 |  |  |  |
| 1 |  | 175000 | NA | 10 |  |  |  |
| 1 |  | 120000 | NA | 10 |  |  |  |
| 1 |  | 160000 | NA | 10 |  |  |  |
| 2 | NA |  | NA | 3 |  |  |  |
| 1 |  | 159000 | NA | 10 |  |  |  |
| 1 |  | 130000 | 73.08 | 10 |  |  |  |
| 1 |  | 113000 | 44.248 | 10 |  |  |  |







| 1 | 855000 | 64.33 | 10 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 764000 | 51.31 | 10 |  |  |  |
| 1 | 122850 | NA | 10 |  |  |  |
| 1 | 370000 | 37.49 | 10 |  |  |  |
| 1 | 603750 | NA | 10 |  |  |  |
| 1 | 380000 | 60.79 | 10 |  |  |  |
| 1 | 318000 | 31.447 | 10 |  |  |  |
| 2 | 220000 | 70 | 10 |  |  |  |
| 1 | 422000 | 30.806 | 10 |  |  |  |
| 1 | 250000 | 72 | 10 |  |  |  |
| 1 | 358000 | 80 | 10 |  |  |  |
| 1 | 450000 | 80 | 1 |  |  |  |
| 1 | 800000 | 68.53 | 10 |  |  |  |
| 1 | 1200000 | 80 | 10 |  |  |  |
| 1 | 230000 | NA | 10 |  |  |  |
| 1 | 310000 | 60 | 3 |  |  |  |
| 1 | 725000 | 80 | 10 |  |  |  |
| 2 | 675000 | 58.96 | 10 |  |  |  |
| 1 | 595000 | 79.33 | 10 |  |  |  |
| 1 | 328000 | 75 | 10 |  |  |  |
| 1 | 720000 | 80 | 10 |  |  |  |
| 1 | 688000 | NA | 10 |  |  |  |
| 1 | 420000 | 64.29 | 10 |  |  |  |
| 1 | 515000 | NA | 10 |  |  |  |
| 1 | 500000 | 64.1 | 10 |  |  |  |
| 1 | 601000 | 90.56 | 10 |  |  |  |
| 1 | 335000 | NA | 10 |  |  |  |
| 1 | 445000 | NA | 10 |  |  |  |
| 1 | 450000 | NA | 10 |  |  |  |
| 1 | 485000 | NA | 10 |  |  |  |
| 1 | 760000 | NA | 10 |  |  |  |
| 1 | 675000 | 58.96 | 10 |  |  | . |
| 1 | 391000 | 80 | 10 |  |  |  |
| 1 | 691000 | 43.42 | 10 |  |  |  |




| 1 | 150000 | 66.667 | 4 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | NA | NA | 9 |  |  |  |
| 1 | 350000 | 98.19 | 10 |  |  |  |
| 1 | 225000 | 12.826 | 10 |  |  |  |
| 2 | 250000 | 65.467 | 3 |  |  |  |
| 1 | 280000 | NA | 10 |  |  |  |
| 1 | 200000 | 80 | 10 |  |  |  |
| 1 | 189000 | 74.76 | 10 |  |  |  |
| 1 | NA | NA | 4 |  |  |  |
| 1 | 230000 | 95 | 10 |  |  |  |
| 1 | 225000 | 59.11 | 10 |  |  |  |
| 1 | 385000 | NA | 10 |  |  |  |
| 1 | 335000 | NA | 10 |  |  |  |
| 2 | 374000 | 55.271 | 10 |  |  |  |
| 1 | 242000 | NA | 10 |  |  |  |
| 1 | 300000 | 26 | 10 |  |  |  |
| 1 | 265000 | NA | 10 |  |  |  |
| 1 | 320000 | NA | 10 |  |  |  |
| 1 | 235000 | NA | 10 |  |  |  |
| 1 | 409000 | 62.855 | 1 |  |  |  |
| 1 | 248000 | NA | 10 |  |  |  |
| 2 | 300000 | 61.741 | 10 |  |  |  |
| 1 | 255000 | 53.33 | 10 |  |  |  |
| 1 | 330000 | 80.771 | 10 |  |  |  |
| 1 | 245000 | NA | 10 |  |  |  |
| 1 | 400000 | 26.75 | 10 |  |  |  |
| 1 | 116000 | 52.8 | 10 |  |  |  |
| 1 | 300000 | 36 | 1. |  |  |  |
| 1 | 635000 | NA | 10 |  |  |  |
| 1 | 571500 | 95 | 10 |  |  |  |
| 1 | 269000 | NA | 10 |  |  |  |
| 1 | 500000 | NA | 10 |  |  |  |
| 1 | 430000 | NA | 10 |  |  |  |
| 1 | 300000 | 94.18 | 10 | . |  |  |


| 1 | 354000 | 74.15 | 10 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 460000 | 70 | 10 |  |  |  |
| 1 | 227000 | NA | 10 |  |  |  |
| 1 | 529000 | 36.11 | 10 |  |  |  |
| 1 | 625000 | 80 | 10 |  |  |  |
| 1 | 1599900 | 64.06 | 10 |  |  |  |
| 1 | 274750 | NA | 10 |  |  |  |
| 1 | 850000 | 90 | 10 |  |  |  |
| 1 | 455000 | 78.9 | 10 |  |  |  |
| 1 | 291000 | NA | 10 |  |  |  |
| 1 | 485000 | 74.43 | 10 |  |  |  |
| 1 | 1178000 | 72.16 | 10 |  |  |  |
| 1 | 1300000 | NA | 10 |  |  |  |
| 1 | 550000 | NA | 10 |  |  |  |
| 1 | 1292000 | 36 | 10 |  |  |  |
| 1 | 3288000 | 37.71 | 10 |  |  |  |
| 1 | 269000 | 70 | 10 |  |  |  |
| 1 | 425000 | 80 | 10 |  |  |  |
| 1 | 587250 | NA | 10 |  |  |  |
| 1 | 500000 | NA | 10 |  |  |  |
| 1 | 900000 | 57.67 | 10 |  |  |  |
| 1 | 225000 | NA | 10 |  |  |  |
| 1 | 341000 | 72.872 | 10 |  |  |  |
| 1 | 235000 | NA | 10 |  |  |  |
| 1 | 604000 | 80 | 10 |  |  |  |
| 1 | 985000 | 74.62 | 10 |  |  |  |
| 1 | 546000 | 80 | 10 |  |  |  |
| 1 | 1533000 | 62.62 | 10 |  |  |  |
| 1 | 515000 | NA | 10 |  |  |  |
| 2 | 863000 | 68.6 | 10 |  |  |  |
| 1 | 900000 | NA | 10 |  |  |  |
| 1 | 1445000 | 80 | 10 |  |  | . |
| 1 | 863000 | 68.6 | 10 |  |  |  |
| 1 | 990000 | NA | 10 |  |  |  |



| 1 | 825000 | 79.03 | 10 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 751000 | NA | 10 |  |  |  |
| 1 | 3548244 | 70 | 10 |  |  |  |
| 1 | 3323073 | 70 | 10 |  |  |  |
| 1 | 600000 | NA | 10 |  |  |  |
| 1 | 3100000 | 63.99 | 10 |  |  |  |
| 1 | 950000 | 80 | 10 |  |  |  |
| 1 | 555000 | 57.69 | 10 |  |  |  |
| 1 | 885000 | 73.45 | 10 |  |  |  |
| 1 | 310000 | NA | 10 |  |  |  |
| 1 | 524900 | NA | 10 |  |  |  |
| 1 | 830000 | NA | 10 |  |  |  |
| 1 | 595000 | NA | 10 |  |  |  |
| 1 | 1267000 | 55.82 | 10 |  |  |  |
| 1 | 764500 | NA | 10 |  |  |  |
| 1 | 812000 | NA | 10 |  |  |  |
| 1 | 655000 | NA | 10 |  |  |  |
| 1 | 1000000 | 61.2 | 10 |  |  |  |
| 1 | 1330000 | 36.09 | 10 |  |  |  |
| 1 | 925000 | NA | 10 |  |  |  |
| 1 | 1200000 | 37.08 | 1 |  |  |  |
| 1 | 1040000 | 80 | 10 |  |  |  |
| 1 | 1000000 | 90 | 10 |  |  |  |
| 1 | 680000 | NA | 10 |  |  |  |
| 1 | 496000 | NA | 10 |  |  |  |
| 1 | 800000 | 71.88 | 10 |  |  |  |
| 1 | 925000 | 90 | 10 |  |  |  |
| 1 | 909000 | 80 | 10 |  |  |  |
| 1 | 595000 | 80 | 10 |  |  |  |
| 1 | 480000 | 95 | 10 |  |  |  |
| 1 | 1000000 | NA | 10 |  |  |  |
| 1 | 535000 | NA | 10 |  |  |  |
| 1 | 1100000 | NA | 10 |  |  |  |
| 1 | 1060000 | NA | 10 |  |  |  |






| 1 |  | 430000 | 41.16 | 10 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  | 325000 | 80 | 10 |  |  |  |
| 1 |  | 189000 | NA | 10 |  |  |  |
| 2 | NA |  | NA | 3 |  |  |  |
| 1 |  | 338000 | 80 | 10 |  |  |  |
| 1 |  | 345000 | 78.841 | 3 |  |  |  |
| 1 |  | 250000 | NA | 10 |  |  |  |
| 2 | NA |  | NA | 4 |  |  |  |
| 2 |  | 299000 | 59.178 | 10 |  |  |  |
| 1 |  | 229000 | 97 | 10 |  |  |  |
| 1 | NA |  | NA | 4 |  |  |  |
| 1 |  | 420000 | 62.619 | 10 |  |  |  |
| 1 |  | 320000 | 82.188 | 3 |  |  |  |
| 1 | NA |  | NA | 10 |  |  |  |
| 1 |  | 340000 | 70.15 | 10 |  |  |  |
| 1 | NA |  | NA | 3 |  |  |  |
| 1 | NA |  | NA | 4 |  |  |  |
| 1 |  | 215000 | NA | 10 |  |  |  |
| 1 |  | 229000 | NA | 10 |  |  |  |
| 2 |  | 200000 | 91.171 | 1 |  |  |  |
| 1 |  | 273000 | 18.315 | 4 |  |  |  |
| 1 |  | 235000 | 88.09 | 1 | 4. |  |  |
| 2 | NA |  | NA | 4 |  |  |  |
| 2 | NA |  | NA | 4 |  |  |  |
| 1 |  | 231000 | 88.052 | 4 |  |  |  |
| 1 |  | 456500 | 97 | 10 |  |  |  |
| 2 |  | 350000 | 70.855 | 3 |  |  |  |
| 1 |  | 200000 | 64.35 | 10 |  |  |  |
| 1 |  | 170000 | 8.824 | 1 |  |  |  |
| 1 |  | 295000 | 52.542 | 10 |  |  |  |
| 1 |  | 333000 | 30.48 | 10 |  |  |  |
| 1 |  | 880000 | 77.27 | 10 |  |  |  |
| 1 |  | 511000 | NA | 10 |  |  |  |
| 1 |  | 180999 | NA | 10 |  |  |  |







| 2 | NA |  | NA | 3 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  | 92800 | NA | 10 |  |  |  |  |
| 1 |  | 275000 | 68.18 | 10 |  |  |  |  |
| 1 |  | 86000 | NA | 10 |  |  |  |  |
| 1 |  | 184000 | NA | 10 |  |  |  |  |
| 1 |  | 195000 | NA | 10 |  |  |  |  |
| 1 |  | 240000 | NA | 10 |  |  |  |  |
| 1 |  | 282000 | NA | 10 |  |  |  |  |
| 1 |  | 215000 | NA | 10 |  |  |  |  |
| 1 |  | 325000 | 70.769 | 10 |  |  |  |  |
| 1 |  | 330000 | 80 | 7 |  |  |  |  |
| 1 |  | 535000 | 94.39 | 10 |  |  |  |  |
| 1 |  | 586000 | 64.06 | 10 |  |  |  |  |
| 1 |  | 200000 | NA | 10 |  |  |  |  |
| 1 |  | 313000 | 75 | 10 |  |  |  |  |
| 1 |  | 310000 | NA | 10 |  |  |  |  |
| 1 |  | 328500 | 95 | 10 |  |  |  |  |
| 1 |  | 606000 | NA | 10 |  |  |  |  |
| 1 |  | 250000 | NA | 10 |  |  |  |  |
| 1 |  | 275000 | NA | 10 |  |  |  |  |
| 1 |  | 205000 | NA | 10 |  |  |  |  |
| 1 |  | 280000 | NA | 10 |  |  |  |  |
| 1 |  | 245000 | NA | 10 |  |  |  |  |
| 1 |  | 210000 | 93 | 6 |  |  |  |  |
| 1 |  | 202000 | 105.2 | 4 |  |  |  |  |
| 1 |  | 340000 | NA | 10 |  |  |  |  |
| 1 | NA |  | NA | 10 |  |  |  |  |
| 1 |  | 432000 | 90 | 4 |  |  |  |  |
| 1 |  | 300000 | 25 | 9 | 4 |  | . |  |
| 1 |  | 230000 | 43.47 | 10 |  |  |  |  |
| 1 |  | 270000 | NA | 10 |  |  |  |  |
| 2 | NA |  | NA | 4 |  |  |  |  |
| 1 |  | 270000 | NA | 10 |  |  |  |  |
| 1 |  | 249000 | NA | 10 |  |  |  |  |


| 1 | 230000 | 35.247 | 1. |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 650000 | 71.31 | 10 |  |  |  |
| 1 | 315000 | NA | 10 |  |  |  |
| 1 | 462250 | NA | 10 |  | . |  |
| 1 | 1475000 | 76.27 | 4 | 6 |  |  |
| 1 | 800000 | 90 | 10 |  |  |  |
| 1 | 675000 | 80 | 10 |  |  |  |
| 1 | 610000 | NA | 10 |  |  |  |
| 1 | 362000 | 95 | 10 |  |  |  |
| 1 | 739800 | NA | 10 |  |  |  |
| 1 | 550000 | 72.64 | 10 |  |  |  |
| 1 | 660000 | 90 | 10 |  |  |  |
| 1 | 670000 | NA | 10 |  |  |  |
| 1 | 610000 | 89.88 | 10 |  |  |  |
| 1 | 605000 | 74.88 | 10 |  |  |  |
| 1 | 1045000 | NA | 10 |  |  |  |
| 1 | 510000 | 66.66 | 10 |  |  |  |
| 1 | 257500 | NA | 10 |  |  |  |
| 1 | 519000 | NA | 10 |  |  |  |
| 1 | 700000 | 78.32 | 10 |  |  |  |
| 1 | 750000 | 66.27 | 10 |  |  |  |
| 1 | 660000 | NA | 10 |  |  |  |
| 1 | 655000 | 73.29 | 10 |  |  |  |
| 1 | 139900 | 100.95 | 10 |  |  |  |
| 1 | 280000 | NA | 10 |  |  |  |
| 1 | 259000 | NA | 10 |  |  |  |
| 1 | 193000 | NA | 10 |  |  |  |
| 1 | 200000 | NA | 10 |  |  |  |
| 1 | 152000 | NA | 10 |  |  |  |
| 1 | 230700 | NA | 10 |  |  |  |
| 1 | 155000 | NA | 10 |  |  |  |
| 1 | 142000 | NA | 10 |  |  |  |
| 1 | 181000 | NA | 10 |  |  |  |
| 1 | 270000 | NA | 10 |  | . |  |


| 1 | 165000 | 78.24 | 10 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 233000 | 79.44 | 10 |  |  |  |
| 1 | 265000 | 68.87 | 10 |  |  |  |
| 1 | 200000 | 57.15 | 10 |  |  |  |
| 1 | 100000 | 98.19 | 3 |  |  |  |
| 2 | NA | NA | 9 |  |  |  |
| 1 | 300000 | 44.33 | 1 |  |  |  |
| 1 | 390000 | 33.33 | 10 |  |  |  |
| 1 | 509000 | 80 | 10 |  |  |  |
| 1 | NA | NA | 5 | 4 | 7 |  |
| 2 | 450000 | 48.903 | 10 |  |  |  |
| 1 | 420000 | NA | 10 |  |  |  |
| 1 | 330000 | NA | 10 |  |  |  |
| 1 | 640000 | 70 | 10 |  |  |  |
| 1 | 280000 | 78.57 | 10 |  |  |  |
| 1 | 1178000 | 37.78 | 10 |  |  |  |
| 2 | 300000 | 55.743 | 10 |  |  |  |
| 2 | 620000 | 70 | 10 |  |  |  |
| 1 | 445000 | 40.674 | 10 |  |  |  |
| 1 | 340000 | NA | 10 |  |  |  |
| 1 | 375000 | 75 | 10 |  |  |  |
| 1 | 210000 | 61.9 | 10 |  |  |  |
| 1 | 375000 | 73.33 | 7 |  |  |  |
| 1 | 180000 | NA | 10 |  |  |  |
| 1 | 175000 | NA | 10 |  |  |  |
| 1 | 280000 | 60.751 | 1 |  |  |  |
| 1 | 335000 | NA | 10 |  |  |  |
| 1 | 230000 | 42.478 | 10 |  |  |  |
| 1 | 400000 | 75 | 5 |  |  |  |
| 1 | 250000 | 51 | 10 |  |  |  |
| 1 | 200000 | NA | 10 |  |  |  |
| 1 | 237000 | NA | 10 |  |  |  |
| 1 | 190000 | 63.68 | 10 |  |  |  |
| 1 | 400000 | 53 | 1 | 5 |  |  |


| 2 | 350000 | 72 | 4 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 350000 | 43.429 | 3 |  |  |  |
| 1 | 166000 | NA | 10 |  |  |  |
| 1 | 450000 | 75 | 9 |  |  |  |
| 2 | 250000 | 46.601 | 4 |  |  |  |
| 2 | 275000 | 46.909 | 4 |  |  |  |
| 1 | 430000 | 53.95 | 10 |  |  |  |
| 1 | 365000 | NA | 10 |  |  |  |
| 1 | 1225000 | 80 | 10 |  |  |  |
| 1 | 225000 | 66.67 | 3 |  |  |  |
| 1 | 230000 | 80 | 10 |  |  |  |
| 1 | 400000 | 66.63 | 10 |  |  |  |
| 1 | 200000 | 62.5 | 10 |  |  |  |
| 1 | 535000 | NA | 10 |  |  |  |
| 1 | 400000 | 57.5 | 10 |  |  |  |
| 1 | 629000 | 90 | 1 |  |  |  |
| 1 | 650000 | NA | 10 |  |  |  |
| 1 | 470000 | 79.89 | 10 |  |  |  |
| 1 | 595000 | NA | 10 |  |  |  |
| 1 | 550500 | NA | 10 |  |  |  |
| 1 | 530000 | NA | 10 |  |  |  |
| 2 | 700000 | 70 | 10 |  |  |  |
| 1 | 525000 | NA | 10 |  |  |  |
| 1 | 1425000 | 74 | 10 |  |  |  |
| 1 | 562000 | NA | 10 |  |  |  |
| 1 | 600000 | 85 | 10 |  |  |  |
| 1 | 630000 | 79.44 | 10 |  |  |  |
| 1 | 273500 | NA | 10 |  |  |  |
| 1 | 280000 | 35.71 | 10 |  |  |  |
| 1 | 259900 | NA | 10 |  |  |  |
| 1 | 198000 | NA | 10 |  |  |  |
| 1 | 200000 | 39.5 | 10 |  |  |  |
| 1 | 499000 | NA | 10 |  |  |  |
|  |  | NA | 10 |  |  | . |


| 1 | 547000 | NA | 10 | . | . |
| ---: | ---: | ---: | ---: | :--- | :--- | :--- |
| 1 | NA | 6 | . | . | . |

LR_RACE_BORR LR_RACE_BORR_LR_RACE_BORRLR_RACE_BORR LR_RACE_BORRLR_RACE_CO_BORFLR_RACE_CO_BORF

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| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 7 |  |  |  |  | 8 |  |
| 7 |  |  |  |  | 7 |  |
| 5 |  |  |  |  | 8 |  |
| 5 |  |  |  |  | 8 |  |
| 3 |  |  |  |  | 3 |  |
| 7 |  |  |  |  | 7 |  |
| 7 |  |  |  |  | 7 |  |
| 3 |  |  |  |  | 8 |  |
| 6 |  |  |  |  | 8 |  |
| 7 |  |  |  |  | 7 |  |
| 5 |  |  |  |  | 5 |  |
| 7 |  |  |  |  | 7 |  |
| 7 |  |  |  |  | 7 |  |
| 5 |  |  |  |  | 8 |  |
| 7 |  |  |  |  | 7 |  |
| 7 |  |  |  |  | 7 |  |
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| 7 |  |  |  |  | 7 |  |
| 7 |  |  |  |  | 7 |  |
| 7 |  |  |  |  | 7 |  |
| 7 |  |  |  |  | 7 |  |
| 5 |  |  |  | . | 5 |  |
| 7 |  |  |  |  | 7 |  |
| 5 |  |  |  | . | 8 |  |
| 5 |  |  | 1. | . | 8 |  |



| 7 |  |  |  |  |  | 7. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 7 |  |  |  |  |  | 7. |  |
| 5 |  |  |  |  |  | 8. |  |
| 7 |  |  |  |  |  | 7. |  |
| 3 |  |  |  |  |  | 8. |  |
| 7 |  |  |  |  |  | 7. |  |
| 7 |  |  |  |  |  | 7. |  |
| 7 |  |  |  |  |  | 7. |  |
| 6 |  |  |  |  |  | 8. |  |
| 3 |  |  |  |  |  | 8. |  |
| 7 |  |  |  |  |  | 7. |  |
| 6 |  |  |  |  |  | 8. |  |
| 5 |  |  |  |  |  | 5. |  |
| 7 |  |  |  |  |  | 7. |  |
| 1 | 5 | 5 |  |  |  | 8. |  |
| 5 |  |  |  |  |  | 5. |  |
| 5 |  |  |  |  |  | 8. |  |
| 2 |  |  |  |  |  | 2. |  |
| 2 | 26 |  |  |  |  | 2 | 26 |
| 5 |  |  |  |  |  | 8. |  |
| 5 |  |  |  |  |  | 8. |  |
| 7 |  |  |  |  |  | 7. |  |
| 7 |  |  |  |  |  | 7. |  |
| 2 |  |  |  |  |  | 2. |  |
| 5 |  |  |  |  |  | 5. |  |
| 6 |  |  |  |  |  | 6. |  |
| 5 |  |  |  |  |  | 8. |  |
| 5 |  |  |  |  |  | 5. |  |
| 7 |  |  |  |  |  | 7. |  |
| 7 |  |  |  |  |  | 7. |  |
| 5 |  |  |  |  |  | 5. |  |
| 7 |  |  |  |  |  | 7. |  |
| 2 |  |  |  |  | . | 2. |  |



| 5 |  |  |  |  | 8. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 7 |  |  |  |  | 7. |  |
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| 7 |  |  |  |  | 7. |  |
| 7 |  |  |  |  | 8. |  |
| 6 |  |  |  |  | 6. |  |
| 7 |  |  |  |  | 7. |  |
| 5 |  |  |  |  | 8. |  |
| 7 |  |  |  |  | 7. |  |
| 7 |  |  |  |  | 7. |  |
| 5 |  |  |  |  | 8. |  |
| 2 |  |  |  |  | 8. |  |
| 5 |  |  |  |  | 8. |  |
| 6 |  |  |  |  | 6. |  |
| 7 |  |  |  |  | 7. |  |
| 7 |  |  |  |  | 7. |  |
| 7 |  |  |  |  | 7. |  |
| 7 |  |  |  |  | 7. |  |
| 7 |  |  |  |  | 8. |  |
| 2 | 26 |  |  |  | 8. |  |
| 2 | 21 |  |  |  | 5. |  |
| 6 |  |  |  |  | 8. |  |
| 5 |  |  |  |  | 8. |  |
| 7 |  |  |  |  | 7. |  |
| 7 |  |  |  |  | 7. |  |
| 5 |  |  |  |  | 8. |  |
| 6 |  |  |  |  | 6. |  |
| 7 |  |  |  |  | 7. |  |
| 5 |  |  |  |  | 8. |  |
| 7 |  |  |  |  | 7. |  |
| 7 |  |  |  |  | 7. |  |
| 5 |  |  |  | . | 8. |  |


| 7 |  |  |  |  |  | 8. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5 |  |  |  |  |  | 8. |  |
| 7 |  |  |  |  |  | 7. |  |
| 5 |  |  |  |  |  | 8. |  |
| 5 |  |  |  |  |  | 8. |  |
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| 7 |  |  |  |  |  | 7. |  |
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| 5 |  |  |  |  |  | 8. |  |
| 7 |  |  |  |  |  | 7. |  |
| 2 |  |  |  |  |  | 8. |  |
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| 5 |  |  |  |  |  | 8. |  |
| 5 |  |  |  |  |  | 5. |  |
| 7 |  |  |  |  |  | 7. |  |
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| 5 |  |  |  |  |  | 5. |  |
| 5 |  |  |  |  |  | 8. |  |
| 7 |  |  |  |  |  | 7. |  |
| 7 |  |  |  |  |  | 7. |  |
| 7 |  |  |  |  |  | 7. |  |
| 7 |  |  |  |  |  | 7. |  |
| 5 |  |  |  |  |  | 5. |  |
| 6 |  |  |  |  |  | 8. |  |
| 7 |  |  |  |  |  | 7. |  |
| 5 |  |  |  |  |  | 2 | 3 |
| 7 |  |  |  |  |  | 7. |  |
| 7 |  |  |  |  |  | 7. |  |
| 7 |  |  |  |  |  | 7. |  |
| 5 |  |  |  |  |  | 8. |  |
| 7 |  |  |  |  |  | 7. |  |
| 22 |  |  |  |  | . | 8. |  |
| 5 |  |  |  |  | . | 5. |  |





| 7 |  |  |  |  | 7. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5 |  |  |  |  | 5. |  |
| 5 |  |  |  |  | 8. |  |
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|  | _RACE_CO_BORE | R_RACE_CO_BORF | R_GENDER_BOR | LR_GENDER_CO_BOR | LR_ETHNIC_BORR |
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|  |  |  | 1 | 5 | 14 |
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|  |  |  | 1 | 5 | 2 |
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|  |  |  | 2 | 5 | 3 |
|  |  |  | 4 | 4 | 4 |
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|  |  |  | 1 | 2 | 2 |
|  |  |  | 4 | 4 | 4 |
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|  |  |  | 1 | 5 | - 2 |
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|  |  |  | 1 | 2 | 1 |
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|  |  |  | 2 | 5 | 1 |
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|  |  |  | 1 | 5 | 2 |
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|  |  |  | 4 | 4 | 4 |
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|  | Instruction - Form G <br> Depository Information <br> (Balance as of December 31, 2022) |
| :--- | :--- |
| Census Tract | Office Address |
| 170310310.00 | 4363 S Clark St |
| 170315805.02 | 1851 N Cicher Ave Ave |
| 170311910.00 | 1225 S Ashland Ave |
| 170318429.00 | 4809 S Ashland Ave |
| 170316112.00 | 3033 N Pulaski Rd |
| 170312105.01 | 5620 W Belmont Ave |
| 170311512.00 | 2310 W 95th St |
| 170317201.00 | 757 W 35th St |
| 170318399.00 | 3500 S King Dr |
| 170318396.00 | 1055 W Bryn Mawr Ave, Unit B |
| 170310307.01 | 1849 W North Ave |
| 170312415.00 | 3101 W Cermak Rd |
| 170313009.00 | 712 E 87th St, Ste D2 |
| 170314402.02 | 800 N Kedzie Ave, Ste 218 |
| 170318366.00 | 755 N Larrabee St |
| 170310819.00 | 141 W Jackson Blvd |
| 170318391.00 | 10 S Dearborn |
| 170318391.00 | 4730 W 79th St |
| 170317002.00 | 1103 W Addison St |
| 170318320.00 | 550 W Adams St |
| 170312819.00 | 2790 N Clybourn Ave |
| 170310707.00 | 30 S Wacker Dr |
| 170318391.00 | 9138 S Commercial Ave |
| 170314610.00 | 1959 W Division St |
| 170312422.00 | 600 N Dearborn St |
| 170310817.00 | 330 N Desplaines St |
| 170312801.00 | 4645 W Diversey Ave |
| 170311909.00 | 1200 N Clybourn Ave |
| 170310804.00 | 92 E 103Rd St |
| 170314908.00 |  |


| 170310631.00 | 3032 N Clark St |
| :--- | :--- |
| 170310306.03 | 5715 N Broadway St |
| 170318311.00 | 3225 W Addison St |
| 170316715.00 | 6940 A S Ashland Ave |
| 170310810.00 | 1122 N Clark St |
| 170310818.00 | 230 W Grand Ave |
| 170318316.00 | 7180 W Grand Ave |
| 170310813.00 | 875 N Michigan Ave |
| 170310102.02 | 1791 W Howard St |
| 170314107.00 | 1204 E 53rd St |
| 170311605.02 | 3204 W Irving Park Rd |
| 170315103.00 | 1910 E 95th St |
| 170314306.00 | 7131 S Jeffery Blvd, Ste E |
| 170317004.02 | 8340 S Kedzie Ave |
| 170310817.00 | 401 N Clark St |
| 170311401.00 | 4843 N Kedzie Ave |
| 170310402.02 | 5341 N Lincoln Ave |
| 170310628.00 | 2968 N Lincoln Ave |
| 170310506.00 | 3868 N Lincoln Ave |
| 170318325.00 | 2170 N Clybourn Ave |
| 170310701.02 | 2501 N Clark St |
| 170310712.00 | 2377 N Lincoln Ave, Ste A1-100 |
| 170311301.00 | 6350 N Mccormick Rd |
| 170313005.00 | 3856 W 26th St |
| 170312214.00 | 2235 N Milwaukee Ave |
| 170310104.00 | 6415 N Sheridan Rd |
| 170312819.00 | 739 W Madison St |
| 170313201.00 | 150 N Michigan Ave |
| 170310814.03 | 605 N Michigan Ave |
| 170316201.00 | 5137 S Pulaski Rd |
| 170311504.01 | 5606 W Montrose Ave |
| 170312305.00 | 4440 W North Ave |
| 170318422.00 | 1551 N Kingsbury St |
|  |  |


| 170312206.02 | 2639 N Milwaukee Ave |
| :---: | :---: |
| 170311404.00 | 4824 N Pulaski Rd |
| 170310715.00 | 1700 N Wells St |
| 170310609.00 | 3714 N Broadway St |
| 170318413.00 | 2228 S Western Ave |
| 170315701.00 | 4455 S Pulaski Rd |
| 170318308.00 | 1809 W Lawrence Ave |
| 170310204.00 | 7015 N Western Ave |
| 170315607.00 | 5687 S Archer Ave |
| 170311203.00 | 4145 W Peterson Ave |
| 170318326.00 | 935 W Armitage Ave |
| 170311502.00 | 4854 W Irving Park Rd |
| 170318419.00 | 1130 S Canal St |
| 170315302.00 | 11721 S Halsted St |
| 170313302.00 | 1934 S State St |
| 170310811.00 | 902 N State St |
| 170318391.00 | 238 N State St |
| 170318424.00 | 353 W 83rd St |
| 170318439.00 | 6650 S Stony Island Ave |
| 170310814.02 | 549 N McClurg Ct |
| 170318333.00 | 1130 W Taylor St |
| 170318307.00 | 1101 W Lawrence Ave |
| 170313204.00 | 55 E Monroe St |
| 170310624.00 | 3335 N Ashland Ave |
| 170318330.00 | 923 W Washington Blvd |
| 170310209.01 | 6155 N Western Ave |
| 170312809.00 | 2317 W Madison St |
| 170318350.00 | 6245 S Western Ave |
| 170312403.00 | 1958 W. North Ave |
| 170318330.00 | 1000 W. Randolph St. |

Note: 11 digit is the State Code, County Code and Census Tract merged to single number
Note: Information as of December 31, 2022

Instructions - Form H

## Summary of All Lending Activity and Savings/ Checking Accounts

(For Loans Closed in Calendar Year 2022)

|  | Residential Lendi | ng (1-4 Units) |  |
| :---: | :---: | :---: | :---: |
| Line Number | Description | Information Source | 2-32-440 Municipal Code |
| 1 | (Number) Total Loans Made in Chicago | Refer to your institutions internal records. | a-1 |
|  | (Amount) Sum of all loan amounts made in Chicago | Refer to your institutions internal records. | a-1 |
|  |  |  |  |
| 2 | (Number) Total Loans Made Outside Chicago | Refer to your institutions internal records. | a-2 |
|  | (Amount) Sum of all loan amounts made outside Chicago but in the "Chicago MSA" | Refer to your institutions internal records. |  |
|  |  |  |  |
| 3 | Average Effective Interest Rates - In Chicago | Calculate the average effective interest rate on the following types of loans. | a-3 |
|  | (a) Home Purchase Loans | Refer to your institutions internal records. |  |
|  | (b) Refinancing Loans | Refer to your institutions internal records. |  |
|  | (c) Home Improvement Loans | Refer to your institutions internal records. |  |
|  | (d) Construction Loans | Refer to your institutions internal records. |  |
|  | (e) Home Equity Loans | Refer to your institutions internal records. |  |
|  |  |  |  |
| 4 | Average Effective Interest Rate -Outside Chicago but within the "Chicago MSA" | Refer to your institutions internal records. For Loans Made outside Chicago in Calendar Year 2022, provide the average effective interest rate for the following type of loans | a-4 |
|  | (a) Home Purchase Loans | Refer to your institutions internal records. |  |
|  | (b) Refinancing Loans | Refer to your institutions internal records. |  |
|  | (c) Home Improvement Loans | Refer to your institutions internal records. |  |
|  | (d) Construction Loans | Refer to your institutions internal records. |  |
|  | (e) Home Equity Loans | Refer to your institutions internal records. |  |
|  |  |  |  |
| 5 | Average Down Payment on Home Purchase Loans - In Chicago | Refer to your institutions internal records. | a-5 |
|  |  |  |  |
| 6 | Average Down Payment on Home Purchase Loans - Outside Chicago but within the "Chicago MSA" | Refer to your institutions internal records. | a-5 |


| Residential Lending (More than 4 Units) |  |  |  |
| :---: | :---: | :---: | :---: |
| Line Number | Description | Information Source | 2-32-440 Municipal Code |
| 7 | (Number) Total Loans Made in Chicago | Refer to your institutions internal records. | a-1 |
|  | (Amount) Sum of all loan amounts made in Chicago | Refer to your institutions internal records. | a-1 |
|  |  |  |  |
| 8 | (Number) Total Loans Made Outside Chicago | Refer to your institutions internal records. | a-2 |
|  | (Amount) Sum of all loan amounts made outside Chicago but in the "Chicago MSA" | Refer to your institutions internal records. |  |
|  |  |  |  |
| 9 | Average Effective Interest Rates - In Chicago | Calculate the average effective interest rate on the following types of loans. | a-3 |
|  | (a) Home Purchase Loans | Refer to your institutions internal records. |  |
|  | (b) Refinancing Loans | Refer to your institutions internal records. |  |
|  | (c) Home Improvement Loans | Refer to your institutions internal records. |  |
|  | (d) Construction Loans | Refer to your institutions internal records. |  |
|  | (e) Home Equity Loans | Refer to your institutions internal records. |  |
|  |  |  |  |


| 10 | Average Effective Interest Rate -Outside Chicago but within the "Chicago MSA" | Refer to your institutions internal records. For Loans Made outside Chicago in Calendar Year 2022, provide the average effective interest rate for the following type of loans | a-4 |
| :---: | :---: | :---: | :---: |
|  | (a) Home Purchase Loans | Refer to your institutions internal records. |  |
|  | (b) Refinancing Loans | Refer to your institutions internal records. |  |
|  | (c) Home Improvement Loans | Refer to your institutions internal records. |  |
|  | (d) Construction Loans | Refer to your institutions internal records. |  |
|  | (e) Home Equity Loans | Refer to your institutions internal records. |  |
|  |  |  |  |
| 11 | Average Down Payment on Home Purchase Loans - In Chicago | Refer to your institution's internal records. Provide the average down payment as a percentage of purchase price for all home purchase loans made on properties located within Chicago. | a-5 |
|  |  |  |  |
| 12 | Average Down Payment on Home Purchase Loans - Outside Chicago but within the "Chicago MSA" | Refer to your institution's internal records. Provide the average down payment as a percentage of purchase price for all home purchase loans made on properties located outside Chicago but within Chicago MSA. | a-5 |
| Commercial Lending |  |  |  |
| 13 |  | Refer to Form C |  |
|  | (Number) Total Loans Made in Chicago | Number: Provide the sum of column 2 | c-1 |
|  | (Amount) Sum of all loan amounts made in Chicago | Amount: Provide the sum of column 3 | $\mathrm{c}-1$ |
|  |  |  |  |
| 14 | (Number) Total Loans Made in Chicago Outside Chicago but within the "Chicago MSA" | Refer to your institution's internal records. Provide the total number and dollar amount of all commercial loans made outside Chicago calendar year 2022. | c-3 |
|  | (Amount) Sum of all loan amounts made in Chicago Outside Chicago but within the "Chicago MSA" |  | c-3 |


| Consumer Lending |  |  |  |
| :---: | :---: | :---: | :---: |
| 15 |  | Refer to Form D |  |
|  | (Number) Total Loans Made in Chicago | Number: Provide the sum of column 2 | b-1 |
|  | (Amount) Sum of all loan amounts made in Chicago | Amount: Provide the sum of column 3 | b-1 |
| 16 | (Number) Total Loans Made in Chicago Outside Chicago but within the "Chicago MSA" | Refer to your institution's internal records. Provide the total number and dollar amount of all consumer loans made outside Chicago calendar year 2022. | b-3 |
|  | (Amount) Sum of all loan amounts made in Chicago Outside Chicago but within the "Chicago MSA" |  | b-3 |


| Savings and Checking Accounts |  |  |  |
| :---: | :---: | :---: | :---: |
| 17 |  | Refer to Form E |  |
|  | (Number) Total Savings Accounts in Chicago | Number: Provide the sum of column 2 | d |
|  | (Amount) Total Amount in Savings Account in Chicago | Amount: Provide the sum of column 3 | d |
|  |  |  |  |
| 18 |  | Refer to Form F |  |
|  | (Number) Total Checking Accounts in Chicago Outside Chicago but within the "Chicago MSA" | Number: Provide the sum of column 2 | d |
|  | (Amount) Total Amount in Checking Account in Chicago Outside Chicago but within the "Chicago MSA" | Number: Provide the sum of column 3 | d |

## Instructions - Form H

## Summary of All Lending Activity and Savings/ Checking Accounts (For Loans Closed in Calendar Year 2022)

| Residential Lending (1-4 Units) |  |  |  |
| :---: | :---: | :---: | :---: |
| Line Number | Description |  |  |
| 1 | (Number) Total Loans Made in Chicago |  | 3,753 |
|  | (Amount) Sum of all loan amounts made in Chicago | \$ | 1,451,372,211.16 |
|  |  |  |  |
| 2 | (Number) Total Loans Made Outside Chicago |  | 6,512 |
|  | (Amount) Sum of all loan amounts made outside Chicago but in the "Chicago MSA" | \$ | 1,990,749,919.94 |
|  |  |  |  |
| 3 | Average Effective Interest Rates - In Chicago |  |  |
|  | (a) Home Purchase Loans |  | 4.6266 |
|  | (b) Refinancing Loans |  | 3.6526 |
|  | (c) Home Improvement Loans |  | 5.4876 |
|  | (d) Construction Loans |  |  |
|  | (e) Home Equity Loans |  | 4.1875 |
|  |  |  |  |
| 4 | Average Effective Interest Rate -Outside Chicago but within the "Chicago MSA" |  |  |
|  | (a) Home Purchase Loans |  | 4.7824 |
|  | (b) Refinancing Loans |  | 3.6792 |
|  | (c) Home Improvement Loans |  | 4.9481 |
|  | (d) Construction Loans |  |  |
|  | (e) Home Equity Loans |  | 3.8500 |
|  |  |  |  |
| 5 | Average Down Payment on Home Purchase Loans - In Chicago | \$ | 100,239.66 |
|  |  |  |  |
| 6 | Average Down Payment on Home Purchase Loans - Outside Chicago but within the "Chicago MSA" | \$ | 107,382.06 |


| Residential Lending (More than 4 Units) |  |  |
| :---: | :---: | :---: |
| Line Number | Description |  |
| 7 | (Number) Total Loans Made in Chicago | 0 |
|  | (Amount) Sum of all loan amounts made in Chicago | N/A |
|  |  |  |
| 8 | (Number) Total Loans Made Outside Chicago | 0 |
|  | (Amount) Sum of all loan amounts made outside Chicago but in the "Chicago MSA" | N/A |
|  |  |  |
| 9 | Average Effective Interest Rates - In Chicago |  |
|  | (a) Home Purchase Loans | N/A |
|  | (b) Refinancing Loans | N/A |
|  | (c) Home Improvement Loans | N/A |



| Commercial Lending |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 13 | (Number) Total Loans Made in Chicago | 582 |  |  |
|  | (Amount) Sum of all loan amounts made in Chicago | \$ |  | 2,588,044,596.29 |
|  |  |  |  |  |
| 14 | (Number) Total Loans Made in Chicago Outside Chicago but within the "Chicago MSA" |  | 1048 |  |
|  | (Amount) Sum of all loan amounts made in Chicago Outside Chicago but within the "Chicago MSA" | \$ |  | 359,464,307.55 |


| Consumer Lending |  |  |
| :---: | :--- | :--- |
| 15 |  | This is information is not available by census tract, loan count or loan <br> amount |
|  | (Number) Total Loans Made in Chicago |  |
|  | (Amount) Sum of all loan amounts made in Chicago <br> (Number) Total Loans Made in Chicago Outside Chicago but within the "Chicago <br> MSA" |  |
|  | (Amount) Sum of all loan amounts made in Chicago Outside Chicago but within the <br> "Chicago MSA" |  |


| Savings and Checking Accounts |  |  |
| :--- | :--- | :--- |
| 17 |  |  |
|  | (Number) Total Savings Accounts in Chicago |  |
|  | (Amount) Total Amount in Savings Account in Chicago |  |
|  |  |  |

# CITY OF CHICAGO <br> ECONOMIC DISCLOSURE STATEMENT <br> AND AFFIDAVIT 

## SECTION I -- GENERAL INFORMATION

A. Legal name of the Disclosing Party submitting this EDS. Include $\mathrm{d} / \mathrm{b} / \mathrm{a} /$ if applicable:

JPMorgan Chase Bank, N.A.

## Check ONE of the following three boxes:

Indicate whether the Disclosing Party submitting this EDS is:

1. $[x]$ the Applicant OR
2. [ ] a legal entity currently holding, or anticipated to hold within six months after City action on the contract, transaction or other undertaking to which this EDS pertains (referred to below as the "Matter"), a direct or indirect interest in excess of $7.5 \%$ in the Applicant. State the Applicant's legal name:

## OR

3. [ ] a legal entity with a direct or indirect right of control of the Applicant (see Section II(B)(1)) State the legal name of the entity in which the Disclosing Party holds a right of control:
B. Business address of the Disclosing Party:

1111 Polaris Parkway
Columbus, OH 43240
C. Telephone: $\underline{(312)} 732-6988 ~ F a x: ~ N / A ~ E m a i l: ~ j o a n n e . b a e r @ j p m o r g a n . c o m ~_{\text {_____ }}^{\text {_ }}$
D. Name of contact person: Joanne Baer
E. Federal Employer Identification No. (if you have one): 13-4994650
F. Brief description of the Matter to which this EDS pertains. (Include project number and location of property, if applicable):

The City has distributed an RFP for Depository Certification to remain in the pool eligible to provide banking services and products to the City of Chicago.
This certification also includes the Chicago Public Schools.
G. Which City agency or department is requesting this EDS? City of Chicago Department of Finance

If the Matter is a contract being handled by the City's Department of Procurement Services, please complete the following:

Specification \# $\qquad$ and Contract \# $\qquad$

## SECTION II -- DISCLOSURE OF OWNERSHIP INTERESTS

## A. NATURE OF THE DISCLOSING PARTY

1. Indicate the nature of the Disclosing Party:
[ ] Person
[ ] Publicly registered business corporation
[ ] Privately held business corporation
[ ] Sole proprietorship
[ ] General partnership
[ ] Limited partnership
[ ] Trust
[ ] Limited liability company
[ ] Limited liability partnership
[ ] Joint venture
[ ] Not-for-profit corporation
(Is the not-for-profit corporation also a $501(\mathrm{c})(3)$ )?
[ ] Yes [ ] No
[X] Other (please specify)
National Banking Association
2. For legal entities, the state (or foreign country) of incorporation or organization, if applicable:

Disclosing party is organized under the federal laws of the United States of America.
3. For legal entities not organized in the State of Illinois: Has the organization registered to do business in the State of Illinois as a foreign entity?
[ ] Yes
[x] No
[ ] Organized in Illinois

## B. IF THE DISCLOSING PARTY IS A LEGAL ENTITY:

1. List below the full names and titles, if applicable, of: (i) all executive officers and all directors of the entity; (ii) for not-for-profit corporations, all members, if any, which are legal entities (if there are no such members, write "no members which are legal entities"); (iii) for trusts, estates or other similar entities, the trustee, executor, administrator, or similarly situated party; (iv) for general or limited partnerships, limited liability companies, limited liability partnerships or joint ventures, each general partner, managing member, manager or any other person or legal entity that directly or indirectly controls the day-to-day management of the Applicant.

NOTE: Each legal entity listed below must submit an EDS on its own behalf.

SEE ATTACHMENT A
2. Please provide the following information concerning each person or legal entity having a direct or indirect, current or prospective (i.e. within 6 months after City action) beneficial interest (including ownership) in excess of $7.5 \%$ of the Applicant. Examples of such an interest include shares in a corporation, partnership interest in a partnership or joint venture, interest of a member or manager in a
limited liability company, or interest of a beneficiary of a trust, estate or other similar entity. If none, state "None."

NOTE: Each legal entity listed below may be required to submit an EDS on its own behalf.

| Name <br> JPMorgan Chase \& Co. | Business Address <br> 383 Madison Avenue | Percentage Interest in the Applicant <br> $100 \%$ |
| :--- | :--- | :--- |

[^0]
## SECTION III -- INCOME OR COMPENSATION TO, OR OWNERSHIP BY, CITY ELECTED OFFICIALS

Has the Disclosing Party provided any income or compensation to any City elected official during the 12-month period preceding the date of this EDS? ] Yes [x] No

Does the Disclosing Party reasonably expect to provide any income or compensation to any City elected official during the 12 -month period following the date of this EDS? [ ] Yes [x] No

If "yes" to either of the above, please identify below the name(s) of such City elected official(s) and describe such income or compensation:
SEE ATTACHMENT A

Does any City elected official or, to the best of the Disclosing Party's knowledge after reasonable inquiry, any City elected official's spouse or domestic partner, have a financial interest (as defined in Chapter 2-156 of the Municipal Code of Chicago ("MCC")) in the Disclosing Party?
[ ] Yes [x] No
If "yes," please identify below the name(s) of such City elected official(s) and/or spouse(s)/domestic partner(s) and describe the financial interest(s).

## SECTION IV -- DISCLOSURE OF SUBCONTRACTORS AND OTHER RETAINED PARTIES

The Disclosing Party must disclose the name and business address of each subcontractor, attorney, lobbyist (as defined in MCC Chapter 2-156), accountant, consultant and any other person or entity whom the Disclosing Party has retained or expects to retain in connection with the Matter, as well as the nature of the relationship, and the total amount of the fees paid or estimated to be paid. The Disclosing Party is not required to disclose employees who are paid solely through the Disclosing Party's regular payroll. If the Disclosing Party is uncertain whether a disclosure is required under this Section, the Disclosing Party must either ask the City whether disclosure is required or make the disclosure.

Name (indicate whether retained or anticipated to be retained)

Business Address

Relationship to Disclosing Party (subcontractor, attorney, lobbyist, etc.)

Fees (indicate whether paid or estimated.) NOTE:
"hourly rate" or "t.b.d." is not an acceptable response.
(Add sheets if necessary)
[X] Check here if the Disclosing Party has not retained, nor expects to retain, any such persons or entities.

## SECTION V -- CERTIFICATIONS

## A. COURT-ORDERED CHILD SUPPORT COMPLIANCE

Under MCC Section 2-92-415, substantial owners of business entities that contract with the City must remain in compliance with their child support obligations throughout the contract's term.

Has any person who directly or indirectly owns $10 \%$ or more of the Disclosing Party been declared in arrearage on any child support obligations by any Illinois court of competent jurisdiction?
[ ] Yes [ ] No [X] No person directly or indirectly owns $10 \%$ or more of the Disclosing Party.
If "Yes," has the person entered into a court-approved agreement for payment of all support owed and is the person in compliance with that agreement?

## [ ] Yes [ ] No

## B. FURTHER CERTIFICATIONS

1. [This paragraph 1 applies only if the Matter is a contract being handled by the City's Department of Procurement Services.] In the 5-year period preceding the date of this EDS, neither the Disclosing Party nor any Affiliated Entity [see definition in (5) below] has engaged, in connection with the performance of any public contract, the services of an integrity monitor, independent private sector inspector general, or integrity compliance consultant (i.e., an individual or entity with legal, auditing, investigative, or other similar skills, designated by a public agency to help the agency monitor the activity of specified agency vendors as well as help the vendors reform their business practices so they can be considered for agency contracts in the future, or continue with a contract in progress).
2. The Disclosing Party and its Affiliated Entities are not delinquent in the payment of any fine, fee, tax or other source of indebtedness owed to the City of Chicago, including, but not limited to, water and sewer charges, license fees, parking tickets, property taxes and sales taxes, nor is the Disclosing Party delinquent in the payment of any tax administered by the Illinois Department of Revenue.

SEE ATTACHMENT A
3. The Disclosing Party and, if the Disclosing Party is a legal entity, all of those persons or entities identified in Section II(B)(1) of this EDS: SEE ATTACHMENT A
a. are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from any transactions by any federal, state or local unit of government;
b. have not, during the 5 years before the date of this EDS, been convicted of a criminal offense, adjudged guilty, or had a civil judgment rendered against them in connection with: obtaining, attempting to obtain, or performing a public (federal, state or local) transaction or contract under a public transaction; a violation of federal or state antitrust statutes; fraud; embezzlement; theft; forgery; bribery; falsification or destruction of records; making false statements; or receiving stolen property;
c. are not presently indicted for, or criminally or civilly charged by, a governmental entity (federal, state or local) with committing any of the offenses set forth in subparagraph (b) above;
d. have not, during the 5 years before the date of this EDS, had one or more public transactions (federal, state or local) terminated for cause or default; and
e. have not, during the 5 years before the date of this EDS, been convicted, adjudged guilty, or found liable in a civil proceeding, or in any criminal or civil action, including actions concerning environmental violations, instituted by the City or by the federal government, any state, or any other unit of local government.
4. The Disclosing Party understands and shall comply with the applicable requirements of MCC Chapters 2-56 (Inspector General) and 2-156 (Governmental Ethics).
5. Certifications (5), (6) and (7) concern: SEE ATTACHMENT A

- the Disclosing Party;
- any "Contractor" (meaning any contractor or subcontractor used by the Disclosing Party in connection with the Matter, including but not limited to all persons or legal entities disclosed under Section IV, "Disclosure of Subcontractors and Other Retained Parties");
- any "Affiliated Entity" (meaning a person or entity that, directly or indirectly: controls the Disclosing Party, is controlled by the Disclosing Party, or is, with the Disclosing Party, under common control of another person or entity). Indicia of control include, without limitation: interlocking management or ownership; identity of interests among family members, shared facilities and equipment; common use of employees; or organization of a business entity following the ineligibility of a business entity to do business with federal or state or local government, including the City, using substantially the same management, ownership, or principals as the ineligible entity. With respect to Contractors, the term Affiliated Entity means a person or entity that directly or indirectly controls the Contractor, is controlled by it, or, with the Contractor, is under common control of another person or entity;
- any responsible official of the Disclosing Party, any Contractor or any Affiliated Entity or any other official, agent or employee of the Disclosing Party, any Contractor or any Affiliated Entity, acting pursuant to the direction or authorization of a responsible official of the Disclosing Party, any Contractor or any Affiliated Entity (collectively "Agents").

Neither the Disclosing Party, nor any Contractor, nor any Affiliated Entity of either the Disclosing Party or any Contractor, nor any Agents have, during the 5 years before the date of this EDS, or, with respect to a Contractor, an Affiliated Entity, or an Affiliated Entity of a Contractor during the 5 years before the date of such Contractor's or Affiliated Entity's contract or engagement in connection with the Matter:
a. bribed or attempted to bribe, or been convicted or adjudged guilty of bribery or attempting to bribe, a public officer or employee of the City, the State of Illinois, or any agency of the federal government or of any state or local government in the United States of America, in that officer's or employee's official capacity;
b. agreed or colluded with other bidders or prospective bidders, or been a party to any such agreement, or been convicted or adjudged guilty of agreement or collusion among bidders or prospective bidders, in restraint of freedom of competition by agreement to bid a fixed price or otherwise; or
c. made an admission of such conduct described in subparagraph (a) or (b) above that is a matter of record, but have not been prosecuted for such conduct; or
d. violated the provisions referenced in MCC Subsection 2-92-320(a)(4)(Contracts Requiring a Base Wage); (a)(5)(Debarment Regulations); or (a)(6)(Minimum Wage Ordinance).
6. Neither the Disclosing Party, nor any Affiliated Entity or Contractor, or any of their employees, officials, agents or partners, is barred from contracting with any unit of state or local government as a result of engaging in or being convicted of (1) bid-rigging in violation of 720 ILCS 5/33E-3; (2) bid-rotating in violation of 720 ILCS $5 / 33 \mathrm{E}-4$; or (3) any similar offense of any state or of the United States of America that contains the same elements as the offense of bid-rigging or bid-rotating.
7. Neither the Disclosing Party nor any Affiliated Entity is listed on a Sanctions List maintained by the United States Department of Commerce, State, or Treasury, or any successor federal agency.
8. [FOR APPLICANT ONLY] (i) Neither the Applicant nor any "controlling person" [see MCC Chapter 1-23, Article I for applicability and defined terms] of the Applicant is currently indicted or charged with, or has admitted guilt of, or has ever been convicted of, or placed under supervision for, any criminal offense involving actual, attempted, or conspiracy to commit bribery, theft, fraud, forgery, perjury, dishonesty or deceit against an officer or employee of the City or any "sister agency"; and (ii) the Applicant understands and acknowledges that compliance with Article I is a continuing requirement for doing business with the City. NOTE: If MCC Chapter 1-23, Article I applies to the Applicant, that Article's permanent compliance timeframe supersedes 5-year compliance timeframes in this Section V.
9. [FOR APPLICANT ONLY] The Applicant and its Affiliated Entities will not use, nor permit their subcontractors to use, any facility listed as having an active exclusion by the U.S. EPA on the federal System for Award Management ("SAM").
10. [FOR APPLICANT ONLY] The Applicant will obtain from any contractors/subcontractors hired or to be hired in connection with the Matter certifications equal in form and substance to those in Certifications (2) and (9) above and will not, without the prior written consent of the City, use any such
contractor/subcontractor that does not provide such certifications or that the Applicant has reason to believe has not provided or cannot provide truthful certifications.
11. If the Disclosing Party is unable to certify to any of the above statements in this Part B (Further Certifications), the Disclosing Party must explain below: SEE ATTACHMENT A

If the letters "NA," the word "None," or no response appears on the lines above, it will be conclusively presumed that the Disclosing Party certified to the above statements.
12. To the best of the Disclosing Party's knowledge after reasonable inquiry, the following is a complete list of all current employees of the Disclosing Party who were, at any time during the 12month period preceding the date of this EDS, an employee, or elected or appointed official, of the City of Chicago (if none, indicate with "N/A" or "none").
SEE ATTACHMENT A
13. To the best of the Disclosing Party's knowledge after reasonable inquiry, the following is a complete list of all gifts that the Disclosing Party has given or caused to be given, at any time during the 12 -month period preceding the execution date of this EDS, to an employee, or elected or appointed official, of the City of Chicago. For purposes of this statement, a "gift" does not include: (i) anything made generally available to City employees or to the general public, or (ii) food or drink provided in the course of official City business and having a retail value of less than $\$ 25$ per recipient, or (iii) a political contribution otherwise duly reported as required by law (if none, indicate with "N/A" or "none"). As to any gift listed below, please also list the name of the City recipient. SEE ATTACHMENT A

## C. CERTIFICATION OF STATUS AS FINANCIAL INSTITUTION

1. The Disclosing Party certifies that the Disclosing Party (check one)
$[X]$ is $\quad[\quad]$ is not
a "financial institution" as defined in MCC Section 2-32-455(b).
2. If the Disclosing Party IS a financial institution, then the Disclosing Party pledges:
"We are not and will not become a predatory lender as defined in MCC Chapter 2-32. We further pledge that none of our affiliates is, and none of them will become, a predatory lender as defined in MCC Chapter 2-32. We understand that becoming a predatory lender or becoming an affiliate of a predatory lender may result in the loss of the privilege of doing business with the City."

If the Disclosing Party is unable to make this pledge because it or any of its affiliates (as defined in MCC Section 2-32-455(b)) is a predatory lender within the meaning of MCC Chapter 2-32, explain here (attach additional pages if necessary):

If the letters "NA," the word "None," or no response appears on the lines above, it will be conclusively presumed that the Disclosing Party certified to the above statements.

## D. CERTIFICATION REGARDING FINANCIAL INTEREST IN CITY BUSINESS

Any words or terms defined in MCC Chapter 2-156 have the same meanings if used in this Part D.

1. In accordance with MCC Section 2-156-110: To the best of the Disclosing Party's knowledge after reasonable inquiry, does any official or employee of the City have a financial interest in his or her own name or in the name of any other person or entity in the Matter?
[ ] Yes [X] No SEE ATTACHMENT A
NOTE: If you checked "Yes" to Item $D(1)$, proceed to Items $D(2)$ and $D(3)$. If you checked "No" to Item $\mathrm{D}(1)$, skip Items $\mathrm{D}(2)$ and $\mathrm{D}(3)$ and proceed to Part E.
2. Unless sold pursuant to a process of competitive bidding, or otherwise permitted, no City elected official or employee shall have a financial interest in his or her own name or in the name of any other person or entity in the purchase of any property that (i) belongs to the City, or (ii) is sold for taxes or assessments, or (iii) is sold by virtue of legal process at the suit of the City (collectively, "City Property Sale"). Compensation for property taken pursuant to the City's eminent domain power does not constitute a financial interest within the meaning of this Part D.

Does the Matter involve a City Property Sale?
[ ] Yes [ ] No
3. If you checked "Yes" to Item $\mathrm{D}(1)$, provide the names and business addresses of the City officials or employees having such financial interest and identify the nature of the financial interest:

Name
Business Address
Nature of Financial Interest
4. The Disclosing Party further certifies that no prohibited financial interest in the Matter will be acquired by any City official or employee. SEE ATTACHMENT A

## E. CERTIFICATION REGARDING SLAVERY ERA BUSINESS

Please check either (1) or (2) below. If the Disclosing Party checks (2), the Disclosing Party must disclose below or in an attachment to this EDS all information required by (2). Failure to comply with these disclosure requirements may make any contract entered into with the City in connection with the Matter voidable by the City.
$\qquad$ 1. The Disclosing Party verifies that the Disclosing Party has searched any and all records of the Disclosing Party and any and all predecessor entities regarding records of investments or profits from slavery or slaveholder insurance policies during the slavery era (including insurance policies issued to slaveholders that provided coverage for damage to or injury or death of their slaves), and the Disclosing Party has found no such records.
2. The Disclosing Party verifies that, as a result of conducting the search in step (1) above, the Disclosing Party has found records of investments or profits from slavery or slaveholder insurance policies. The Disclosing Party verifies that the following constitutes full disclosure of all such records, including the names of any and all slaves or slaveholders described in those records: SEE ATTACHMENT B

## SECTION VI -- CERTIFICATIONS FOR FEDERALLY FUNDED MATTERS

NOTE: If the Matter is federally funded, complete this Section VI. If the Matter is not
federally funded, proceed to Section VII. For purposes of this Section VI, tax credits allocated by the City and proceeds of debt obligations of the City are not federal funding.

## A. CERTIFICATION REGARDING LOBBYING

1. List below the names of all persons or entities registered under the federal Lobbying Disclosure Act of 1995, as amended, who have made lobbying contacts on behalf of the Disclosing Party with respect to the Matter: (Add sheets if necessary): NOT APPLICABLE
(If no explanation appears or begins on the lines above, or if the letters "NA" or if the word "None" appear, it will be conclusively presumed that the Disclosing Party means that NO persons or entities registered under the Lobbying Disclosure Act of 1995, as amended, have made lobbying contacts on behalf of the Disclosing Party with respect to the Matter.)
2. The Disclosing Party has not spent and will not expend any federally appropriated funds to pay any person or entity listed in paragraph $\mathrm{A}(1)$ above for his or her lobbying activities or to pay any person or entity to influence or attempt to influence an officer or employee of any agency, as defined by applicable federal law, a member of Congress, an officer or employee of Congress, or an employee Ver.2018-1
of a member of Congress, in connection with the award of any federally funded contract, making any federally funded grant or loan, entering into any cooperative agreement, or to extend, continue, renew, amend, or modify any federally funded contract, grant, loan, or cooperative agreement.
3. The Disclosing Party will submit an updated certification at the end of each calendar quarter in which there occurs any event that materially affects the accuracy of the statements and information set forth in paragraphs $A(1)$ and $A(2)$ above.
4. The Disclosing Party certifies that either: (i) it is not an organization described in section 501(c)(4) of the Internal Revenue Code of 1986; or (ii) it is an organization described in section 501(c)(4) of the Internal Revenue Code of 1986 but has not engaged and will not engage in "Lobbying Activities," as that term is defined in the Lobbying Disclosure Act of 1995, as amended.
5. If the Disclosing Party is the Applicant, the Disclosing Party must obtain certifications equal in form and substance to paragraphs $\mathrm{A}(1)$ through $\mathrm{A}(4)$ above from all subcontractors before it awards any subcontract and the Disclosing Party must maintain all such subcontractors' certifications for the duration of the Matter and must make such certifications promptly available to the City upon request.

## B. CERTIFICATION REGARDING EQUAL EMPLOYMENT OPPORTUNITY

If the Matter is federally funded, federal regulations require the Applicant and all proposed subcontractors to submit the following information with their bids or in writing at the outset of negotiations.

Is the Disclosing Party the Applicant?
[ ] Yes [ ] No
If "Yes," answer the three questions below:

1. Have you developed and do you have on file affirmative action programs pursuant to applicable federal regulations? (See 41 CFR Part 60-2.)
[ ] Yes [ ] No
2. Have you filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance Programs, or the Equal Employment Opportunity Commission all reports due under the applicable filing requirements?
[ ] Yes [ ] No [ ] Reports not required
3. Have you participated in any previous contracts or subcontracts subject to the equal opportunity clause?
[ ] Yes [ ] No
If you checked "No" to question (1) or (2) above, please provide an explanation:

## SECTION VII -- FURTHER ACKNOWLEDGMENTS AND CERTIFICATION

The Disclosing Party understands and agrees that:
A. The certifications, disclosures, and acknowledgments contained in this EDS will become part of any contract or other agreement between the Applicant and the City in connection with the Matter, whether procurement, City assistance, or other City action, and are material inducements to the City's execution of any contract or taking other action with respect to the Matter. The Disclosing Party understands that it must comply with all statutes, ordinances, and regulations on which this EDS is based.
B. The City's Governmental Ethics Ordinance, MCC Chapter 2-156, imposes certain duties and obligations on persons or entities seeking City contracts, work, business, or transactions. The full text of this ordinance and a training program is available on line at www.cityofchicago.org/Ethics, and may also be obtained from the City's Board of Ethics, 740 N. Sedgwick St., Suite 500, Chicago, IL 60610, (312) 744-9660. The Disclosing Party must comply fully with this ordinance.
C. If the City determines that any information provided in this EDS is false, incomplete or inaccurate, any contract or other agreement in connection with which it is submitted may be rescinded or be void or voidable, and the City may pursue any remedies under the contract or agreement (if not rescinded or void), at law, or in equity, including terminating the Disclosing Party's participation in the Matter and/or declining to allow the Disclosing Party to participate in other City transactions. Remedies at law for a false statement of material fact may include incarceration and an award to the City of treble damages.
D. It is the City's policy to make this document available to the public on its Internet site and/or upon request. Some or all of the information provided in, and appended to, this EDS may be made publicly available on the Internet, in response to a Freedom of Information Act request, or otherwise. By completing and signing this EDS, the Disclosing Party waives and releases any possible rights or claims which it may have against the City in connection with the public release of information contained in this EDS and also authorizes the City to verify the accuracy of any information submitted in this EDS.
E. The information provided in this EDS must be kept current. In the event of changes, the Disclosing Party must supplement this EDS up to the time the City takes action on the Matter. If the Matter is a contract being handled by the City's Department of Procurement Services, the Disclosing Party must update this EDS as the contract requires. NOTE: With respect to Matters subject to MCC Chapter 1-23, Article I (imposing PERMANENT INELIGIBILITY for certain specified offenses), the information provided herein regarding eligibility must be kept current for a longer period, as required by MCC Chapter 1-23 and Section 2-154-020.

## CERTIFICATION

Under penalty of perjury, the person signing below: (1) warrants that he/she is authorized to execute this EDS, and all applicable Appendices, on behalf of the Disclosing Party, and (2) warrants that all certifications and statements contained in this EDS, and all applicable Appendices, are true, accurate and complete as of the date furnished to the City.

JPMorgan Chase Bank, N.A.
(Print or type exact legal name of Disclosing Party)
By: fane Baler
(Sign here)

Joanne Baer
(Print or type name of person signing)

Authorized Officer
(Print or type title of person signing)

Signed and sworn to before me on (date) $11-30-2023$, at COOK County, Illinois (state).


Commission expires: $02-02-2025$

# CITY OF CHICAGO <br> ECONOMIC DISCLOSURE STATEMENT AND AFFIDAVIT <br> APPENDIX A 

## FAMILIAL RELATIONSHIPS WITH ELECTED CITY OFFICIALS AND DEPARTMENT HEADS


#### Abstract

This Appendix is to be completed only by (a) the Applicant, and (b) any legal entity which has a direct ownership interest in the Applicant exceeding 7.5\%. It is not to be completed by any legal entity which has only an indirect ownership interest in the Applicant.


Under MCC Section 2-154-015, the Disclosing Party must disclose whether such Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof currently has a "familial relationship" with any elected city official or department head. A "familial relationship" exists if, as of the date this EDS is signed, the Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof is related to the mayor, any alderman, the city clerk, the city treasurer or any city department head as spouse or domestic partner or as any of the following, whether by blood or adoption: parent, child, brother or sister, aunt or uncle, niece or nephew, grandparent, grandchild, father-in-law, mother-in-law, son-in-law, daughter-in-law, stepfather or stepmother, stepson or stepdaughter, stepbrother or stepsister or half-brother or half-sister.
"Applicable Party" means (1) all executive officers of the Disclosing Party listed in Section II.B.1.a., if the Disclosing Party is a corporation; all partners of the Disclosing Party, if the Disclosing Party is a general partnership; all general partners and limited partners of the Disclosing Party, if the Disclosing Party is a limited partnership; all managers, managing members and members of the Disclosing Party, if the Disclosing Party is a limited liability company; (2) all principal officers of the Disclosing Party; and (3) any person having more than a $7.5 \%$ ownership interest in the Disclosing Party. "Principal officers" means the president, chief operating officer, executive director, chief financial officer, treasurer or secretary of a legal entity or any person exercising similar authority.

Does the Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof currently have a "familial relationship" with an elected city official or department head?

To the Authorized Representative's knowledge, information
[ ] Yes
[X] No and belief after reasonable inquiry.
If yes, please identify below (1) the name and title of such person, (2) the name of the legal entity to which such person is connected; (3) the name and title of the elected city official or department head to whom such person has a familial relationship, and (4) the precise nature of such familial relationship.

## CITY OF CHICAGO <br> ECONOMIC DISCLOSURE STATEMENT AND AFFIDAVIT APPENDIX B

## BUILDING CODE SCOFFLAW/PROBLEM LANDLORD CERTIFICATION

This Appendix is to be completed only by (a) the Applicant, and (b) any legal entity which has a direct ownership interest in the Applicant exceeding 7.5\% (an "Owner"). It is not to be completed by any legal entity which has only an indirect ownership interest in the Applicant.

1. Pursuant to MCC Section 2-154-010, is the Applicant or any Owner identified as a building code scofflaw or problem landlord pursuant to MCC Section 2-92-416?
[ ] Yes [X] No
2. If the Applicant is a legal entity publicly traded on any exchange, is any officer or director of the Applicant identified as a building code scofflaw or problem landlord pursuant to MCC Section 2-92-416? *
[ ] Yes [ ] No [X] The Applicant is not publicly traded on any exchange.
3. If yes to (1) or (2) above, please identify below the name of each person or legal entity identified as a building code scofflaw or problem landlord and the address of each building or buildings to which the pertinent code violations apply.

## CITY OF CHICAGO ECONOMIC DISCLOSURE STATEMENT AND AFFIDAVIT APPENDIX C

## PROHIBITION ON WAGE \& SALARY HISTORY SCREENING - CERTIFICATION

This Appendix is to be completed only by an Applicant that is completing this EDS as a "contractor" as defined in MCC Section 2-92-385. That section, which should be consulted (www.amlegal.com), generally covers a party to any agreement pursuant to which they: (i) receive City of Chicago funds in consideration for services, work or goods provided (including for legal or other professional services), or (ii) pay the City money for a license, grant or concession allowing them to conduct a business on City premises.

On behalf of an Applicant that is a contractor pursuant to MCC Section 2-92-385, I hereby certify that the Applicant is in compliance with MCC Section 2-92-385(b)(1) and (2), which prohibit: (i) screening job applicants based on their wage or salary history, or (ii) seeking job applicants' wage or salary history from current or former employers. I also certify that the Applicant has adopted a policy that includes those prohibitions.
[X] Yes
[ ] No
[ ] N/A - I am not an Applicant that is a "contractor" as defined in MCC Section 2-92-385.

This certification shall serve as the affidavit required by MCC Section 2-92-385(c)(1).

If you checked "no" to the above, please explain.

## ATTACHMENT A

TO

## CITY OF CHICAGO

## ECONOMIC DISCLOSURE STATEMENT AND AFFIDAVIT <br> FILED BY <br> JPMORGAN CHASE BANK, N.A. <br> (as the Disclosing Party and the Applicant)

Responses contained in the corresponding EDS and this Attachment A are true, accurate and complete based on the undersigned's knowledge, information and belief, upon due inquiry by relying on information provided by other employees of the Disclosing Party or its affiliates or subsidiaries. Certain sections of this EDS may be in the process of being updated. The Disclosing Party will provide the City of Chicago with an update to this Disclosure Statement if there are any material changes to the matters disclosed herein.

## SECTION II B. 1 <br> Directors:

Linda B. Bammann

Stephen B. Burke
Todd A. Combs
Alicia Davis
James Dimon
Timothy P. Flynn
Alex Gorsky
Mellody Hobson
Michael A. Neal
Phebe N. Novakovic
Virginia M. Rometty

## Executive Officers

| Ashley Bacon | Chief Risk Officer |
| :--- | :--- |
| Jeremy Barnum | Chief Financial Officer |
| Lori A. Beer | Chief Information Officer |
| James Dimon | Chief Executive Officer and President |
| Mary Callahan Erdoes | Chief Executive Officer of Asset \& Wealth Management |
| Stacey Friedman | General Counsel |
| Marianne Lake | Co-Chief Executive Officer of Consumer \& Community <br> Banking <br> Robin Leopold |
| Douglas B. Petno | Head of Human Resources |
| Jennifer A. Piepszak | Chief Executive Officer of Commercial Banking |
| Daniel E. Pinto | Co-Chief Executive Officer of Consumer \& Community Banking <br> Chief Operating Officer and Chief Executive Officer of <br> Corporate \& Investment Bank <br> Peter L. Scher |
|  | Vice Chair |

Notes regarding additional, select officer titles with JPMorgan Chase Bank, N.A.:

| Stephen B. Burke | Non-executive Chairman of the Board |
| :--- | :--- |
| Charles Bristow | Chief Investment Officer |
| Louis Rauchenberger | General Auditor |
| Christina Duggar | Chief Compliance Officer |
| John Tribolati | Secretary |
| Giovanna Acquilanlo | Controller |

## SECTION III: INCOME OR COMPENSATION TO, OR OWNERSHIP BY, CITY ELECTED OFFICIALS

Based on knowledge and belief, upon due inquiry, the Disclosing Party does not reasonably expect to provide any income or compensation to any City elected official during the 12-month period following the date of this EDS.

## SECTION IV: DISCLOSURE OF SUBCONTRACTORS AND OTHER RETAINED PARTIES


#### Abstract

With respect to Section IV, the Authorized Representative certifies based on the Authorized Representative's knowledge, information and belief, upon due inquiry, that the Disclosing Party has not retained a subcontractor, attorney, lobbyist, accountant or consultant in connection with the Matter.


## SECTION V: CERTIFICATIONS

## B. FURTHER CERTIFICATIONS

B. 2 The Authorized Representative certifies on behalf of the Disclosing Party, as to the statements contained in Section V. B. 2 that based on the Authorized Representative's knowledge, information, and belief, upon due inquiry, that neither the Disclosing Party nor its affiliates are delinquent in paying any fine, fee, tax or other charge owed to the City of Chicago except for taxes that are being contested in good faith by appropriate legal proceeding and possible delinquencies in paying a fine, fee, tax or other charge related to (i) property mortgaged to the Disclosing Party or its affiliates, (ii) property owned by the Disclosing Party or its affiliates and leased to others, (iii) foreclosed property now owned by the Disclosing Party or its affiliates, (iv) property owned or held by the Disclosing Party or its affiliates as a fiduciary or nominee, and (v) fines, fees, taxes or other charges that are being contested in good faith by the Disclosing Party or its affiliates by appropriate legal proceeding. If there are any outstanding claims that the Disclosing Party is notified of that Disclosing Party was not aware of previously, Disclosing Party will immediately address them.
B. 3 (a-e) With respect to Section V, B. 3 (a-e) of the EDS, the Authorized Representative, certifies based on the Authorized Representative's knowledge, information, and belief, upon due inquiry, that such statements are accurate with respect to the executive officers and directors of the Disclosing Party. Based on the Disclosing Party's knowledge, information, and belief, upon due inquiry, JPMorgan Chase \& Co. and/or its subsidiaries (collectively, the "Firm") are defendants or putative defendants in numerous legal proceedings, including private civil litigations and regulatory/government investigations. The litigations range from individual actions involving a single plaintiff to class action lawsuits with potentially millions of class members. Investigations involve both formal and informal proceedings, by both governmental agencies and self-regulatory organizations. These legal proceedings are at varying stages of adjudication, arbitration or investigation, and involve each of the Firm's lines of business and geographies and a wide variety of claims (including common law tort and contract claims and statutory antitrust, securities and consumer protection claims), some of which present novel legal theories. Based on current knowledge, the Firm believes it has asserted meritorious defenses to the claims asserted against it in its currently outstanding legal proceedings, intends to defend itself vigorously in all such matters and does not believe that any pending legal proceeding would have a
material effect on the Firm's performance of the services contemplated by the RFP. For further discussion, please refer to JPMorgan Chase \& Co.'s publicly-filed disclosures, including its most recent Annual Report on Form 10-K and Quarterly Reports on Form 10Q filed with the U.S. Securities and Exchange Commission (available at: https://investor.shareholder.com/jpmorganchase/sec.cfm.
B. 5 (a-d);
B.6; B. 7;
B. 8

The Authorized Representative certifies on behalf of the Disclosing Party the accuracy of the statements contained in sections 5, 6, 7 and 8 of Section V only as to the Disclosing Party and its executive officers and directors. Based on the Disclosing Party's knowledge, information, and belief, upon due inquiry, JPMorgan Chase \& Co. and/or its subsidiaries (collectively, the "Firm") are defendants or putative defendants in numerous legal proceedings, including private civil litigations and regulatory/government investigations. The litigations range from individual actions involving a single plaintiff to class action lawsuits with potentially millions of class members. Investigations involve both formal and informal proceedings, by both governmental agencies and self-regulatory organizations. These legal proceedings are at varying stages of adjudication, arbitration or investigation, and involve each of the Firm's lines of business and geographies and a wide variety of claims (including common law tort and contract claims and statutory antitrust, securities and consumer protection claims), some of which present novel legal theories. Based on current knowledge, the Firm believes it has asserted meritorious defenses to the claims asserted against it in its currently outstanding legal proceedings, intends to defend itself vigorously in all such matters and does not believe that any pending legal proceeding would have a material effect on the Firm's performance of the services contemplated by the RFP. For further discussion, please refer to JPMorgan Chase \& Co.'s publicly-filed disclosures, including its most recent Annual Report on Form 10-K and Quarterly Reports on Form 10-Q filed with the U.S. Securities and Exchange Commission (available at: https://investor.shareholder.com/jpmorganchase/sec.cfm.

Furthermore, with respect to Section V. B.5. (d), the Minimum Wage ordinance, the Disclosing Party has not, during the five years before the execution date of this EDS, been determined to have violated the provisions of Municipal Code Section 2-92-320 (Minimum Wage Ordinance) as it relates to base wages.
B. 11 Except as otherwise set forth in this Attachment A, the Authorized Representative on behalf of the Disclosing Party does not make any certification whatsoever with respect to any Applicable Party other than the Disclosing Party. The Authorized Representative on behalf of the Disclosing Party also certifies that it has not engaged any sub-contractor with respect to this transaction.
B. 12 Please note that due to the size and scope of our organization, we are unable to determine whether any employees of the Disclosing Party were previously employed by the City of Chicago during the 12 -month period preceding the date of this EDS; without limiting the immediately foregoing statement, we do not believe there are any such employees of the Disclosing Party upon knowledge, information and belief. Further, we can state that no member of the JPMC deal team directly working on this matter was previously employed by the City of Chicago during this time period.
B. 13 The Authorized Representative certifies as to the statement in Section V, paragraph B. 13 that, based on the Authorized Representative's knowledge, information, and belief, upon due inquiry, the following gifts were provided by employees of the Bank to the following:

- None


## D. INTEREST IN CITY BUSINESS

D. 1 \& D. 4 As to the disclosures set forth in Section V, paragraphs D. 1 \& D.4, based on the Authorized Representative's knowledge, information, and belief, upon due inquiry, on behalf of the Disclosing Party, to the extent the Disclosing Party has any control the Authorized Representative certifies that no official or employee of the City of Chicago has a financial interest in his or her own name or in the name of any other person in this transaction.

# ATTACHMENT B <br> TO <br> CITY OF CHICAGO <br> ECONOMIC DISCLOSURE STATEMENT AND AFFIDAVIT FILED BY <br> JPMORGAN CHASE BANK, N.A. <br> (as the Disclosing Party and the Applicant) 

The following response is true, accurate and complete based on the Authorized Representative's knowledge, information, and belief relying on information prepared on February 24, 2009, by a consultant at the direction of JPMorgan Chase \& Co.

## SECTION V -- CERTIFICATIONS

## E. CERTIFICATION REGARDING SLAVERY ERA BUSINESS.

The Disclosing Party assumed its current name on November 13, 2004, when JPMorgan Chase Bank, a New York banking corporation, was converted into a national banking association under the name JPMorgan Chase Bank, National Association, and both Bank One, National Association (main office Chicago) and Bank One, National Association (main office Columbus) merged into it with the Disclosing Party being the surviving entity.

With regard to predecessors of the Disclosing Party as it existed prior to such merger ("JPMorgan Chase"), the Disclosing Party reports that J. Pierpont Morgan, Sr. was associated with George Peabody \& Company and J.S. Morgan \& Company (the "Peabody Firms") before he founded Drexel Morgan \& Company, which ultimately became part of JPMorgan Chase. Capital supplied by Junius S. Morgan and J. Pierpont Morgan, Sr. appears to have been used to capitalize Drexel Morgan \& Company in 1871. Upon the death of Junius S. Morgan, J.S. Morgan \& Company came under the control of J. Pierpont Morgan, Sr. and became affiliated with J.P. Morgan \& Co. Records indicate that the Peabody Firms had customers that appear to have used enslaved individuals.

JPMorgan Chase and the Bank One banks referred to above (collectively, "Bank One") had predecessor banks in states outside the South that purchased notes issued by, issued letters of credit or made loans to, and/or maintained correspondent accounts with municipalities, banks, companies and individuals located in Southern states where slavery was practiced during the slavery era. These municipalities, banks, companies and individuals are listed on Attachment 1.

Bank One had predecessor banks before 1866 in three Southern states: Kentucky, Louisiana and Virginia. Searches revealed slavery-related information about two Louisiana banks, the Canal Bank (formed in 1831) and the Citizens Bank (formed in 1833), and the Lexington branch of the second Bank of Kentucky (formed in 1835). In 1924 Citizens Bank and Canal Bank merged. Predecessors of JPMorgan Chase had longstanding banking relationships with Canal Bank and its predecessors (see Attachment 1), were creditors of Canal Bank and, in 1931, it appears that a predecessor of JPMorgan Chase led a group of investors that provided capital to Canal Bank and this predecessor of JPMorgan Chase became a shareholder and took a controlling management interest in the Canal Bank. The Canal Bank was placed into liquidation in March-May 1933 based on actions by the State of Louisiana and the federal government. In May 1933, The National Bank of Commerce in New Orleans was formed pursuant to an executive order approved by President Roosevelt and its assets included some of the deposits and loans of the old Canal Bank. Most of the capital for The National Bank of Commerce was provided by the Reconstruction Finance Corporation (owned by the U.S. government), with the remainder coming
from new shareholders. The U.S. government also provided over $\$ 13$ million toward the liquidation of the old Canal Bank. In 1947 and 1969, The National Bank of Commerce in New Orleans made two grants to Tulane University, which included archives of the Citizens Bank and Canal Bank. These materials are held at the Tulane Manuscripts Department, Special Collections Division, Howard-Tilton Memorial Library at Tulane University in New Orleans, Louisiana (collectively, the "Tulane Records"). In 1865, the First National Bank of Lexington (subsequently a part of First Security Corporation of Kentucky which was acquired by Bank One in 1992) was formed and assumed the operations of the Lexington Branch of the second Bank of Kentucky. Public records pertaining to the Lexington Branch of the second Bank of Kentucky have been discovered that contain records relevant to this certification (the "Lexington Records"). The Tulane Records, the Lexington Records and other records indicate that:

1. Citizens Bank and Canal Bank provided credit to plantation owners and accepted mortgages from them. The collateral covered by these mortgages included land, equipment and/or enslaved individuals. The available records do not always provide the names of enslaved individuals. The Disclosing Party, however, estimates that, from 1831 to 1865, taking into account the duplication and/or absence of exact data, approximately 21,000 enslaved individuals were listed among the collateral covered by mortgages given to the Louisiana banks.
2. The Lexington Branch of the second Bank of Kentucky also provided credit to plantation owners and accepted mortgages from them. The collateral covered by these mortgages included land, equipment and/or enslaved individuals. The available records do not always provide the names of enslaved individuals. The Disclosing Party, however, estimates that, from 1835 to 1865 , taking into account the duplication and/or absence of exact data, approximately 55 enslaved individuals were listed among the collateral covered by mortgages given to the Lexington Branch of the second Bank of Kentucky.
3. When mortgages went unpaid, the banks could initiate foreclosure proceedings. When this occurred, the bank could take ownership of the collateral. The available records do not always provide the names of enslaved individuals. The Disclosing Party, however, estimates that, from 1831 to 1865 , taking into account the duplication and/or absence of exact data, approximately 1,300 enslaved individuals were listed among the collateral that the Louisiana banks came to own. There is no evidence of foreclosure proceedings initiated by the Lexington Branch of the second Bank of Kentucky.

Attachment 2 lists information on mortgages as to which one of the Louisiana banks came to own enslaved individuals through foreclosure proceedings, including, where available, the names of those individuals and their prior or subsequent owners. Attachment 3 lists information on mortgages as to which one of the three banks held collateral that included enslaved individuals, including, where available, the names of those individuals and their prior or subsequent owners. The attachments will be supplemented as necessary to reflect any additional information located.

On September 25, 2008, the Disclosing Party acquired from the Federal Deposit Insurance Corporation, as the Receiver of Washington Mutual Bank, Henderson, NV (the "Receiver") certain assets of Washington Mutual Bank.

A review of the records of Washington Mutual Bank, including the records of its predecessor entities, has disclosed no evidence that Washington Mutual Bank nor any of its predecessors had any investments or profits from slavery, any direct involvement in the slave trade, any direct ownership in slaves, or any slaveholder insurance policies from the slavery era. There is evidence, however, that one predecessor entity, The Bowery Savings Bank, New York (1834)
("Bowery Savings"), purchased a $\$ 100,000$ bond of a slave holding state, North Carolina. A total of $\$ 44,000$ was paid to Bowery Savings by North Carolina in 1868 on account of the bond.

## ATTACHMENT 1

TO
ATTACHMENT B
TO
CITY OF CHICAGO
ECONOMIC DISCLOSURE STATEMENT AND AFFIDAVIT FILED BY
JPMORGAN CHASE BANK, N.A. (as the Disclosing Party and the Applicant)

Agricultural Bank of Mississippi<br>Baltimore \& Ohio Rail Road Company<br>Bank of Alabama<br>Bank of Alexandria (Virginia)<br>Bank of Ashland at Shelbyville<br>Bank of Augusta (Georgia)<br>Bank of Kentucky<br>Bank of Louisiana<br>Bank of Louisville<br>Bank of Metropolis<br>Bank of Mobile<br>Bank of Missouri<br>Bank of North Carolina<br>Bank of South Carolina<br>Bank of the State of Missouri<br>Bank of Tennessee<br>Bank of Virginia<br>Barnett, Ellison \& Co.<br>Beers \& Brunell<br>Beers \& Co.<br>Canal \& Rail Road Bank of Vicksburg<br>Carrolton Bank of New Orleans<br>Charleston Fire \& Marine Insurance Company<br>Chattahoochee Rail Road and Banking Company<br>City Bank of New Orleans<br>Commercial \& Rail Road Bank of Vicksburg<br>Commercial Bank of Manchester (Mississippi)<br>Commercial Bank of New Orleans<br>Commercial Bank of Selma<br>Corporation of the City of New Orleans<br>Corporation of the City of Savannah<br>Davis \& Davis<br>Delaware \& Hudson Canal Company<br>E.I. Forestall of New Orleans<br>ER Tyler of New Orleans<br>E. Warfield, Lexington, Kentucky<br>Exchange \& Banking Company of New Orleans<br>Exchange Bank of Virginia at Richmond<br>Franklin Bank of Baltimore<br>First Bank of Richmond<br>Hunt, Morton \& Quigby of Louisville (Kentucky)

J.D. Beers \& Co.<br>Louisiana \& Nashville Railroad Company<br>Mechanics \& Traders Bank of New Orleans<br>Merchant \& Planters Bank of Savannah<br>Merchants Bank of Baltimore<br>Mississippi Sound Company<br>Mr. Pastoret<br>Mr. S. Reid Irving \& Co. (Cotton)<br>Nashville and Northwestern Rail Road Co.<br>New Orleans Canal \& Banking Company<br>North Western Bank of Virginia<br>Philadelphia, Wilmington \& Baltimore Rail Road Company<br>Planters \& Mechanics Bank of Charleston<br>Planters \& Mechanics Bank of Mobile<br>Planters \& Merchants Bank of Charleston<br>Planters Bank of Jackson (Mississippi)<br>Planters Bank of Natchez<br>Planters Bank of Savannah<br>Planters Bank of Tennessee<br>Robert Kinder House<br>Ross \& Coleman<br>South Western Rail Road Bank of Charleston<br>Southern Bank of Alabama<br>Southern Bank of Kentucky<br>Southern Life Insurance \& Trust Company of Florida<br>Southern Trust Company<br>Southwestern Rail Road Bank (South Carolina)<br>S. Reid Irving \& Company<br>State \& Metcalf of Gainsville, Georgia<br>State of Alabama<br>State of Florida<br>State of Georgia<br>State of Mississippi<br>T.T. Crittenden, Lexington and Huntsville, Kentucky<br>Tuscumbice and Decatur Rail Road Company<br>Union Bank of Charleston<br>Union Bank of Florida<br>Union Bank of Tennessee

## ATTACHMENT 2

TO
ATTACHMENT B
TO
CITY OF CHICAGO
ECONOMIC DISCLOSURE STATEMENT AND AFFIDAVIT FILED BY
JPMORGAN CHASE BANK, N.A.
(as the Disclosing Party and the Applicant)

ENSLAVED INDIVIDUALS OWNED BY<br>CITIZENS BANK OF LOUISIANA AND<br>NEW ORLEANS CANAL \& BANKING COMPANY

Attachments 2 and 3 are omitted.
Please see the Economic Disclosure Statement of JPMorgan Chase \& Co. for Attachments 2 and 3.

## ATTACHMENT 3

TO
ATTACHMENT B
TO
CITY OF CHICAGO
ECONOMIC DISCLOSURE STATEMENT AND AFFIDAVIT FILED BY
JPMORGAN CHASE BANK, N.A.
(as the Disclosing Party and the Applicant)
ENSLAVED INDIVIDUALS MORTGAGED TO
CITIZENS BANK OF LOUISIANA,
NEW ORLEANS CANAL \& BANKING COMPANY AND LEXINGTON BRANCH OF THE SECOND BANK OF KENTUCKY

Attachments 2 and 3 are omitted.
Please see the Economic Disclosure Statement of JPMorgan Chase \& Co. for Attachments 2 and 3.

# CITY OF CHICAGO <br> ECONOMIC DISCLOSURE STATEMENT <br> AND AFFIDAVIT 

## SECTION I -- GENERAL INFORMATION

A. Legal name of the Disclosing Party submitting this EDS. Include $\mathrm{d} / \mathrm{b} / \mathrm{a} /$ if applicable:

JPMorgan Chase \& Co.

## Check ONE of the following three boxes:

Indicate whether the Disclosing Party submitting this EDS is:

1. $[x]$ the Applicant OR
2. $[X]$ a legal entity currently holding, or anticipated to hold within six months after City action on the contract, transaction or other undertaking to which this EDS pertains (referred to below as the "Matter"), a direct or indirect interest in excess of $7.5 \%$ in the Applicant. State the Applicant's legal name: JPMorgan Chase Bank, N.A.

OR
3. [ ] a legal entity with a direct or indirect right of control of the Applicant (see Section II(B)(1)) State the legal name of the entity in which the Disclosing Party holds a right of control:
B. Business address of the Disclosing Party:

383 Madison Avenue
New York, NY 10179
C. Telephone: (312)732-6988 Fax: N/A Email: joanne.baer@jpmorgan.com
D. Name of contact person: Joanne Baer
E. Federal Employer Identification No. (if you have one): 13-2624428
F. Brief description of the Matter to which this EDS pertains. (Include project number and location of property, if applicable):

The City has distributed an RFP for Depository Certification to remain in the pool eligible to provide banking services and products to the City of Chicago.
This certification also includes the Chicago Public Schools.
G. Which City agency or department is requesting this EDS? City of Chicago Department of Finance

If the Matter is a contract being handled by the City's Department of Procurement Services, please complete the following:

Specification \# $\qquad$ and Contract \# $\qquad$

## SECTION II -- DISCLOSURE OF OWNERSHIP INTERESTS

## A. NATURE OF THE DISCLOSING PARTY

1. Indicate the nature of the Disclosing Party:
[ ] Person
[X] Publicly registered business corporation
[ ] Privately held business corporation
[ ] Sole proprietorship
[ ] General partnership
[ ] Limited partnership
[ ] Trust
[ ] Limited liability company
[ ] Limited liability partnership
[ ] Joint venture
[ ] Not-for-profit corporation
(Is the not-for-profit corporation also a 501 (c)(3))?
[ ] Yes [ ] No
[X] Other (please specify)
2. For legal entities, the state (or foreign country) of incorporation or organization, if applicable:

Delaware
3. For legal entities not organized in the State of Illinois: Has the organization registered to do business in the State of Illinois as a foreign entity?
[X] Yes [X] No ] Organized in Illinois

## B. IF THE DISCLOSING PARTY IS A LEGAL ENTITY:

1. List below the full names and titles, if applicable, of: (i) all executive officers and all directors of the entity; (ii) for not-for-profit corporations, all members, if any, which are legal entities (if there are no such members, write "no members which are legal entities"); (iii) for trusts, estates or other similar entities, the trustee, executor, administrator, or similarly situated party; (iv) for general or limited partnerships, limited liability companies, limited liability partnerships or joint ventures, each general partner, managing member, manager or any other person or legal entity that directly or indirectly controls the day-to-day management of the Applicant.

NOTE: Each legal entity listed below must submit an EDS on its own behalf.

SEE ATTACHMENT A
2. Please provide the following information concerning each person or legal entity having a direct or indirect, current or prospective (i.e. within 6 months after City action) beneficial interest (including ownership) in excess of $7.5 \%$ of the Applicant. Examples of such an interest include shares in a corporation, partnership interest in a partnership or joint venture, interest of a member or manager in a
limited liability company, or interest of a beneficiary of a trust, estate or other similar entity. If none, state "None."

NOTE: Each legal entity listed below may be required to submit an EDS on its own behalf.
Name
Business Address
Percentage Interest in the Applicant
SEE ATTACHMENT A

## SECTION III -- INCOME OR COMPENSATION TO, OR OWNERSHIP BY, CITY ELECTED OFFICIALS

Has the Disclosing Party provided any income or compensation to any City elected official during the 12 -month period preceding the date of this EDS? ] Yes [X] No

Does the Disclosing Party reasonably expect to provide any income or compensation to any City elected official during the 12 -month period following the date of this EDS? [ ] Yes [X] No

If "yes" to either of the above, please identify below the name(s) of such City elected official(s) and describe such income or compensation:
SEE ATTACHMENT A

Does any City elected official or, to the best of the Disclosing Party's knowledge after reasonable inquiry, any City elected official's spouse or domestic partner, have a financial interest (as defined in Chapter 2-156 of the Municipal Code of Chicago ("MCC")) in the Disclosing Party?
[ ] Yes [X] No
If "yes," please identify below the name(s) of such City elected official(s) and/or spouse(s)/domestic partner(s) and describe the financial interest(s).

## SECTION IV -- DISCLOSURE OF SUBCONTRACTORS AND OTHER RETAINED PARTIES

The Disclosing Party must disclose the name and business address of each subcontractor, attorney, lobbyist (as defined in MCC Chapter 2-156), accountant, consultant and any other person or entity whom the Disclosing Party has retained or expects to retain in connection with the Matter, as well as the nature of the relationship, and the total amount of the fees paid or estimated to be paid. The Disclosing Party is not required to disclose employees who are paid solely through the Disclosing Party's regular payroll. If the Disclosing Party is uncertain whether a disclosure is required under this Section, the Disclosing Party must either ask the City whether disclosure is required or make the disclosure.

Name (indicate whether retained or anticipated to be retained)

Business Address

Relationship to Disclosing Party (subcontractor, attorney, lobbyist, etc.)

Fees (indicate whether paid or estimated.) NOTE:
"hourly rate" or "t.b.d." is not an acceptable response.
(Add sheets if necessary)
[X] Check here if the Disclosing Party has not retained, nor expects to retain, any such persons or entities.

## SECTION V -- CERTIFICATIONS

## A. COURT-ORDERED CHILD SUPPORT COMPLIANCE

Under MCC Section 2-92-415, substantial owners of business entities that contract with the City must remain in compliance with their child support obligations throughout the contract's term.

Has any person who directly or indirectly owns $10 \%$ or more of the Disclosing Party been declared in arrearage on any child support obligations by any Illinois court of competent jurisdiction?
[ ] Yes [ ] No [X] No person directly or indirectly owns $10 \%$ or more of the Disclosing Party.
If "Yes," has the person entered into a court-approved agreement for payment of all support owed and is the person in compliance with that agreement?

## [ ] Yes [ ] No

## B. FURTHER CERTIFICATIONS

1. [This paragraph 1 applies only if the Matter is a contract being handled by the City's Department of Procurement Services.] In the 5-year period preceding the date of this EDS, neither the Disclosing Party nor any Affiliated Entity [see definition in (5) below] has engaged, in connection with the performance of any public contract, the services of an integrity monitor, independent private sector inspector general, or integrity compliance consultant (i.e., an individual or entity with legal, auditing, investigative, or other similar skills, designated by a public agency to help the agency monitor the activity of specified agency vendors as well as help the vendors reform their business practices so they can be considered for agency contracts in the future, or continue with a contract in progress).
2. The Disclosing Party and its Affiliated Entities are not delinquent in the payment of any fine, fee, tax or other source of indebtedness owed to the City of Chicago, including, but not limited to, water and sewer charges, license fees, parking tickets, property taxes and sales taxes, nor is the Disclosing Party delinquent in the payment of any tax administered by the Illinois Department of Revenue.

SEE ATTACHMENT A

3. The Disclosing Party and, if the Disclosing Party is a legal entity, all of those persons or entities identified in Section II(B)(1) of this EDS: SEE ATTACHMENT A
a. are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from any transactions by any federal, state or local unit of government;
b. have not, during the 5 years before the date of this EDS, been convicted of a criminal offense, adjudged guilty, or had a civil judgment rendered against them in connection with: obtaining, attempting to obtain, or performing a public (federal, state or local) transaction or contract under a public transaction; a violation of federal or state antitrust statutes; fraud; embezzlement; theft; forgery; bribery; falsification or destruction of records; making false statements; or receiving stolen property;
c. are not presently indicted for, or criminally or civilly charged by, a governmental entity (federal, state or local) with committing any of the offenses set forth in subparagraph (b) above;
d. have not, during the 5 years before the date of this EDS, had one or more public transactions (federal, state or local) terminated for cause or default; and
e. have not, during the 5 years before the date of this EDS, been convicted, adjudged guilty, or found liable in a civil proceeding, or in any criminal or civil action, including actions concerning environmental violations, instituted by the City or by the federal government, any state, or any other unit of local government.
4. The Disclosing Party understands and shall comply with the applicable requirements of MCC Chapters 2-56 (Inspector General) and 2-156 (Governmental Ethics).
5. Certifications (5), (6) and (7) concern: SEE ATTACHMENT A

- the Disclosing Party;
- any "Contractor" (meaning any contractor or subcontractor used by the Disclosing Party in connection with the Matter, including but not limited to all persons or legal entities disclosed under Section IV, "Disclosure of Subcontractors and Other Retained Parties");
- any "Affiliated Entity" (meaning a person or entity that, directly or indirectly: controls the Disclosing Party, is controlled by the Disclosing Party, or is, with the Disclosing Party, under common control of another person or entity). Indicia of control include, without limitation: interlocking management or ownership; identity of interests among family members, shared facilities and equipment; common use of employees; or organization of a business entity following the ineligibility of a business entity to do business with federal or state or local government, including the City, using substantially the same management, ownership, or principals as the ineligible entity. With respect to Contractors, the term Affiliated Entity means a person or entity that directly or indirectly controls the Contractor, is controlled by it, or, with the Contractor, is under common control of another person or entity;
- any responsible official of the Disclosing Party, any Contractor or any Affiliated Entity or any other official, agent or employee of the Disclosing Party, any Contractor or any Affiliated Entity, acting pursuant to the direction or authorization of a responsible official of the Disclosing Party, any Contractor or any Affiliated Entity (collectively "Agents").

Neither the Disclosing Party, nor any Contractor, nor any Affiliated Entity of either the Disclosing Party or any Contractor, nor any Agents have, during the 5 years before the date of this EDS, or, with respect to a Contractor, an Affiliated Entity, or an Affiliated Entity of a Contractor during the 5 years before the date of such Contractor's or Affiliated Entity's contract or engagement in connection with the Matter:
a. bribed or attempted to bribe, or been convicted or adjudged guilty of bribery or attempting to bribe, a public officer or employee of the City, the State of Illinois, or any agency of the federal government or of any state or local government in the United States of America, in that officer's or employee's official capacity;
b. agreed or colluded with other bidders or prospective bidders, or been a party to any such agreement, or been convicted or adjudged guilty of agreement or collusion among bidders or prospective bidders, in restraint of freedom of competition by agreement to bid a fixed price or otherwise; or
c. made an admission of such conduct described in subparagraph (a) or (b) above that is a matter of record, but have not been prosecuted for such conduct; or
d. violated the provisions referenced in MCC Subsection 2-92-320(a)(4)(Contracts Requiring a Base Wage); (a)(5)(Debarment Regulations); or (a)(6)(Minimum Wage Ordinance).
6. Neither the Disclosing Party, nor any Affiliated Entity or Contractor, or any of their employees, officials, agents or partners, is barred from contracting with any unit of state or local government as a result of engaging in or being convicted of (1) bid-rigging in violation of 720 ILCS 5/33E-3; (2) bid-rotating in violation of 720 ILCS $5 / 33 \mathrm{E}-4$; or (3) any similar offense of any state or of the United States of America that contains the same elements as the offense of bid-rigging or bid-rotating.
7. Neither the Disclosing Party nor any Affiliated Entity is listed on a Sanctions List maintained by the United States Department of Commerce, State, or Treasury, or any successor federal agency.
8. [FOR APPLICANT ONLY] (i) Neither the Applicant nor any "controlling person" [see MCC Chapter 1-23, Article I for applicability and defined terms] of the Applicant is currently indicted or charged with, or has admitted guilt of, or has ever been convicted of, or placed under supervision for, any criminal offense involving actual, attempted, or conspiracy to commit bribery, theft, fraud, forgery, perjury, dishonesty or deceit against an officer or employee of the City or any "sister agency"; and (ii) the Applicant understands and acknowledges that compliance with Article I is a continuing requirement for doing business with the City. NOTE: If MCC Chapter 1-23, Article I applies to the Applicant, that Article's permanent compliance timeframe supersedes 5-year compliance timeframes in this Section V.
9. [FOR APPLICANT ONLY] The Applicant and its Affiliated Entities will not use, nor permit their subcontractors to use, any facility listed as having an active exclusion by the U.S. EPA on the federal System for Award Management ("SAM").
10. [FOR APPLICANT ONLY] The Applicant will obtain from any contractors/subcontractors hired or to be hired in connection with the Matter certifications equal in form and substance to those in Certifications (2) and (9) above and will not, without the prior written consent of the City, use any such
contractor/subcontractor that does not provide such certifications or that the Applicant has reason to believe has not provided or cannot provide truthful certifications.
11. If the Disclosing Party is unable to certify to any of the above statements in this Part B (Further Certifications), the Disclosing Party must explain below: SEE ATTACHMENT A

If the letters "NA," the word "None," or no response appears on the lines above, it will be conclusively presumed that the Disclosing Party certified to the above statements.
12. To the best of the Disclosing Party's knowledge after reasonable inquiry, the following is a complete list of all current employees of the Disclosing Party who were, at any time during the 12month period preceding the date of this EDS, an employee, or elected or appointed official, of the City of Chicago (if none, indicate with "N/A" or "none").
SEE ATTACHMENT A
13. To the best of the Disclosing Party's knowledge after reasonable inquiry, the following is a complete list of all gifts that the Disclosing Party has given or caused to be given, at any time during the 12 -month period preceding the execution date of this EDS, to an employee, or elected or appointed official, of the City of Chicago. For purposes of this statement, a "gift" does not include: (i) anything made generally available to City employees or to the general public, or (ii) food or drink provided in the course of official City business and having a retail value of less than $\$ 25$ per recipient, or (iii) a political contribution otherwise duly reported as required by law (if none, indicate with "N/A" or "none"). As to any gift listed below, please also list the name of the City recipient. SEE ATTACHMENT A

## C. CERTIFICATION OF STATUS AS FINANCIAL INSTITUTION

1. The Disclosing Party certifies that the Disclosing Party (check one)
$[X]$ is $\quad[\quad]$ is not
a "financial institution" as defined in MCC Section 2-32-455(b).
2. If the Disclosing Party IS a financial institution, then the Disclosing Party pledges:
"We are not and will not become a predatory lender as defined in MCC Chapter 2-32. We further pledge that none of our affiliates is, and none of them will become, a predatory lender as defined in MCC Chapter 2-32. We understand that becoming a predatory lender or becoming an affiliate of a predatory lender may result in the loss of the privilege of doing business with the City."

If the Disclosing Party is unable to make this pledge because it or any of its affiliates (as defined in MCC Section 2-32-455(b)) is a predatory lender within the meaning of MCC Chapter 2-32, explain here (attach additional pages if necessary):

If the letters "NA," the word "None," or no response appears on the lines above, it will be conclusively presumed that the Disclosing Party certified to the above statements.

## D. CERTIFICATION REGARDING FINANCIAL INTEREST IN CITY BUSINESS

Any words or terms defined in MCC Chapter 2-156 have the same meanings if used in this Part D.

1. In accordance with MCC Section 2-156-110: To the best of the Disclosing Party's knowledge after reasonable inquiry, does any official or employee of the City have a financial interest in his or her own name or in the name of any other person or entity in the Matter?
[ ] Yes [X] No SEE ATTACHMENT A
NOTE: If you checked "Yes" to Item $D(1)$, proceed to Items $D(2)$ and $D(3)$. If you checked "No" to Item $\mathrm{D}(1)$, skip Items $\mathrm{D}(2)$ and $\mathrm{D}(3)$ and proceed to Part E .
2. Unless sold pursuant to a process of competitive bidding, or otherwise permitted, no City elected official or employee shall have a financial interest in his or her own name or in the name of any other person or entity in the purchase of any property that (i) belongs to the City, or (ii) is sold for taxes or assessments, or (iii) is sold by virtue of legal process at the suit of the City (collectively, "City Property Sale"). Compensation for property taken pursuant to the City's eminent domain power does not constitute a financial interest within the meaning of this Part D.

Does the Matter involve a City Property Sale?
[ ] Yes [ ] No
3. If you checked "Yes" to Item $\mathrm{D}(1)$, provide the names and business addresses of the City officials or employees having such financial interest and identify the nature of the financial interest:

Name
Business Address
Nature of Financial Interest
4. The Disclosing Party further certifies that no prohibited financial interest in the Matter will be acquired by any City official or employee. SEE ATTACHMENT A

## E. CERTIFICATION REGARDING SLAVERY ERA BUSINESS

Please check either (1) or (2) below. If the Disclosing Party checks (2), the Disclosing Party must disclose below or in an attachment to this EDS all information required by (2). Failure to comply with these disclosure requirements may make any contract entered into with the City in connection with the Matter voidable by the City.
$\qquad$ 1. The Disclosing Party verifies that the Disclosing Party has searched any and all records of the Disclosing Party and any and all predecessor entities regarding records of investments or profits from slavery or slaveholder insurance policies during the slavery era (including insurance policies issued to slaveholders that provided coverage for damage to or injury or death of their slaves), and the Disclosing Party has found no such records.
$\qquad$ 2. The Disclosing Party verifies that, as a result of conducting the search in step (1) above, the Disclosing Party has found records of investments or profits from slavery or slaveholder insurance policies. The Disclosing Party verifies that the following constitutes full disclosure of all such records, including the names of any and all slaves or slaveholders described in those records: SEE ATTACHMENT B

## SECTION VI -- CERTIFICATIONS FOR FEDERALLY FUNDED MATTERS

NOTE: If the Matter is federally funded, complete this Section VI. If the Matter is not
federally funded, proceed to Section VII. For purposes of this Section VI, tax credits allocated by the City and proceeds of debt obligations of the City are not federal funding.

## A. CERTIFICATION REGARDING LOBBYING

1. List below the names of all persons or entities registered under the federal Lobbying Disclosure Act of 1995, as amended, who have made lobbying contacts on behalf of the Disclosing Party with respect to the Matter: (Add sheets if necessary): NOT APPLICABLE
(If no explanation appears or begins on the lines above, or if the letters "NA" or if the word "None" appear, it will be conclusively presumed that the Disclosing Party means that NO persons or entities registered under the Lobbying Disclosure Act of 1995, as amended, have made lobbying contacts on behalf of the Disclosing Party with respect to the Matter.)
2. The Disclosing Party has not spent and will not expend any federally appropriated funds to pay any person or entity listed in paragraph $\mathrm{A}(1)$ above for his or her lobbying activities or to pay any person or entity to influence or attempt to influence an officer or employee of any agency, as defined by applicable federal law, a member of Congress, an officer or employee of Congress, or an employee Ver.2018-1
of a member of Congress, in connection with the award of any federally funded contract, making any federally funded grant or loan, entering into any cooperative agreement, or to extend, continue, renew, amend, or modify any federally funded contract, grant, loan, or cooperative agreement.
3. The Disclosing Party will submit an updated certification at the end of each calendar quarter in which there occurs any event that materially affects the accuracy of the statements and information set forth in paragraphs $A(1)$ and $A(2)$ above.
4. The Disclosing Party certifies that either: (i) it is not an organization described in section 501(c)(4) of the Internal Revenue Code of 1986; or (ii) it is an organization described in section 501(c)(4) of the Internal Revenue Code of 1986 but has not engaged and will not engage in "Lobbying Activities," as that term is defined in the Lobbying Disclosure Act of 1995, as amended.
5. If the Disclosing Party is the Applicant, the Disclosing Party must obtain certifications equal in form and substance to paragraphs $\mathrm{A}(1)$ through $\mathrm{A}(4)$ above from all subcontractors before it awards any subcontract and the Disclosing Party must maintain all such subcontractors' certifications for the duration of the Matter and must make such certifications promptly available to the City upon request.

## B. CERTIFICATION REGARDING EQUAL EMPLOYMENT OPPORTUNITY

If the Matter is federally funded, federal regulations require the Applicant and all proposed subcontractors to submit the following information with their bids or in writing at the outset of negotiations.

Is the Disclosing Party the Applicant?
[ ] Yes [ ] No
If "Yes," answer the three questions below:

1. Have you developed and do you have on file affirmative action programs pursuant to applicable federal regulations? (See 41 CFR Part 60-2.)
[ ] Yes [ ] No
2. Have you filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance Programs, or the Equal Employment Opportunity Commission all reports due under the applicable filing requirements?
[ ] Yes [ ] No [ ] Reports not required
3. Have you participated in any previous contracts or subcontracts subject to the equal opportunity clause?
[ ] Yes [ ] No
If you checked "No" to question (1) or (2) above, please provide an explanation:

## SECTION VII -- FURTHER ACKNOWLEDGMENTS AND CERTIFICATION

The Disclosing Party understands and agrees that:
A. The certifications, disclosures, and acknowledgments contained in this EDS will become part of any contract or other agreement between the Applicant and the City in connection with the Matter, whether procurement, City assistance, or other City action, and are material inducements to the City's execution of any contract or taking other action with respect to the Matter. The Disclosing Party understands that it must comply with all statutes, ordinances, and regulations on which this EDS is based.
B. The City's Governmental Ethics Ordinance, MCC Chapter 2-156, imposes certain duties and obligations on persons or entities seeking City contracts, work, business, or transactions. The full text of this ordinance and a training program is available on line at www.cityofchicago.org/Ethics, and may also be obtained from the City's Board of Ethics, 740 N. Sedgwick St., Suite 500, Chicago, IL 60610, (312) 744-9660. The Disclosing Party must comply fully with this ordinance.
C. If the City determines that any information provided in this EDS is false, incomplete or inaccurate, any contract or other agreement in connection with which it is submitted may be rescinded or be void or voidable, and the City may pursue any remedies under the contract or agreement (if not rescinded or void), at law, or in equity, including terminating the Disclosing Party's participation in the Matter and/or declining to allow the Disclosing Party to participate in other City transactions. Remedies at law for a false statement of material fact may include incarceration and an award to the City of treble damages.
D. It is the City's policy to make this document available to the public on its Internet site and/or upon request. Some or all of the information provided in, and appended to, this EDS may be made publicly available on the Internet, in response to a Freedom of Information Act request, or otherwise. By completing and signing this EDS, the Disclosing Party waives and releases any possible rights or claims which it may have against the City in connection with the public release of information contained in this EDS and also authorizes the City to verify the accuracy of any information submitted in this EDS.
E. The information provided in this EDS must be kept current. In the event of changes, the Disclosing Party must supplement this EDS up to the time the City takes action on the Matter. If the Matter is a contract being handled by the City's Department of Procurement Services, the Disclosing Party must update this EDS as the contract requires. NOTE: With respect to Matters subject to MCC Chapter 1-23, Article I (imposing PERMANENT INELIGIBILITY for certain specified offenses), the information provided herein regarding eligibility must be kept current for a longer period, as required by MCC Chapter 1-23 and Section 2-154-020.

## CERTIFICATION

Under penalty of perjury, the person signing below: (1) warrants that he/she is authorized to execute this EDS, and all applicable Appendices, on behalf of the Disclosing Party, and (2) warrants that all certifications and statements contained in this EDS, and all applicable Appendices, are true, accurate and complete as of the date furnished to the City.

## JPMorgan Chase \& Co.

(Print or type exact legal name of Disclosing Party)
By:


Lori Madden
(Print or type name of person signing)
Attorney in Fact
(Print or type title of person signing)

Signed and sworn to before me on (date) 12-01-2023 $\qquad$ ,


Commission expires: 06-14-2025

# CITY OF CHICAGO <br> ECONOMIC DISCLOSURE STATEMENT AND AFFIDAVIT <br> APPENDIX A 

## FAMILIAL RELATIONSHIPS WITH ELECTED CITY OFFICIALS AND DEPARTMENT HEADS


#### Abstract

This Appendix is to be completed only by (a) the Applicant, and (b) any legal entity which has a direct ownership interest in the Applicant exceeding 7.5\%. It is not to be completed by any legal entity which has only an indirect ownership interest in the Applicant.


Under MCC Section 2-154-015, the Disclosing Party must disclose whether such Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof currently has a "familial relationship" with any elected city official or department head. A "familial relationship" exists if, as of the date this EDS is signed, the Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof is related to the mayor, any alderman, the city clerk, the city treasurer or any city department head as spouse or domestic partner or as any of the following, whether by blood or adoption: parent, child, brother or sister, aunt or uncle, niece or nephew, grandparent, grandchild, father-in-law, mother-in-law, son-in-law, daughter-in-law, stepfather or stepmother, stepson or stepdaughter, stepbrother or stepsister or half-brother or half-sister.
"Applicable Party" means (1) all executive officers of the Disclosing Party listed in Section II.B.1.a., if the Disclosing Party is a corporation; all partners of the Disclosing Party, if the Disclosing Party is a general partnership; all general partners and limited partners of the Disclosing Party, if the Disclosing Party is a limited partnership; all managers, managing members and members of the Disclosing Party, if the Disclosing Party is a limited liability company; (2) all principal officers of the Disclosing Party; and (3) any person having more than a $7.5 \%$ ownership interest in the Disclosing Party. "Principal officers" means the president, chief operating officer, executive director, chief financial officer, treasurer or secretary of a legal entity or any person exercising similar authority.

Does the Disclosing Party or any "Applicable Party" or any Spouse or Domestic Partner thereof currently have a "familial relationship" with an elected city official or department head?
[ ] Yes [X] No To the Authorized Representative's knowledge, information and belief after reasonable inquiry.

If yes, please identify below (1) the name and title of such person, (2) the name of the legal entity to which such person is connected; (3) the name and title of the elected city official or department head to whom such person has a familial relationship, and (4) the precise nature of such familial relationship.

## CITY OF CHICAGO <br> ECONOMIC DISCLOSURE STATEMENT AND AFFIDAVIT APPENDIX B

## BUILDING CODE SCOFFLAW/PROBLEM LANDLORD CERTIFICATION

This Appendix is to be completed only by (a) the Applicant, and (b) any legal entity which has a direct ownership interest in the Applicant exceeding 7.5\% (an "Owner"). It is not to be completed by any legal entity which has only an indirect ownership interest in the Applicant.

1. Pursuant to MCC Section 2-154-010, is the Applicant or any Owner identified as a building code scofflaw or problem landlord pursuant to MCC Section 2-92-416?
[ ] Yes [X] No
2. If the Applicant is a legal entity publicly traded on any exchange, is any officer or director of the Applicant identified as a building code scofflaw or problem landlord pursuant to MCC Section 2-92-416?
[ ] Yes [ ] No [X] The Applicant is not publicly traded on any exchange.
3. If yes to (1) or (2) above, please identify below the name of each person or legal entity identified as a building code scofflaw or problem landlord and the address of each building or buildings to which the pertinent code violations apply.

## CITY OF CHICAGO ECONOMIC DISCLOSURE STATEMENT AND AFFIDAVIT APPENDIX C

## PROHIBITION ON WAGE \& SALARY HISTORY SCREENING - CERTIFICATION

This Appendix is to be completed only by an Applicant that is completing this EDS as a "contractor" as defined in MCC Section 2-92-385. That section, which should be consulted (www.amlegal.com), generally covers a party to any agreement pursuant to which they: (i) receive City of Chicago funds in consideration for services, work or goods provided (including for legal or other professional services), or (ii) pay the City money for a license, grant or concession allowing them to conduct a business on City premises.

On behalf of an Applicant that is a contractor pursuant to MCC Section 2-92-385, I hereby certify that the Applicant is in compliance with MCC Section 2-92-385(b)(1) and (2), which prohibit: (i) screening job applicants based on their wage or salary history, or (ii) seeking job applicants' wage or salary history from current or former employers. I also certify that the Applicant has adopted a policy that includes those prohibitions.
[X] Yes
[ ] No
[X] N/A - I am not an Applicant that is a "contractor" as defined in MCC Section 2-92-385.

This certification shall serve as the affidavit required by MCC Section 2-92-385(c)(1).

If you checked "no" to the above, please explain.

# ATTACHMENT A <br> TO <br> CITY OF CHICAGO <br> ECONOMIC DISCLOSURE STATEMENT AND AFFIDAVIT <br> FILED BY <br> JPMORGAN CHASE \& CO. (as a Disclosing Party holding an interest in the Applicant) 

Responses contained in the corresponding EDS and this Attachment A are true, accurate and complete based on the undersigned's knowledge, information and belief, upon due inquiry by relying on information provided by other employees of the Disclosing Party or its affiliates or subsidiaries. Certain sections of this EDS may be in the process of being updated. The Disclosing Party will provide the City of Chicago with an update to this Disclosure Statement if there are any material changes to the matters disclosed herein.

## SECTION II B. 1

## Directors:

> Linda B. Bammann

Stephen B. Burke
Todd A. Combs
Alicia Davis
James Dimon
Timothy P. Flynn
Alex Gorsky
Mellody Hobson
Michael A. Neal
Phebe N. Novakovic
Virginia M. Rometty

## Operating Committee:

Ashley Bacon
Mark Badrichani
Jeremy Barnum
Lori A. Beer
James Dimon
Mary Callahan Erdoes
Stacey Friedman
Takis Georgakopolous
Teresa Heitsenrether
Marianne Lake
Robin Leopold
Douglas B. Petno
Jennifer A. Piepszak
Daniel E. Pinto
Troy Rohrbaugh
Peter L. Scher
Sanoke Viswanathan

Chief Risk Officer
Head of Global Sales \& Research
Chief Financial Officer
Chief Information Officer
Chairman of the Board, Chief Executive Officer
Chief Executive Officer of Asset \& Wealth Management
General Counsel
Global Head of Payments
Chief Data \& Analytics Officer
Co-Chief Executive Officer of Consumer \& Community Banking
Head of Human Resources
Chief Executive Officer of Commercial Banking
Co-Chief Executive Officer of Consumer \& Community Banking
President, Chief Operating Officer, Chief Executive Officer of the Corporate \& Investment Bank
Co-Head of Markets \& Securities Services
Vice Chairman
Chief Executive Officer of International Consumer Banking

## SECTION II B.2: DISCLOSURE OF OWNERSHIP INTERESTS

JPMorgan Chase \& Co. has nearly three billion shares of common stock outstanding as of September 30, 2023 that are bought and sold by investors in the normal course. At various points of time, a limited number of large institutional investors may own in excess of $7.5 \%$ and those companies are required to make related regulatory filings with the SEC.

## SECTION III: INCOME OR COMPENSATION TO, OR OWNERSHIP BY, CITY ELECTED OFFICIALS

Based on knowledge and belief, upon due inquiry, the Disclosing Party does not reasonable expect to provide any income or compensation to any City elected official during the 12-month period following the date of this EDS.

## SECTION IV: DISCLOSURE OF SUBCONTRACTORS AND OTHER RETAINED PARTIES

With respect to Section IV, the Authorized Representative certifies based on the Authorized Representative's knowledge, information, and belief, upon due inquiry, that the Disclosing Party has not retained a subcontractor, attorney, lobbyist, accountant, or consultant in connection with the Matter.

## SECTION V: CERTIFICATIONS

## B. FURTHER CERTIFICATIONS

B. 2 The Authorized Representative certifies on behalf of the Disclosing Party, as to the statements contained in Section V.B. 2 that based on the Authorized Representative's knowledge, information, and belief, upon due inquiry, that neither the Disclosing Party nor its affiliates are delinquent in paying any fine, fee, tax or other charge owed to the State of Illinois or the City of Chicago except for taxes that are being contested in good faith by appropriate legal proceeding and possible delinquencies in paying a fine, fee, tax or other charge related to (i) property mortgaged to the Disclosing Party or its affiliates, (ii) property owned by the Disclosing Party or its affiliates and leased to others, (iii) foreclosed property now owned by the Disclosing Party or its affiliates, (iv) property owned or held by the Disclosing Party or its affiliates as a fiduciary or nominee, and (v) fines, fees, taxes or other charges that are being contested in good faith by the Disclosing Party or its affiliates by appropriate legal proceeding. If there are any outstanding claims that the Disclosing Party is notified of that Disclosing Party was not aware of previously, Disclosing Party will immediately address them.
B. 3 (a-e) With respect to Section V, B. 3 (a-e) of the EDS, the Authorized Representative certifies based on the Authorized Representative's knowledge, information, and belief, upon due inquiry, that such statements are accurate with respect to the executive officers and directors of the Disclosing Party. Based on the Disclosing Party's knowledge, information, and belief, upon due inquiry, JPMorgan Chase \& Co. and/or its subsidiaries (collectively, the "Firm") are defendants or putative defendants in numerous legal proceedings, including private civil litigations and regulatory/government investigations. The litigations range from individual actions involving a single plaintiff to class action lawsuits with potentially millions of class members. Investigations involve both formal and informal proceedings, by both governmental agencies and self-regulatory organizations. These legal proceedings are at varying stages of adjudication, arbitration or investigation, and involve each of the Firm's lines of business and geographies and a wide variety of claims (including common law tort and contract claims and statutory antitrust, securities and consumer protection claims), some of which present novel legal theories. Based on current knowledge, the Firm believes it has asserted meritorious defenses to the claims asserted against it in its currently outstanding legal proceedings, intends to defend itself vigorously in all such matters and does not believe that any pending legal proceeding would have a material effect on the Firm's performance of the services contemplated by the RFP. For further discussion, please refer to JPMorgan Chase \& Co.'s publicly-filed disclosures, including its most recent Annual Report on Form 10-K and Quarterly Reports on Form 10Q filed with the U.S. Securities and Exchange Commission (available at: https://investor.shareholder.com/ipmorganchase/sec.cfm.
B. 5 (a-d);B.6,
B. 7

The Authorized Representative certifies on behalf of the Disclosing Party the accuracy of the statements contained in sections 5, 6, and 7 of Section V only as to the Disclosing Party and its executive officers and directors. Based on the Disclosing Party's knowledge, information, and belief, upon due inquiry, JPMorgan Chase \& Co. and/or its subsidiaries are defendants or putative defendants in numerous legal proceedings, including private civil litigations and regulatory/government investigations. The litigations range from individual actions involving a single plaintiff to class action lawsuits with potentially millions of class members. Investigations involve both formal and informal proceedings, by both governmental agencies and self-regulatory organizations. These legal proceedings are at varying stages of adjudication, arbitration or investigation, and involve each of the Firm's lines of business and geographies and a wide variety of claims (including common law tort and contract claims and statutory antitrust, securities and consumer protection claims), some of which present novel legal theories. Based on current knowledge, the Firm believes it has asserted meritorious defenses to the claims asserted against it in its currently outstanding legal proceedings, intends to defend itself vigorously in all such matters and does not believe that any pending legal proceeding would have a material effect on the Firm's performance of the services contemplated by the RFP. For further discussion, please refer to JPMorgan Chase \& Co.'s publicly-filed disclosures, including its most recent Annual Report on Form 10-K and Quarterly Reports on Form 10-Q filed with the U.S. Securities and Exchange Commission (available at: https://investor.shareholder.com/jpmorganchase/sec.cfm.

Furthermore, with respect to Section V. B.5. (d), the Minimum Wage ordinance, the Disclosing Party has not, during the five years before the execution date of this EDS, been
determined to have violated the provisions of Municipal Code Section 2-92-320 (Minimum Wage Ordinance) as it relates to base wages.
B. 11 Except as otherwise set forth in this Attachment A, the Authorized Representative on behalf of the Disclosing Party does not make any certification whatsoever with respect to any Applicable Party other than the Disclosing Party. The Authorized Representative on behalf of the Disclosing Party also certifies that it has not engaged any sub-contractor with respect to this transaction.
B. 12 Please note that due to the size and scope of our organization, we are unable to determine whether any employees of the Disclosing Party were previously employed by the City of Chicago during the 12 -month period preceding the date of this EDS; without limiting the immediately foregoing statement, we do not believe there are any such employees of the Disclosing Party upon knowledge, information and belief. Further, we can state that no member of the JPMC deal team directly working on this matter was previously employed by the City of Chicago during this time period.
B. 13 The Authorized Representative certifies as to the statement in Section V, paragraph B. 13 that, based on the Authorized Representative's knowledge, information, and belief, upon due inquiry, the following gifts were provided by employees of the Disclosing Party to the following:

- None


## D. INTEREST IN CITY BUSINESS

D. 1 \& D. 4 As to the disclosures set forth in Section V, paragraphs D. 1 \& D.4, based on the Authorized Representative's knowledge, information, and belief, upon due inquiry, on behalf of the Disclosing Party, to the extent the Disclosing Party has any control the Authorized Representative certifies that no official or employee of the City of Chicago has a financial interest in his or her own name or in the name of any other person in this transaction.

# ATTACHMENT B <br> TO <br> CITY OF CHICAGO ECONOMIC DISCLOSURE STATEMENT AND AFFIDAVIT FILED BY <br> JPMORGAN CHASE \& CO. (as a Disclosing Party holding an interest in the Applicant) 

The following response is true, accurate and complete based on the Authorized Representative's knowledge, information, and belief relying on information prepared on February 24, 2009, by a consultant at the direction of JPMorgan Chase \& Co.

## SECTION V -- CERTIFICATIONS

## E. CERTIFICATION REGARDING SLAVERY ERA BUSINESS.

The Disclosing Party was formed on July 1, 2004, when JPMorgan Chase \& Co. acquired Bank One Corporation ("Bank One").

With regard to predecessors of the Disclosing Party as it existed prior to the Bank One Corporation acquisition ("JPMorgan Chase"), the Disclosing Party reports that J. Pierpont Morgan, Sr. was associated with George Peabody \& Company and J.S. Morgan \& Company (the "Peabody Firms") before he founded Drexel Morgan \& Company, which ultimately became part of JPMorgan Chase. Capital supplied by Junius S. Morgan and J. Pierpont Morgan, Sr. appears to have been used to capitalize Drexel Morgan \& Company in 1871. Upon the death of Junius S. Morgan, J.S. Morgan \& Company came under the control of J. Pierpont Morgan, Sr. and became affiliated with J.P. Morgan \& Co. Records indicate that the Peabody Firms had customers that appear to have used enslaved individuals.

JPMorgan Chase and Bank One had predecessor banks in states outside the South that purchased notes issued by, issued letters of credit or made loans to, and/or maintained correspondent accounts with municipalities, banks, companies and individuals located in Southern states where slavery was practiced during the slavery era. These municipalities, banks, companies and individuals are listed on Attachment 1.

Bank One had predecessor banks before 1866 in three Southern states: Kentucky, Louisiana and Virginia. Searches revealed slavery-related information about two Louisiana banks, the Canal Bank (formed in 1831) and the Citizens Bank (formed in 1833), and the Lexington branch of the second Bank of Kentucky (formed in 1835). In 1924 Citizens Bank and Canal Bank merged. Predecessors of JPMorgan Chase had longstanding banking relationships with Canal Bank and its predecessors (see Attachment 1), were creditors of Canal Bank and, in 1931, it appears that a predecessor of JPMorgan Chase led a group of investors that provided capital to Canal Bank and this predecessor of JPMorgan Chase became a shareholder and took a controlling management interest in the Canal Bank. The Canal Bank was placed into liquidation in March-May 1933 based on actions by the State of Louisiana and the federal government. In May 1933, The National Bank of Commerce in New Orleans was formed pursuant to an executive order approved by President Roosevelt and its assets included some of the deposits and loans of the old Canal Bank. Most of the capital for The National Bank of Commerce was provided by the Reconstruction Finance Corporation (owned by the U.S. government), with the remainder coming from new shareholders. The U.S. government also provided over $\$ 13$ million toward the liquidation of the old Canal Bank. In 1947 and 1969, The National Bank of Commerce in New

Orleans made two grants to Tulane University, which included archives of the Citizens Bank and Canal Bank. These materials are held at the Tulane Manuscripts Department, Special Collections Division, Howard-Tilton Memorial Library at Tulane University in New Orleans, Louisiana (collectively, the "Tulane Records"). In 1865, the First National Bank of Lexington (subsequently a part of First Security Corporation of Kentucky which was acquired by Bank One in 1992) was formed and assumed the operations of the Lexington Branch of the second Bank of Kentucky. Public records pertaining to the Lexington Branch of the second Bank of Kentucky have been discovered that contain records relevant to this certification (the "Lexington Records"). The Tulane Records, the Lexington Records and other records indicate that:

1. Citizens Bank and Canal Bank provided credit to plantation owners and accepted mortgages from them. The collateral covered by these mortgages included land, equipment and/or enslaved individuals. The available records do not always provide the names of enslaved individuals. The Disclosing Party, however, estimates that, from 1831 to 1865, taking into account the duplication and/or absence of exact data, approximately 21,000 enslaved individuals were listed among the collateral covered by mortgages given to the Louisiana banks.
2. The Lexington Branch of the second Bank of Kentucky also provided credit to plantation owners and accepted mortgages from them. The collateral covered by these mortgages included land, equipment and/or enslaved individuals. The available records do not always provide the names of enslaved individuals. The Disclosing Party, however, estimates that, from 1835 to 1865, taking into account the duplication and/or absence of exact data, approximately 55 enslaved individuals were listed among the collateral covered by mortgages given to the Lexington Branch of the second Bank of Kentucky.
3. When mortgages went unpaid, the banks could initiate foreclosure proceedings. When this occurred, the bank could take ownership of the collateral. The available records do not always provide the names of enslaved individuals. The Disclosing Party, however, estimates that, from 1831 to 1865 , taking into account the duplication and/or absence of exact data, approximately 1,300 enslaved individuals were listed among the collateral that the Louisiana banks came to own. There is no evidence of foreclosure proceedings initiated by the Lexington Branch of the second Bank of Kentucky.

Attachment 2 lists information on mortgages as to which one of the Louisiana banks came to own enslaved individuals through foreclosure proceedings, including, where available, the names of those individuals and their prior or subsequent owners. Attachment 3 lists information on mortgages as to which one of the three banks held collateral that included enslaved individuals, including, where available, the names of those individuals and their prior or subsequent owners. The attachments will be supplemented as necessary to reflect any additional information located.

On September 25, 2008, JPMorgan Chase Bank, National Association (a subsidiary of the Disclosing Party) acquired from the Federal Deposit Insurance Corporation, as the Receiver of Washington Mutual Bank, Henderson NV, certain assets of Washington Mutual Bank.

A review of the records of Washington Mutual Bank, including the records of its predecessor entities, has disclosed no evidence that Washington Mutual Bank nor any of its predecessors had any investments or profits from slavery, any direct involvement in the slave trade, any direct ownership in slaves, or any slaveholder insurance policies from the slavery era. There is evidence, however, that one predecessor entity, The Bowery Savings Bank, New York (1834)
("Bowery Savings"), purchased a $\$ 100,000$ bond of a slave holding state, North Carolina. A total of $\$ 44,000$ was paid to Bowery Savings by North Carolina in 1868 on account of the bond.

## ATTACHMENT 1

TO
ATTACHMENT B
TO
CITY OF CHICAGO ECONOMIC DISCLOSURE STATEMENT AND AFFIDAVIT FILED BY
JPMORGAN CHASE \& CO. (as a Disclosing Party holding an interest in the Applicant)

Agricultural Bank of Mississippi<br>Baltimore \& Ohio Rail Road Company<br>Bank of Alabama<br>Bank of Alexandria (Virginia)<br>Bank of Ashland at Shelbyville<br>Bank of Augusta (Georgia)<br>Bank of Kentucky<br>Bank of Louisiana<br>Bank of Louisville<br>Bank of Metropolis<br>Bank of Mobile<br>Bank of Missouri<br>Bank of North Carolina<br>Bank of South Carolina<br>Bank of the State of Missouri<br>Bank of Tennessee<br>Bank of Virginia<br>Barnett, Ellison \& Co.<br>Beers \& Brunell<br>Beers \& Co.<br>Canal \& Rail Road Bank of Vicksburg<br>Carrolton Bank of New Orleans<br>Charleston Fire \& Marine Insurance Company<br>Chattahoochee Rail Road and Banking Company<br>City Bank of New Orleans<br>Commercial \& Rail Road Bank of Vicksburg<br>Commercial Bank of Manchester (Mississippi)<br>Commercial Bank of New Orleans<br>Commercial Bank of Selma<br>Corporation of the City of New Orleans<br>Corporation of the City of Savannah<br>Davis \& Davis<br>Delaware \& Hudson Canal Company<br>E.I. Forestall of New Orleans<br>ER Tyler of New Orleans<br>E. Warfield, Lexington, Kentucky<br>Exchange \& Banking Company of New Orleans<br>Exchange Bank of Virginia at Richmond<br>Franklin Bank of Baltimore<br>First Bank of Richmond

Hunt, Morton \& Quigby of Louisville (Kentucky)<br>J.D. Beers \& Co.<br>Louisiana \& Nashville Railroad Company<br>Mechanics \& Traders Bank of New Orleans<br>Merchant \& Planters Bank of Savannah<br>Merchants Bank of Baltimore<br>Mississippi Sound Company<br>Mr. Pastoret<br>Mr. S. Reid Irving \& Co. (Cotton)<br>Nashville and Northwestern Rail Road Co.<br>New Orleans Canal \& Banking Company<br>North Western Bank of Virginia<br>Philadelphia, Wilmington \& Baltimore Rail Road Company<br>Planters \& Mechanics Bank of Charleston<br>Planters \& Mechanics Bank of Mobile<br>Planters \& Merchants Bank of Charleston<br>Planters Bank of Jackson (Mississippi)<br>Planters Bank of Natchez<br>Planters Bank of Savannah<br>Planters Bank of Tennessee<br>Robert Kinder House<br>Ross \& Coleman<br>South Western Rail Road Bank of Charleston<br>Southern Bank of Alabama<br>Southern Bank of Kentucky<br>Southern Life Insurance \& Trust Company of Florida<br>Southern Trust Company<br>Southwestern Rail Road Bank (South Carolina)<br>S. Reid Irving \& Company<br>State \& Metcalf of Gainsville, Georgia<br>State of Alabama<br>State of Florida<br>State of Georgia<br>State of Mississippi<br>T.T. Crittenden, Lexington and Huntsville, Kentucky<br>Tuscumbice and Decatur Rail Road Company<br>Union Bank of Charleston<br>Union Bank of Florida<br>Union Bank of Tennessee

## ATTACHMENT 2

TO
ATTACHMENT B
TO
CITY OF CHICAGO
ECONOMIC DISCLOSURE STATEMENT AND AFFIDAVIT
FILED BY
JPMORGAN CHASE \& CO.
(as a Disclosing Party holding an interest in the Applicant)
ENSLAVED INDIVIDUALS OWNED BY
CITIZENS BANK OF LOUISIANA AND
NEW ORLEANS CANAL \& BANKING COMPANY

## ATTACHMENT 3

TO
ATTACHMENT B
TO
CITY OF CHICAGO
ECONOMIC DISCLOSURE STATEMENT AND AFFIDAVIT
FILED BY
JPMORGAN CHASE \& CO.
(as a Disclosing Party holding an interest in the Applicant)

ENSLAVED INDIVIDUALS MORTGAGED TO
CITIZENS BANK OF LOUISIANA,
NEW ORLEANS CANAL \& BANKING COMPANY AND
LEXINGTON BRANCH OF THE SECOND BANK OF KENTUCKY

## Attachment 2

The following list identifies enslaved individuals owned by Citizens Bank of Louisiana and New Orleans Canal \& Banking Company in Louisiana from 1831 to $1865 .{ }^{1}$ The information is drawn from two sources. The first is a collection of Citizens Bank minute books and papers held at Tulane University. The second is a survey of conveyance and land records held either at the New Orleans Public Library or at local parishes throughout Louisiana.

The list includes every reference to ownership of enslaved individuals by the banks located in these records. The list is arranged by parish and thereafter by date. General references to ownership that did not indicate a specific parish are listed separately.

Each entry includes information on previous $(\mathrm{P})$ and subsequent $(\mathrm{S})$ owners where known. Any available information on the location of the plantation is also recorded and appears in brackets after the previous and subsequent owners. Each entry includes a reference identifying the historical sources used to compile the information.

The information on individuals includes all names identified in the records. In some cases, the same individuals appear to have been involved in several different transactions. However, the records are often not consistent in the spelling of names and are often only partially or poorly indexed. Accordingly, each transaction is listed separately. The names in italics are ones that were difficult to decipher because of handwriting or because the records have faded over time.

[^1]
## Citizens Bank of Louisiana

| General References.........................................................page 3 | Pointe Coupee Parish................................................page 8 |
| :---: | :---: |
| Ascension Parish............................................................page 3 | Rapides Parish........................................................ page 8 |
| Assumption Parish.......................................................... page 3 | St. Bernard Parish ................................................... page 8 |
| Claiborne Parish........................................................... page 4 | St. Charles Parish ................................................... page 8 |
| East Feliciana Parish ...................................................... page 4 | St. John the Baptist Parish........................................... page 9 |
| Iberville Parish................................................................page 5 | St. Martin Parish..................................................... page 10 |
| Lafourche Parish .........................................................page 5 | St. Mary Parish...................................................... page 11 |
| Natchitoches Parish........................................................ page 6 | St. Tammany Parish ............................................... page 11 |
| Orleans Parish ........................................................... page 6 | Washington Parish ............................................... page 11 |
| Plaquemines Parish......................................................... page 7 |  |
| New Orleans Canal \& Banking Company |  |
| Ascension Parish......................................................... page 12 | Natchitoches Parish................................................ page 13 |
| Avoyelles Parish........................................................... page 12 | Orleans Parish ..................................................... page 13 |
| East Feliciana Parish .................................................... page 12 | West Feliciana Parish ............................................ page 14 |
| Jefferson Parish ......................................................... page 12 |  |

## Citizens Bank of Lousiana

| General References |  |  |
| :--- | :--- | :--- |
| Date | Previous/Subsequent <br> Owners <br> [Plantation Location] | Information on Individuals |
| Apr 1842 | Mr. Pim (S) | Nelson, Philip, Sylvester, Sally and her two children |
| Jan 1845- <br> Mar 1845 | J. R. Thomas (P) | unnamed individuals |
| Jul 1845 | Mary Hoey (P) | Lucretia and Joe |
| Aug 1847 | Unknown | unnamed individuals |
| Feb 1847 | J. Lawson (P) | Edward |
| Jul 1850 | G. Hiriard (P) | unnamed individuals |

Ascension Parish
Date
Previous/Subsequent Owners
[Plantation Location]
C. 1839

Trasimon Landry (P)

Assumption Parish
Date
Previous/Subsequent
Owners [Plantation
Location]
Sep 1840
ocation]

Aubin (P)
Adolphe Wenceslas Pichot
(S)

## Source

Tulane University, Citizens Bank Minute Book No. 5, 1842/04/04
Tulane University, Citizens Bank Minute Book No. 5, 1845/01/18 and 1845/03/27
Tulane University, Citizens Bank Minute Book No. 5, 1845/07/31
Tulane University, Citizens Bank Minute Book No. 6, 1847/08/17

Tulane University, Citizens Bank Minute Book No. 6, 1849/03/23
Tulane University, Citizens Bank
Minute Book No. 6, 1850/07/02

## Source

New Orleans Public Library (NOPL), Ascension Parish Vendee Index

## Source

Assumption Parish, Sheriff's Sale
Book A, p. 232, 1840/09/023;
Conveyance Record 6, p.
232,1841/07/26

| Aug 1844 Jan 1846 | Marius Albagnac (P) John Billsen (S) [left bank of Bayou Lafourche] | Peggy, Barnalby, Magdelaine | Assumption Parish, Conveyance Book 11, p. 297, 1846/01/10; Sheriff's Sale Book B, p. 178, 1884/08/03; Tulane University, Citizens Bank Minute Book No. 5, 1846/01/07 |
| :---: | :---: | :---: | :---: |
| Mar 1853- <br> Apr 1853 | Alfred Tete (P) Mrs. Clodis Gourdan (S) [Bayou Lafourche] | Henry, Jacob, Abraham, George, Moses, Anais | Assumption Parish, Conveyance Book 19, p. 190, 1853/04/26; Sheriff's Sale Book B, p. 426, 1853/03/06; Tulane University, Citizens Bank Minute Book No. 7, 1853/03/31 |
| Claiborne Parish |  |  |  |
| Date | Previous/Subsequent Owners [Plantation Location] | Information on Individuals | Source |
| c. 1848 | R. H. Basset (P) | 4 unnamed individuals | Tulane University, Citizens Bank Property Management Book |
| East Feliciana Parish |  |  |  |
| Date | Previous/Subsequent Owners [Plantation Location] | Information on Individuals | Source |
| Dec 1845 - <br> Feb 1846 | John D. McDonald (P) Robert Perry (S) [Black Creek] | Hampton, Joe; Laura and her child Jane; Emily and her child John; Hester | East Baton Rouge Parish, Sheriff's Book E, p. 137, 1845/12/13; East Feleciana Parish, Conveyance Book K, pp. 111-113, 1846/02/18; Tulane University, M-1847, Citizens Bank Mortgage Book; Citizens Bank Minute Book No. 5, 1846/02/12 |
| Feb 1847 Dec 1848 | Robert Pool (P) | Jim and other unnamed individuals | Tulane University, Citizens Bank Minute Book No. 6, 1847/02/04, 1848/6/028, 1848/12/18 |
| Jun 1848 | Thorton Lawson (P) | Edmund | East Feliciana Conveyance Book L, pp. 219-225, 1848/06/03; Tulane University, M-1847, Citizens Bank Mortgage Book |
| c. 1848 | Carter Harvil (S) | 7 unnamed individuals | Tulane University, M-1847, Citizens Bank Mortgage Book |
| c. 1848 | B. Myers (P) | 5 unnamed individuals | Tulane University, M-1847, Citizens Bank Mortgage Book |


| c. 1848 | Unknown [Bayou Teche] | 14 unnamed individuals | Tulane University, M-1847, Citizens Bank Mortgage Book |
| :---: | :---: | :---: | :---: |
| Jan 1853 | Stephen Yarborough (P) | 8 unnamed individuals | East Feliciana Parish, Mortgage Book E, p. 543, 1853/01/21 |
| Feb 1854 | John L. DeLee (S) | 13 unnamed individuals | East Feliciana Parish, Mortgage Book E, p. 544, 1853/02/15 |
| lberville Parish |  |  |  |
| Date | Previous/Subsequent Owners [Plantation Location] | Information on Individuals | Source |
| Feb 1840 | Botts and Abner Robinson (S) | Frank, Anthony, Jim, Dirk, Isaac, Joe Gray, Martin, Jacob McNayer, Lewis, Nat, Jacob, George McNayer, Ben, William, Joe, Plato, Washington, Big Davy, Davy, Moses, Wapping; Rachel and her child Daphny; Nelly; Lucy and her child Charlotte; Susan and her three children Jacob, Nelly and Lewis; Patsy and her daughter Caroline; Chancy, Elizabeth, Maria; Luckey and her children Harriet and Abraham; Spencer, Esau, Fanny; Sarah and her two children William and Martha; Daphny, Abby, Phillis, Mary, George, Anne, Big Maria; Fanny and her unnamed infant; Kitty, Charity; Susan and her unnamed son; George, Matilda, Edmund, Peter, Ben, Bandals, Sam, Archibald, York, John, Peter, Abraham, Fielding, Sam, David, Gras, Eliza, Lucy, Robert, Francis, Emily, Caroline, Henry, Patsy, William, Alexander, Wyatt, Anderson, Hannah, Ceyley, Milly, Letty, Tom, Maria, Mary, Harriet, Louisa, Tom, Ned, Juliet, Ned, Nancy | Iberville Parish, Conveyance Book T, Entry 223, 1840/02/07; Lafourche Parish Conveyance Book P, p. 438, 1840/02/17 |
| Feb 1843 | Lewis LeSassin (P) | unnamed individuals | Tulane University, Citizens Minute Book No. 5, 1843/02/07 |
| Lafourche Parish |  |  |  |
| Date | Previous/Subsequent Owners [Plantation Location] | Information on Individuals | Source |
| Dec 1842 | G. A. Botts (P) | unnamed individuals | Tulane University, Citizens Bank Minute Book No. 5, 1842/12/30 |


| Jul 1845 - <br> May 1849 | J. Nicholas (P) <br> R. P Gaillard (S) | Andre, Jean Baptiste, Clairville, Francis, Joseph, Sylvester, Benito, Bonaranture, Theophile, Marie, Cecile, William, Honore, Marianne, Oreline, Catherine, Celestin, Helene, Agathe, Domstele, Celestine, Mary, Solby, Anna, Suzette, Estele, Henriette, Odile, Lutelia, Baptiste, Diek, Randall, James, Sam, Melite, Madeleine | Lafourche Parish, Conveyance Book AA, p. 380, 1849/05/01 |
| :---: | :---: | :---: | :---: |
| Natchitoches Parish |  |  |  |
| Date | Previous/Subsequent Owners [Plantation Location] | Information on Individuals | Source |
| Feb 1838 | Michael Boyce (P) | 36 unnamed individuals | Natchitoches Parish, Book 23, p. 2, 1838/02/07 |
| Feb 1840 | Adolphe Sampayrac (P) | Alfred, Ovide, Honore, Michot, Frederic, Sam, William, Flem, Nelson, Ned, Mary, Fanny | Natchitoches Parish, Book 27, p. 18, 1840/02/29 |
| Mar 1841 | Joseph T. Robinson (S) | Moses, Asariah, Lewis, Joe, Harrison, Henry West, Elsy, Green, Reid, York, Allen, Daniel, Harriet, Judy, Julia, Charlotte, Sirah, Nancy Elliot, Chaney, Emi and her child, Louisa and her unnamed child | Natchitoches Parish, Book 32, p. 50, 1841/03/27 |
| Orleans Parish |  |  |  |
| Date | Previous/Subsequent Owners [Plantation Location] | Information on Individuals | Source |
| Jan 1842 | Christopal de Armas (P) | Marie, Anne | Orleans Parish, Conveyance Record Book 29, p. 698, 1842/01/06 |
| Aug 1842 | Leopold J. Rocquet (S) | Tom Mason and his wife Lucy | Orleans Parish, Conveyance Record Book 32, p. 421, 1842/08/03 |
| Aug 1842 | Antione Bausset (S) | Peter | Orleans Parish, Conveyance Record Book 32, p. 440, 1842/08/18 |
| Aug 1842 | Marais Gautier (S) | Archy, Tably and her two children Joseph and an unnamed infant | Orleans Parish, Conveyance Record Book 31, p. 447, 1842/08/21 |
| May 1843 | Valiour Fortier (S) | Jacob | Orleans Parish, Conveyance Record Book 33, p. 171, 1843/05/20 |


| Sep 1845 | Charles Nicaud (P) <br> V. and B. Bouny (S) | John Richardson, Moses Lewis, Peter, Joe Phoebe, Jim Phoebe, Robert, Saul, Ben, Edmond, Jim Bouny, Narcisse, Thomas Side, Victor, Sheldrick, Moses Guerin, Tom Guerin, Jim O. Duhigg, Figaro, Ned Rackoon, Big Joe, Richard, Eugene, Jim Bullfrog, Bob, Henry Charleston, Belly Boy, William Chaigneau, Peter, Big Ned, Alfred, Mathilde, Nancy, Phoebe, Fany, and Jack | Tulane University, Citizens Bank Papers, Loans, Box 1 |
| :---: | :---: | :---: | :---: |
| c. 1846 | Daniel Holliday (S) | Richmond | Orleans Parish, Conveyance Record Book 38, p. 484 |
| Mar 1849 | Mrs. Lafayette Saunders (S) | James | Orleans Parish, Conveyance Record Book 46, p. 411, 1849/03/06 |
| Sep 1852 | Felix Garcia (P) <br> Auguste Montegut (S) | Arthemise | Orleans Parish, Conveyance Record Book 60, p. 111, 1852/9/6; Tulane University, Citizens Bank Minute Book No. 7, 1852/08/26 |
| Oct 1852 | Felix Garcia (P) William and Heywood Stackhouse (S) | Basile, Llyod, Adam, Laurent, Pegui, Camille, Marguerite, Philomene, Charles, Ursine, Marianne, Pierre, Constance, Celestine, Sanon, Dotreville, Dorothee, Melite, Rose, Sue, Fox, Therese, Edouard, Baptiste, Eulalie, Peter, Jean Bongo, Bill, Lucile Sue, Thebe, Mary, Olivia, Jean, Charles, Raymond, Rachel, Honore, Theodore, Petion, Raymond, Celeste, Joseph, Henriette, Heloise, Antoine, Celestine, Frosine, Casimin, Joseph, Francoise, Victor, Poline, Louise, Alexis, James, Mamette, Augustine, Francois, Birsson, Dick, Tom, Lucille, Anny, Rachel, Lidy, Charlotte, Valcour, Albert | Orleans Parish, Conveyance <br> Book 59, p. 174, 1852/10/20; <br> Tulane University, Citizens Bank Minute Book No. 5, 1852/09/09 |
| Plaquemines Parish |  |  |  |
| Date | Previous/Subsequent Owners [Plantation Location] | Information on Individuals | Source |
| Oct 1852 | Felix Garcia (P) <br> W. and H. Stackhouse (S) | Bazile, Raymond, Lloyde, Rachel, Adam, Honore, Laurent, Theodore, Regan, Petion, Camille, Raymonde, Marguerite, Eclante, Babet, Joseph, Philemon, Henrietta, Charles, Helios, Ursin, Antonio, Marianne, Celestin, Pierre, Frazine, Constance, Casimir, Celestine, Joseph, Janen, Francoise, Patreville, Carter, Porachi, Bob, Neclite, Zanlin, Rose, Louise, Zoe, Hiers, Fox, James, Theresa, Henriette, Edward, Augustine, Baptiste, Francis, Evalie, Risson, Peter, Criske, Jean Congo, Tom, Bill, Lucille, Lucille Joe, Fanny, Phoebe, Rachel, Mary, Liddy, Olivia, Charlotte, Jean, Valcour, Charles, Alberte | Plaquemines Parish, Conveyance Book 6, p. 430, 1852/10/13; Tulane University, Citizens Bank Minute Book No. 5, 1852/09/09 |


| Pointe Coupee Parish |  |  |
| :---: | :---: | :---: |
| Date | Previous/Subsequent Owners [Plantation Location] | Information on Individuals |
| Jul 1839 - <br> Sep 1839 | Montgomery Smith (P) <br> A. Ledoux \& Co., George O. Hall (S) | Gilbert, Randall, Lorenzo; Maria and her two unnamed children; Anne, Eliza, Ellen, |
| Rapides Parish |  |  |
| Date | Previous/Subsequent Owners [Plantation Location] | Information on Individuals |
| Mar 1843 <br> c. 1848 | A. B. Gill (P) <br> J. Huie (S) <br> [Bayou Marteau] | 37 unnamed individuals |
| St. Bernard Parish |  |  |
| Date | Previous/Subsequent Owners [Plantation Location] | Information on Individuals |
| c. 1848 | S. Peyroux (S) | 11 unnamed individuals |
| Sep 1850 | G. Peyroux (P) Albert Faber (S) | 14 unnamed individuals |
| St. Charles Parish |  |  |
| Date | Previous/Subsequent Owners [Plantation Location] | Information on Individuals |
| c. 1848 | C. Roselle (S) | 22 unnamed individuals |
| Jul 1852 | Felix Garcia (P) [Lorio Plantation on the right bank of the Mississippi River] | Abraham, Bill, Jacob, Peter, Jordan, Madison, Captain Fish, Baptiste, Sam, Philippe, Edmund, Marianne; Suzanne and her two children John and Nelly; Rachel and her two children Augile and Victor; Liza, Sally, Caroline |

## Source

Pointe Coupee Parish, Mortgage Book C, No. 1177, 1839/07/22, กo. 1189, 1839/09/25

## Source

Tulane University, Citizens Bank Minute Book No. 5, 1843/03/23 1843/03/25, 1843/4/18; M-1847 Citizens Bank Mortgage Book

## Source

Tulane University, M-1847, Citizens Bank Mortgage Book

Tulane University, Citizens Bank Minute Book No. 6, 1850/09/10

## Source

Tulane University, M-1847, Citizens Bank Mortgage Book St. Charles Parish, Conveyance Book A\&B, 1852/07/07

| Jan 1853 | Felix Garcia (P) |
| :--- | :--- |
|  | Charles Rousell, Theodell |
|  | Rousell, and Julian Vienne |
|  | (S) |
|  | [Lorio Plantation] |


| St. John the | Baptist Parish |
| :--- | :--- |
| Date | Previous/Subsequent <br> Owners [Plantation |
| Apr 1846 | Location] Ars. Jean Arnauld (P) |

Abraham, Bill, Jacob, Peter, Jordan, Madison, Captain Fish, Baptiste, Sam, Philippe, Edmund, Marianne; Suzanne and her two children John and Nelly; Rachel and her two children Augile and Victor; Liza, Sally, Caroline, Toby, Tallyrand, Nelly, Nathan, Arthur Field, Sam Caroll, Alexander Jackson, Archer Caroll, George McHenry, Moses Haris, Henry Hardith, Compthoes; Betsey Galinos and her two children Nathan and James; July Ann Johnson and her unnamed child; Eppo Johnson, Solomon Jones, William Lansing, Henry Waterson, Lan Thomas, Moses Nawell, Jody Flagg, Major Gillsion, John Asbby, Nancy Reses, Sam Red, Amy, Washington Spencer

## Information on Individuals

Thisa, James, Raymond, Alexis, Baker, Fox, Samsnow, Adam Solomon, Honore, Celestin, Charley, Laurent, Pierre, Joe, Theodore, Raymond, Ursin, Camille, Antoinne, Bresson, Bebe, Peter, Dick, Basille, Francois, William, Jim Magnan, Casimer, Loyd, Daniel, Rose; Thereze and her child Manette; Celeste and her three children Louis, Joseph, and Philomele; Francoise and her children Detreville and an unnamed infant; Phiosone and her three children Celestine, Joseph, and Joalsin; Louise, Adelaide; Marianne and her child Estelle; Nathan, John Magnan, Basile, Raymond, Loyld, Rachel, Adam, Laurent, Honore, Theodore, Pegui, Petion, Camille, Raymond, Artemise, Celeste, Marguerite, Babes, Louis, Joseph, Eloise, Ursin, Antoine, Adelaide, Coralie, Marianne, Celestin, Pierre, Casimir, Clara, Estelle, Constance, Frosine, Claire, Sansnow, Francoise, Detreville, Victor, Dorothee, Pauline, Ferdinand, Rose; Louise and her son Joseph Nathan exchanged for Francois, son of Marie Rosette

Tulane University, Citizens Bank
Minute Book 7, 1852/08/26
St. Charles Parish, Conveyance
Book A, p. 174, 1853/01/03

## Source

St. John the Baptist Parish,
Conveyance Book X, pp.
327-328, 1846/4/29, and
Conveyance Book Y, pp. 145-
47, 1847/03/09; Tulane
University, Citizens Bank Minute Book No. 6, 1847/01/27

St. John the Baptist Parish, Conveyance Book Y, pp. 72-74, 1846/08/19; Tulane University, Citizens Bank Minute Book
No. 6, 1846/08/06

| Sep 1846 | Mrs. Jean Arnauld (P) Felix Garcia (S) | Louis (also known as Bebe), Alexis, Fox, Salomon, Daniel, James, William, Celestine, Joseph, Joalsin, Therese, Manette, Auguste, Marie, Augustine, Baptiste, Francois, Eulalie, Bulsin, illegible, Dick, Thisa, Baker, Charley, Ardina, Jean, illegible, Bill, Lucille, Rachel, Lucille Joe, illegible, Hanny, Phebe, Mary, Eugene, Mary, Charlotte, Jean, illegible, illegible | St. John the Baptist Parish, Conveyance Book Y, pp. 83-108, 1846/09/30; Tulane University, M-1847, Citizens Bank Mortgage Book |
| :---: | :---: | :---: | :---: |
| Jun 1852 - <br> Mar 1853 | Felix Garcia (P) Dominique Bouligny (S) | Nathan, Basille, Raymond, illegible, Rachel, Adam, Laurent, Honore, Theodore, Peggy, Petion, Camille, Raymond, Artemise, Celeste, Marguerite, Babette, Joseph, Philomene, Eloise, Ursin, Antoine, Marianne, Celestine, Pierre, Cisimir, Constance, Frasine, Claire, illegible, Francois, Detreville, Victor, Dorothee, Rose, Louisa, Joseph, Pauline, Alexis, Fox, James, Celestine, Joseph, Jason, Thereza, Manette, Augustine, Auguste, Baptiste, Francois, Eulalie, Banson, Peter, Jack, Jean, Leon, Bill, Louisa, Rachel, Hanny, Phalia, Mary, Charlotte, Jean, Faloir, Allant, Theresa, Dorothee, Celeste; Mary and her children Laby and Mary | St. John the Baptist Parish, Conveyance Book Z, pp. 183185, 1852/07/06, and Conveyance Book Z, pp. 216217, 1853/03/04; Tulane University, Citizens Bank Minute Book No. 5, 1852/09/09 |
| May 1852 | Felix Garcia (P) | Dick | Tulane University, Citizens Bank Minute Book No. 7, 1852/05/20 |
| Sep 1852 | Felix Garcia (P) Joseph illegible (S) | Claire | Tulane University, Citizens Bank Minute Book No. 7, 1852/09/09 |
| St. Martin Parish |  |  |  |
| Date | Previous/Subsequent Owners [Plantation Location] | Information on Individuals | Source |
| Jul 1849 | Charles Fagot (P) <br> Charles Grevinberg (S) <br> [Ilse L'abbe] | Nick, Laine, Bill, Etienne, Donhouis; Julie; Charlotte and her three children Frances, Sophie, and Marie; Peggy, Larina; Kitty and her child Pauline; Celeste, Honorine | St. Martin Parish, Sheriff Book 2, p. 163, 1849/07/10; Coneyance Record I-D, p. 260, 1849/10/02; Tulane University, Citizens Bank Minute Book No. 6, 1849/06/20, 1849/07/07; Tulane University, M1847, Citizens Bank Mortgage Book |
| Jul 1849 | Joseph Eysallenne (P) <br> Victor Delahoussaye (S) <br> [Bayou Ceche] | Fernanda, Alfred, Dick, Thomas, Jim, Grace, Julie, Edouarde, Juliet, Patsy, Ophelia, Lilia, Marie, Maria, Dickson, Patsy, Sophie, Fransisque | St. Martin Parish, Sheriff Book 2, p. 163, 1849/07/10; Conveyance Book ID, p. 261, 1849/10/02; <br> Tulane University, Citizens Bank Minute Book No. 6, 1849/07/07 |

St. Mary Parish
Date
May 1845 -
Apr 1846

## Previous/Subsequent

 Owners [Plantation Location]Robert Nicholas (P)
Samuel Ogden and John Huger (S) [Cote Blanche]

## St. Tammany Parish

| Date | Previous/Subsequent <br> Owners [Plantation |
| :--- | :--- |
|  | Location] |
| Apr 1849 | M. G. Penn (P) |
|  | [Palestine Plantation] |


| Washington Parish |  |
| :--- | :--- |
| Date | Previous/Subsequent <br> Owners [Plantation |
| Jun 1847 | Location] |

Information on Individuals
unnamed individuals

Source

Tulane University, Citizens Bank Minute Book No. 5, 1845/05/05 and 1846/04/16; St. Mary Parish Records, Conveyance Book F, p 401, 1845/08/03; Mortgage Book 12, p 89, 1845/07/24; NOPL, New Orleans Deed Book, 1845/08/08

Tulane University, Citizens Bank Minute Book No. 5, 1845/07/31

## Source

Tulane University, M-1847
Citizens Bank Mortgage Book and Citizens Bank Minute Book No. 6 1849/04/19

## Source

Tulane University, Citizens Bank Minute Book No. 6, 1847/06/15

## New Orleans Canal \& Banking Company

## Ascension Parish

| Date | Previous/Subsequent Owners [Plantation Location] | Information on Individuals |
| :---: | :---: | :---: |
| 1845 | William C. Randall (S) | Reuben |
| Oct 1845 - <br> Nov 1845 | David Randall (P) Christopher Ford (S) [left bank of Bayou Lafourche] | Jack, Matthew, Henry, Randall, Gus, Jack, Richard, Brown, Squire, Elijah, Caesar, Charles, MaryAnn, Virginia, Hannah, Julie, Aime; Martha and her two children Letitia and Ralf; Sarah and her three children Reubin, Louisa, and Henry; Mary, Suzane, Aglace, Carol, and William |
| Avoyelles Parish |  |  |
| Date | Previous/Subsequent Owners [Plantation Location] | Information on Individuals |
| Dec 1846 | Edmond Briggs (P) James Satterfield (S) | Hanah and her child Hester; Susan, Henrietta |
| East Feliciana Parish |  |  |
| Date | Previous/Subsequent Owners [Plantation Location] | Information on Individuals |
| Jan 1849 | Mary Bostwick (P) | Cattie |
| Jefferson Parish |  |  |
| Date | Previous/Subsequent Owners [Plantation Location] | Information on Individuals |

## Source

Ascension Parish, Book 19, p 401, c. 1845
Ascension Parish, Conveyance Book 19, p. 379, 1845/10/28, p. 387, 1845/11/13, and p. 401, 845/11/024

## Source

Avoyelles Parish, Conveyance Book T, p. 32, 1846/12/23

## Source

NOPL, East Feliciana Conveyance Book L, p. 366, 849/01/06

Source

Eleonore M. MacCarty (P)
[left bank of Mississippi River]

Narcisse, Adonis, Alexander, Creole, Amedee, Asenor, Alexander, Aisseu, Anthony, Bernard, Bison, Biard, Brutus, Bonjeau, Battist, Big Billy, Little Billy, Billy, Cesar, Charles, Charles, Daniel, Erasti, Etienne, Evariste, Edmund, Francois, George, Hector, Honore, Honore, Henry, Jacinthe, Jacques Jardinier, Jean Baptiste, Jeffrey, Joseph, John, John, Jean, Jerry, Joshua, Jeffrey, Leon, Ludon, Louis Ficher, Louis Ketto, Marcellus, Michel, Michael, Oresti, Orsher, Pair, Pierre, Pierre Congo, Pacide, Pompey, Puyo, Philimon, Paul, Solimon, Sanbo, Stephen, Stephney, Tisi, Mulatto Tom, Turner, Tine Tanba, Little Tom, Victor, Little Victor, Washington, Rosimond, Garlin Blacksmith, Bensiur, Jim, Simon, Felix, Anlaid, Athimide, Arseisne, Charlotte, Christian, Constance, Poumonne, Rose, Sarah, Sophie, Venus Congo, Venus Banbarra, Virginia, Victoire, Clarissa, Labelle, Sarah, Eliza, Marie Brine,
Nelly, Edward, Vincent, Alexis, Figaro, La, Jerry, Antoinette, Helen, Arsuli, Celestina, Desiree, Dylarouie, Dalmyre, Marie Noel, Arsisne, Virginia, Marie Daluph, Jacques Cap, Little Jacques, Cleopatra, Charlotte, Charity, Dalphne, Flora, Big Maria, Maria Trusty, Little Maria, Maria Congo, Marie Francoise, Marianne, Mina; Pouponne and her child Celest; Pelagis

## Information on Individuals

Reuben, Hamish, Peter, Lewis, Jesse, Archy, Anthony, Patrick, Prince, Larrisa and her son Martin, unnamed boy, Mary

Information on Individuals

Billy Christian
Bill
Zachariah, illegible, Frank, John

NOPL, East Feliciana
Conveyance Book L, p. 366
1831/12/19; Louisiana State Archives, Jefferson Parish Mortgage Book 2, p. 387 1832/1/10

## Source

Natchitoches Parish, Book 18, p. 296, 1834/05/05

## Source

Orleans Parish, Conveyance Book 23, p. 692, 1838/11/12 Orleans Parish, Conveyance Book 26, p. 410, 1839/06/25 Orleans Parish, Conveyance Book 35, p. 93, 1844/02/24

| Feb 1844 | Mark Davis (P) | John, Albert, Issac, Peter, Aaron, Nelson | Orleans Parish, Conveyance Book 36, p. 97, 1844/02/24 |
| :---: | :---: | :---: | :---: |
| Dec 1847 | John Currin (P) | Andrew, Quinn | Orleans Parish, Conveyance <br> Book 43, p. 275, 1847/12/28 |
| Apr 1850 | James Gilmer (S) | Terry, James | Orleans Parish, Conveyance <br> Book 49, p. 442, 1850/04/09 |
| Apr 1850 | John Hoey (S) | Hubbard | Orleans Parish, Conveyance <br> Book 50, p. 437, 1850/04/09 |
| Sep 1850 | Mrs. Laure Wilkinson (S) | Susan | Orleans Parish, Conveyance Book 53, p. 127, 1850/09/20 |
| May 1851 | Manuel Blasco (S) | Priscilla and her daughter Mary Rose | Orleans Parish, Conveyance <br> Book 29, p. 342, 1841/05/29 |
| West Feliciana Parish |  |  |  |
| Date | Previous/Subsequent Owners [Plantation Location] | Information on Individuals | Source |
| Sep 1843 | John Holmes (P and S) [Bayou Sarah] | Albert, Edmond, Wilson, Robin, Harriet | NOPL, West Feliciana Conveyance Book H, p. 452, 1843/09/02, and p. 461, 1843/09/02 |
| Sep 1843 | A. Dunbar (P) | Harry, Baptiste, Albert, Harry, Lowry, Randall, John, Jane; Mariah and her three children Baptiste, Albert, and Edward | NOPL, West Feliciana conveyance Book H, p. 455, 1843/09/02 |
| Apr 1845 <br> Dec 1845 | Guillaume Ramon (P) <br> W. H. Barrow (S) <br> [Rio River] | Hampton Stokes, Carter Hampton, Bill O'Conner, Ned Carter, Sam O'Conner, Giles, Joshua, Aaron, Roden, Eddward Long, Peter, Overton, Ben, Walter, Bill, Nat, Solomon, Booker; Adeline and her child Dan; Lot, Joe, Joshua, Island Ben, Harry, Sophia, Kathy, Biddy; Stella and her child Rumsey; Nancy, Annette and her child Eveline; Rachael, Ellen, Lettie, Dorcas and her child Rachael, Jane, Sally, Carey, Patty, Becky; Harriett and her child Elizabeth; Lucy, Susan | NOPL, West Feliciana Conveyance Book I, p. 168, 1845/12/20; West Feliciana Parish, Mortgage Book N, p. 225, 1845/04/09 |
| Mar 1849 | Uriah B. and Edward Phillips (S) | Catherine | West Feliciana, Conveyance Book I, p. 559, 1849/03/21 |
| Nov 1849 | S. H. Lurty (S) | Lucinda, Harriet, Ann Marie, Isobel, and unnamed infant | NOPL, West Feliciana Conveyance Book I, p. 620, 1849/11/15 |
| Nov 1849 | P. Lebret (S) | John | NOPL, West Feliciana Conveyance Book I, p.622, 1849/11/15 |

## Attachment 3

The following list identifies cases where enslaved individuals were pledged to Citizens Bank of Louisiana, the New Orleans Canal Bank, or the Bank of Kentucky (Lexington Branch) as collateral for mortgages or loans from 1831 to $1865 .{ }^{1}$ The information is drawn from three sources. The first is a collection of Citizens Bank minute books and papers held at Tulane University. The second consists of conveyance and mortgage records held at local parishes throughout Louisiana. The final source consists of conveyance records held at the Fayette County Courthouse in Lexington, Kentucky.

The list includes every reference to Citizens Bank, Canal Bank, or Bank of Kentucky (Lexington Branch) customers who secured loans or mortgages with enslaved individuals. The list is arranged alphabetically by parish or county and thereafter by owner. Each entry also includes information on the property and individual names included in the records. Names in italics reflect places where the documents were difficult to decipher because of the handwriting or because the documents have faded over time. The final column identifies the source for the information.

Many loans or mortgages were recorded more than once, including when borrowers died and plantations were sold or passed to others by will or other conveyance, or when loans were changed and had to be re-recorded. The existing records do not always provide enough information to identify when this occurred. Thus, related transactions may appear in separate entries listed under separate individuals. Complicating matters, there was no standardized spelling for many names in the source materials, and no standardized descriptions for many of the properties involved. Duplicate entries were avoided wherever possible, but where there was doubt, multiple entries were provided. Accordingly, some enslaved individuals listed may appear in several different entries.

[^2]
## Citizens Bank of Louisiana

| General References...........................................................page 1 |  |
| :---: | :---: |
| Ascension Parish ..............................................................page 7 |  |
| Assumption Parish. | page 10 |
| Avoyelles Parish | page 15 |
| Bienville Parish | page 15 |
| Caldwell Parish | page 16 |
| Claiborne Parish | ..page 16 |
| Concordia Parish | ..page 16 |
| East Baton Rouge Parish | page 19 |
| East Carroll Parish .. | page 20 |
| East Feliciana Parish | page 21 |
| Iberville Parish | ..page 23 |
| Jefferson Parish | ..page 30 |
| Lafayette Parish | ..page 31 |
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St. Helana Parish ..... page 51
St. James Parish. ..... page 51
St. John the Baptist Parish. .....  page 59
St. Landry Parish. ..... page 60
St. Martin Parish ..... page 61
St. Mary Parish. .....  page 65
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Tensas Parish ..... page 72
Terrebonne Parish ..... page 72
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West Baton Rouge Parish ..... page 73
West Feliciana Parish .....  page 79

## New Orleans Canal \& Banking Company

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Assumption Parish .page 85
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Concordia Parish .page 86
East Baton Rouge Parish .page 86
East Carroll Parish .page 87
East Feliciana Parish page 87
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Lafayette Parish .page 90
Bank of Kentucky (Lexington Branch)
Fayette County ..... page 109
Lafourche Parish ..... page 90
Ouachita Parish. ..... page 91
Pointe Coupee Parish ..... page 91
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St. Landry Parish. ..... page 94
St. Martin Parish ..... page 94
St. Mary Parish. ..... page 95
Terrebonne Parish ..... page 100
West Feliciana Parish ..... page 100

## Citizens Bank of Louisiana

## General References

| Owner | Mortgaged Collateral | Dates | Source |
| :---: | :---: | :---: | :---: |
| Allard, R. | unnamed individuals | 1834 | Tulane University, Citizens Bank Minute Book No. 1: 1834/10/07 |
| Allard, S. | the following individuals: Judy; Emmanuel; Peter | 1838-1845 | Tulane University, Citizens Bank Minute Book No. 2: 1838/06/21; Minute Book No. 5: 1845/08/30 |
| Andry, H. | unnamed individuals | 1843 | Tulane University, Citizens Bank Minute Book No. 5: 1843/02/08 |
| Andry, Mrs. Joe | land; brickyard; and 47 unnamed individuals | 1845 | Tulane University, Citizens Bank Minute Book No. 5: 1845/11/20 |
| Andry, M. and H. | unnamed individuals | 1834 | Tulane University, Citizens Bank Minute Book No. 1: 1834/10/07 |
| Avant, F. R. | unnamed individuals | 1841 | Tulane University, Citizens Bank Minute Book No. 4: 1841/12/22 |
| Bailey, Littleton | plantation and unnamed individuals | 1839 | Tulane University, Citizens Bank Minute Book No. 2: 1839/05/02 |
| Bergron, W. | property and unnamed individuals | 1838 | Tulane University, Citizens Bank Minute Book No. 2: 1838/06/11 |
| Bienvenu, Neuville | Hanisthe; Eliza; Eloise; Sophie; Ansin; Hugner; Robert; Alfred; William; Pleasance | 1847 | Tulane University, Citizens Bank Minute Book No. 6: 1847/03/25 |
| Bouny, Widow | bakery and unnamed individuals | 1845 | Tulane University, Citizens Bank Minute Book No. 5: 1845/06/05 |
| Bouny, William | Minerva and Mathilda | 1851 | Tulane University, Citizens Bank Minute Book No. 6: 1851/06/17 |
| Briny, Mrs. W. | Phebe and Milie | 1846 | Tulane University, Citizens Bank Minute Book No. 6: 1846/12/30 |
| Buisseau, M. Auville | 21 unnamed individuals | 1839 | Tulane University, Citizens Bank Minute Book No. 3: 1839/10/03 |
| Bujai, J. | land and 22 unnamed individuals. | 1850 | Tulane University, Citizens Bank Minute Book No. 6: 1850/10/22 |


| Owner | Mortgaged Collateral | Dates | Source |
| :---: | :---: | :---: | :---: |
| Calfion, P. H. | unnamed individuals | 1838 | Tulane University, Citizens Bank Minute Book No. 2: 1838/11/12 |
| Caulfield, William \& William Noble | 5 unnamed individuals | 1852 | Tulane University, Citizens Bank Minute Book No. 7: 1852/01/13 |
| Chambord \& Salarin | land and unnamed individuals. | 1841 | Tulane University, Citizens Bank Minute Book No. 4: 1841/06/03 |
| Charbonnet, Jacques | plantation and 20 unnamed individuals | $\begin{aligned} & 1838- \\ & 1847 \end{aligned}$ | Tulane University, Citizens Bank Minute Book No. 2: 1838/08/06; Citizens Bank Minute Book No. 6: 1847/10/19; 1847/10/12 |
| Churbanit | 6 unnamed individuals | 1838 | Tulane University, Citizens Bank Minute Book No. 2: 1838/02/12 |
| Cole, Mrs. Ann C. | plantation and 11 unnamed individuals | 1856 | Tulane University, Citizens Bank Minute Book No. 7: 1856/02/19 |
| Curely, Mrs. Sarah | unnamed individuals | 1840 | Tulane University, Citizens Bank Minute Book No. 3: 1840/04/09 |
| Darly, L.Mars and LeMar Durly | 2 unnamed individuals | 1842 | Tulane University, Citizens Bank Minute Book No. 4: 1842/05/05 |
| Daupan, J. P. | plantation and unnamed individuals. | 1838 | Tulane University, Citizens Bank Minute Book No. 2: 1838/05/24 |
| Davenport, B. G. | plantation and 23 individuals; including the following: Ryley; Willis; Hannah; Big Henry; Lewis; Ann | 1844-1845 | Tulane University, Citizens Bank Minute Book No. 5: 1844/07/08, 1845/01/30 |
| de Armas, C. G. | 2 unnamed individuals | 1844 | Tulane University, Citizens Bank Minute Book No. 5: 1844/05/22 |
| Deslondy, J. | unnamed individuals | 1834 | Tulane University, Citizens Bank Minute Book No. 1: 1834/09/22 |
| DeHabicourt, Mrs. | Jonus | 1838 | Tulane University, Citizens Bank Minute Book No. 2: 1838/09/03 |
| Doyal, Henry | Champion; Bathilde; Squire | 1851 | Tulane University, Citizens Bank Minute Book No. 6: 1851/06/24 |
| Drt'orpun G.; William Arnough Arnossly | plantation and unnamed individuals | 1841 | Tulane University, Citizens Bank Minute Book No. 4: 1841/12/11 |
| DuBuchits, W. \& A. Burwin Browning | unnamed individuals | 1842 | Tulane University, Citizens Bank Minute Book No. 4: 1842/02/19 |


| Owner | Mortgaged Collateral | Dates |
| :---: | :---: | :---: |
| Dufollut, J. S. | property and the following individual: Guitilly Road | 1839 |
| Dugue, F. | land and six unnamed individuals | 1846 |
| Dulafat, Joseph | Baptiste; Dudley Washington | 1847 |
| Durand, John | land and the following individuals: Tempe; William and Mil and 6 other unnamed individuals | 1850 |
| Durond, E. D. | plantation and 6 unnamed individuals | 1839 |
| Faber, Albert | Kidose; Jacques; Theodore; Cecila; Milby; Augustine | 1850 |
| Farrar, C. C. | 12 unnamed individuals | 1845 |
| Forbes, Joseph | 2 unnamed individuals | 1841 |
| Forstall, Edward J. and Placide | Grande Terre plantation and 53 unnamed individuals | 1843 |
| Fortier, Edward | plantation and 100 unnamed individuals. | 1839 |
| Fortin, Charles | land and unnamed individuals | 1837 |
| Fortin, O. | unnamed individuals | 1843 |
| Frexet brothers | land and unnamed individuals | 1847 |
| Gabaruche, John | plantation and unnamed individuals | 1838 |
| Garniers, F. | land and 15 unnamed individuals | 1841 |
| Goza \& Griffin | Henry; Anderson; Thomas Henry; Charles; James; Lewis Smith; Joe; Henry Richmond; Charles Smith; Phil; Eliza; Madison; Mary; Isaac; Hager; and Sandy | n.d. |

Dufollut, J. S

Dugue, F

Dulafat, Joseph

Durand, John

Durond, E. D.

Faber, Albert

Farrar, C. C.

Forbes, Joseph

Forstall, Edward J. and Grande Terre plantation and 53 unnamed individuals
Placide
Fortier, Edward

Fortin, Charles

Fortin, O .

Frexet brothers

Gabaruche, John

Garniers, F.

Goza \& Griffin

Henry; Anderson; Thomas Henry; Charles; James; Lewis Smith; Joe; Henry
Richmond; Charles Smith; Phil; Eliza; Madison; Mary; Isaac; Hager; and Sandy

## Dates Source

1839 Tulane University, Citizens Bank Minute Book No. 2 1839/05/09

Tulane University, Citizens Bank Minute Book No. 5 846/02/13, 1846/03/06

Tulane University, Citizens Bank Minute Book No. 6: 1847/04/08

Tulane University, Citizens Bank Minute Book No. 6 : 1850/07/08

Tulane University, Citizens Bank Minute Book No. 2 1839/04/11

Tulane University, Citizens Bank Minute Book No. 6: 1850/10/15

Tulane University, Citizens Bank Minute Book No. 5: 1845/08/30

Tulane University, Citizens Bank Minute Book No. 4 1841/12/22

Tulane University, Citizens Bank Minute Book No. 5: 1843/08/03

Tulane University, Citizens Bank Minute Book No. 2: 1839/04/04

Tulane University, Citizens Bank Minute Book No. 2: 1837/05/13

Tulane University, Citizens Bank Minute Book No. 5: 1843/02/07

Tulane University, Citizens Bank Minute Book No. 6: 1847/12/28

Tulane University, Citizens Bank Minute Book No. 2 1838/10/22

Tulane University, Citizens Bank Minute Book No. 3 1841/04/22

Citizens Bank of Louisiana Papers, 1834-1914, Foldier 5, n.d.

| Owner | Mortgaged Collateral |
| :---: | :---: |
| Harper, John F. and Elliott, C. W. | Adam; Ben; Buck; Cleggett; George; Guss; Henry; Isaiah; July; Jacob; John; Joshua; Jim; Randolph; Peter; Theodore; West; Joe Smith; Bill Brown; Sam; Isaac; Jeffrey; Ellis; Calvin; Lewis; Sam; Edmond; Speede; Lewis; Bob; Andrew; Nathan; Dave; Sandy; Airey; Adline; Bell; Betsy; Charity; Cynthia; Charlotte; Cilia; Eliza Green; Ellen; Frances; Frances; Henney; Josephine; Mary; Mary Brown; Malinda; Margarett; Martha; illegible; Louisa; Liz; Nancy; Sopha; Silla; Susan; Sally; Milly; Sarah; Wrina; Patsy; Nancy; Toby; Levenia; Rebecca; Jinny; Anna; Diana; Rosette; Tempe; Edward; Low; Joe; Jane; Wash; Davis; Moses; Charles; Letty; Ike Edmond; Taylor; William; Lucy; Celia |
| Heriandy, Jacques | 10 unnamed individuals |
| Hilles, J. H. | Orangeland plantation; New Hisia plantation at Bayou Luke; and 52 unnamed individuals |
| Hughes, D. | plantation and unnamed individuals |
| Huie, Joshua | 16 unnamed individuals |
| Johnson, Sty. | plantation and unnamed individuals |
| Jordan, B. | unnamed individual and Marguerite |
| Keyes \& Roberts | plantation and unnamed individuals |
| Kittridge \& Knox | 19 unnamed individuals |
| Landreaux, Honoré | Dorcas and her four children Celia, Moses, Martha and Judah; Ned; George; Terry; Little Archy; Sidney; Davy and his wife Lucinda; Henry; Epps; Joe; Harry; Nathan; Daniel; Ben; Jacob; Dolly; Johanna |
| Lapin, P.M.B. | plantation and 35 unnamed individuals |
| Le Breton, B. S. M. and Louis | land and 9 unnamed individuals. |
| Marim | 6 unnamed individuals |

## Dates Source

Tulane University, Citizens Bank of Louisiana Papers, 1834-1914, Foldier 5

1849-1850 Tulane University, Citizens Bank Minute Book No. 6 : 1849/02/13,1850/02/19
Tulane University, Citizens Bank Minute Book No. 4 1842/12/16

Tulane University, Citizens Bank Minute Book No. 8: 1859/12/05

Tulane University, Citizens Bank Minute Book No. 6 1849/11/07

Tulane University, Citizens Bank Minute Book No. 2 : 1837/05/24

Tulane University, Citizens Bank Minute Book No. 2: 1838/02/12

Tulane University, Citizens Bank Minute Book No. 3 1840/07/02

Tulane University, Citizens Bank Minute Book No. 5: 1844/07/08

Tulane University, Citizens Bank Minute Book No. 6 1847/02/18

Tulane University, Citizens Bank Minute Book No. 7 1856/02/15

Tulane University, Citizens Bank Minute Book No. 5 1845/11/13

Tulane University, Citizens Bank Minute Book No. 2 1838/02/12

| Owner | Mortgaged Collateral | Dates | Source |
| :---: | :---: | :---: | :---: |
| Martin, K. C. | Rhodu and unnamed individuals | 1841 | Tulane University, Citizens Bank Minute Book No. 3: 1841/03/29 |
| Nicaud, Michel | Stephen; Henry Guerin; Robert; Samite; Becky; Maria; Suzanne; Eliza; Hanna; Julia; Isabelle; Mary; Congo; Moses; Ganl; Ganett; John Minor; Ferdinand; Sam; Daniel; Denis; Manuel; David; Roll; Jerry Ridan | 1845 | Tulane University, Citizens Bank Minute Book No. 2: 1838/09/06, 1838/11/08; Citizens Bank Minute Book No. 5: 1845/10/24 |
| O'Deshigy, Mr. | property and 60 unnamed individuals | 1841 | Tulane University, Citizens Bank Minute Book No. 4: 1841/06/29 |
| Parker, A. | property and 2 unnamed individuals | 1841 | Tulane University, Citizens Bank Minute Book No. 4: 1841/12/24 |
| Paruit, Charles | plantation and unnamed individuals | 1838 | Tulane University, Citizens Bank Minute Book No. 2: 1838/03/14 |
| Peyroux, Aime | Jaik and Marguerite | 1845 | Tulane University, Citizens Bank Minute Book No. 5: 1845/07/31 |
| Pim, W. M. | the following individuals: Nelson; Philip; Sylvester; Sally and her two unnamed two children | 1841 | Tulane University, Citizens Bank Minute Book No. 4: 1841/11/29, 1842/04/04 |
| Poincy, D. | Petre; Caroline | 1844 | Tulane University, Citizens Bank Minute Book No. 1844/07/30 |
| Pontchartrain Rail Road Company | land and 28 unnamed individuals | 1843-1846 | Tulane University, Citizens Bank Minute Book No. 5: 1843/02/01, 1843/02/04, 1846/03/26 |
| Poupono, Fifi | land and individual named Marianne | 1838 | Tulane University, Citizens Bank Minute Book No. 2: 1838/03/27 |
| Reggio, Mrs. Augustin | Arthemise; Marie; Clarisse; Martha Hampton; Mary Dorsey; Rosalie | 1849 | Tulane University, Citizens Bank Minute Book No. 6: 1849/02/13 |
| Riggio, Adolphi, Charles and Eusebe | plantation and unnamed individuals | 1845 | Tulane University, Citizens Bank Minute Book No. 5: 1845/05/01 |
| Ring, N. D. | plantation and 150 unnamed individuals | 1841 | Tulane University, Citizens Bank Minute Book No. 3: 1841/05/27 |
| Robert and Allard | 3 unnamed individuals | 1835 | Tulane University, Citizens Bank Minute Book No. 1: 1835/06/09 |
| Sandos, L. P. | Costalina. | 1845 | Tulane University, Citizens Bank Minute Book No. 5: 1845/01/02 |
| Sandrian, P. | plantation and unnamed individuals | 1838 | Tulane University, Citizens Bank Minute Book No. 2: 1838/10/22 |

## Owner

Smith, Rev. Ian
Soniat, E
Soniat, Joseph

Story, C.H. G.
Sumir, V.
Sundurnn, Arvlin
Sundurnn, J. W.
Sundurnn, $P$
Supin, P. M.

Supris, Mr.
Suttel, Henry
Suvilan, G. S.
Thomas, J. R.

Todd, John
Trémé, Benoit
Turing, William and Charles Strong

## Mortgaged Collateral

two plantations and unnamed individuals
two plantations at Little Bayou Sara and 117 unnamed individuals
unnamed individuals
20 unnamed individuals
plantation and unnamed individuals
plantation and unnamed individuals
plantation and unnamed individuals
plantation and unnamed individuals
plantation and unnamed individuals
two plantations and 121 unnamed individuals
plantation and unnamed individuals
plantation and 16 unnamed individuals at Sicily Island on Bayou Fluron
plantation and unnamed individuals
plantation and unnamed individuals
land and 7 unnamed individuals
plantation and unnamed individuals

## Dates Source

1842

Tulane University, Citizens Bank Minute Book No. 4: 1842/05/19, 1842/08/11

Tulane University, Citizens Bank Minute Book No. 7: 1852/01/27

Tulane University, Citizens Bank Minute Book No. 5: 1843/05/17

Tulane University, Citizens Bank Minute Book No. 7: 1852/03/23

Tulane University, Citizens Bank Minute Book No. 2: 1838/07/19

Tulane University, Citizens Bank Minute Book No. 2: 1837/05/27

Tulane University, Citizens Bank Minute Book No. 2: 1837/05/27

Tulane University, Citizens Bank Minute Book No. 2: 1837/05/27

Tulane University, Citizens Bank Minute Book No. 2: 1838/02/12

Tulane University, Citizens Bank Minute Book No. 3: 1841/04/26

Tulane University, Citizens Bank Minute Book No. 8: 1859/06/27

Tulane University, Citizens Bank Minute Book No. 2: 1837/07/15

Tulane University, Citizens Bank Minute Book No. 5: 1845/01/18, 1845/03/27

Tulane University, Citizens Bank Minute Book No. 8: 1859/05/16

Tulane University, Citizens Bank Minute Book No. 6 : 1849/06/20

Tulane University, Citizens Bank Minute Book No. 4: 1841/11/29

## Owner

Vaigar, Honore
Villard, D.
Virret, C.
White \& Hughes; L.
Barly
Whitney, B.
Unknown

Unknown

## Mortgaged Collateral

9 unnamed individuals
6 unnamed individuals
Charles and David
plantation and unnamed individuals
3 unnamed individuals18411847
the following individuals: Leven; Lydia; John; Bob; Bili; Henry; Stephen; Tabby;
Fanny; Perry; Clarissa; Isaac; Tom; Philes; Tener; Betsy; Alek; Eddy; Isaac; Moses; Susan; Lavinia; May; Artemis; Rose; April; Martha; Nancy; Adam; Jack; John; Melinda; Henry; Andrew; Letty

William; Azor; Ben; Jim; Cuffy; Isaac; Mary and child; Emily; Fanny; White Allen; Rachel; Abraham; Xavier; Bax; Black Allen; Cornelius; Henry; Maria and her child; Black Fanny; Sally; Matilda; Lymer; Louise; Victor

## Dates Source

## Ascension Parish

Blanchard, Joseph land and the following individuals: Jaquez; Adam; Julien; Jacobe ; Stepehn; Marc; 1838 Ned; James; Blaise; George; Charles; David; John; Brown; Benjamin; Nicotess ; Henrietta; Bitsy; Lea; Jane; Sally; Domitille ; Alexandre; Odille

Tulane University, Citizens Bank Minute Book No. 5 1842/12/16

Tulane University, Citizens Bank Minute Book No. 5 1846/03/06

Tulane University, Citizens Bank Minute Book No. 2: 1838/08/10

Tulane University, Citizens Bank Minute Book No. 4: 1841/12/11

Tulane University, Citizens Bank Minute Book No. 6 1847/05/13

Tulane University, Citizens Bank of Louisiana Papers, 1834-1914, Foldier 5

Ascension Parish, Conveyance Book 14, p. 298, 1838/03/08

## Owner

De Lizardi, Manuel Julien

## Mortgaged Collateral

Orange Grove sugar plantation and the following individuals: Isaac; Anthony; Cajah; John Sildard; Louis; John Hayes; Sam; Archy; William; George Lee; Nelson; William Bonaparte; Charles Bath; Henry Johnson; Frank; Bolla; Henry Page; Stephen; Pidmalea Denis; Pierre Louis Morris; Wilson; James; Jack; Dublin; Charles Martin; David; George Benton; Ned; Alfred; David; Peggs; Rod; Tammy; Sally; Nelly; Hilty; Elisa; Letty; Violette; Mary; Rolina; Marguerite; Finny; Elada; Marguerite; Sophie; Sophia Mary; Esther; Edouard; Colla; Caroline; Flora; Mathilda; Aaron; Pauline; Robert; Lucinda; Sally; Nancy; Henry; Isaac; David; Noel; Jolyaie; Isaac; John; Horace; Lindon; Henry; Boyer; Bruce; Sam; John; Henry; Kitty; Isabelle; Henriette; Charlotte; Nat; Louisa; Suzanne; Rachel; Moses; Sally; Charlotte

| Duffel, Edward | plantation and the folloiwing individuals: Casimir; Charles; Elizabeth; Peter; Caleb |
| :--- | :--- |
|  | Baptiste; Petit Joe; Matt; Elsie; Henry; William; Joe; John; Sam; Nace; Ben; Frank; |
|  | Tim; August; Jean Louis; Jose; Andre; Evarist; Stephen; Colin; Terrence; Bond; |
|  | Desieser; Lewis; Jack; Constance; Grand Leonard; Melanie; Sellah, her daughter |
|  | Sylvie, and Sylvie's daughter Marie; Maria; Jenny; Fanchonnette; Amie; Sally and |
|  | her son Baptiste; Suzette; Petit Leonaide and her five children Rose, Laurant, |
|  | Tom, Lucia, and Elsie; Augustine; Louise and her son Edward; Marianne and her |
| five children Elphonse, Augustine, Francis, Lucy, and Fortuna; Marguerite and her |  |
|  | child Joe; Sarah; Geneviere; Mary |

Kenner, Duncan F. and Sinwood Plantation and the following individuals: Daniel; Phill; Jove;Shannon; George B.

Keyes, Elizabeth R.

## Dates

1844

## Source

Tulane University, Citizens Bank Minute Book No. 5 1844/04/17; Ascension Parish, Mortgage Book 8, p. 115,1844/04/18

Tulane University, Citizens Bank Minute Book No. 2 1838/02/24; Ascension Parish, Mortgage Book 6, p. 452, 1838/03/29; Ascension Parish, Mortgage Book 9, p.141, c. 1845

Ascension Parish, Mortgage Book 7, p. 111, 1839/05/24

| Owne | Mortgaged Collateral |
| :---: | :---: |
| Landry, Amadeo | land and the following individuals: Pompe; Pierre; Sambo; Jo; Mathilda Mercedi; Constance and her children Hortense and Eugenie |
| Landry, Celeste | plantation on right bank of the Mississippi and the following individuals: Baptiste; Joe; Nat; Elsi; Henry; Raphael; Francis; William; Joe; Michael; Billy; Old Sam; Brother; John; Andrew; Bill; Frank; Nace; Young Sam; Ben; Frank; Jean; Auguste; illegible ; Baralie; Constance; Melagie; illegible ; Celler; Maria; Malina; Jenny; illegible ; Can; Julie; Leonande; Aimee; Sally; Suzette; Laura; Augustine; Louise; Joan Louise; Susan; Jean Baptiste; Andre; Edward; Flora; Colin; Marianne; Julie; Mark; Helene; Johnson; Liza; Rose; Marguerite |
| Landry, Trasimon and Modeste Brand | land and the following individuals: Pompey; Lubin; Sambo; Pierre; Constance; Hortense; Eugene; Betsey Mercredi; Bouchas; Solomon; George; Ben alias Benjamin; Glacede; Squire; Jean Pierre; Suzanne; David; Tom; Sam; Barnett; Henry; Betta; Paul; Celeste; Jacob Augustine; William alias Funis; Isaac; Wiliam (alias Samdi); Milliy; James; John alias PostNote; Dick ou Juin; Elvira; William; Isaac; Charles; Celestine; Fanny; Benjamin; Caroline alias Mai; Milly; John; Sally and her child George; Fanny and her child Rachel; Sandy; John; Matt; Philippe; William; Dick; Lucinda; Black Maria; Criole Maria; Charlotte; Jenny; Allen; James; John; Benjamin Bin; Milley; Benjamin; William; Stephen; Ben; George; Honore; Gabriel; Dumas; Philippe; Jim; Julien; Harry; Harry; Abraham; Jaques; Hector; Cofas; Magloire; Louis Christophe; Pierre; Ned; Louis; Trasimon Mardi; Dick; Charles; George Jour; Simon Lundi; Basil; Darby; Raquis; Henry Vendredi; John; Nat; Thaddeus; Peter Dimanche; Cambredge; Lank; John Javier; George Semaine; Auguste; Willus; Caulin; Alexis; Silvere; Valentin; Zenon; Cesar; Jacques Night; Sophie; Lucy; Rosalie; Estella; Manon; Fanny; Clemence; Marie; July; Agar; Cynthia; Sally; Elizabeth Betsy; Mathilda; Liah; Rosalie Novembre; Mary Ann; Marie; Jean Baptiste; Lindon; Louise; Celestin; Moguie; Séance; Juillet; Nancy; Alfred; Caroline; Audile; Aurore; Bill; Mars; Jane; Susanne; Charity; Jefferson Hope; Cueline |

Landry, Amadeo
Landry, Celeste

Landry, Trasimon and Modeste Brand

## Mortgaged Collateral

land and the following individuals: Pompe; Pierre; Sambo; Jo; Mathilda Mercedi; and Her children Hortense and Eugenie
plantation on right bank of the Mississippi and the following individuals: Baptiste; 1844
oe, Nat, Elsi, Hery, Rall; Fra, Nis; You, Joe, Michael; Bly; Od Sam; illegible ; Baralie; Constance; Melagie; illegible ; Celler; Maria; Malina; Jenny; illegible ; Can; Julie; Leonande; Aimee; Sally; Suzette; Laura; Augustine; Louise ;ouise; Susan; Jean Bapiste; Andre; Edward; Flora; Colin; Marianne; Julie;
land and the following individuals: Pompey; Lubin; Sambo; Pierre; Constance , Eugene; Betsey Mercredi; Bouchas; Solomon; George; Ben alia Henry; Betta; Paul• Celeste; Jacob Augustine; William alias Funis; Isaac; Wiliam (alias Samdi); Milliy; James; John alias PostNote; Dick ou Juin; Elvira; William; saac, Charles; Celestine; Fanny; Benjamin; Caroline alias Mai; Milly; John; Sally and位; Dick; Lucinda; Black Maria; Criole Maria; Charlotte; Jenny; Allen; James; Gabrial; Dumas; Philippe; Jim; Julien; Harry; Harry; Abraham; Jaques; Hector; Cofas; Magloire; Louis Christophe; Pierre; Ned; Louis; Trasimon Mard; Dick; Charles; George Jour; Simon Lundi; Basil; Darby; Raquis; Henry Vendredi; John; Nat; Thaddeus; Peter Dimanche; Cambredge; Lank; John Javier; George Semaine; Auguste; Willus; Caulin; Alexis; Silvere; Valentin; Zenon; Cesar; , Clemence; Novembre; Mary Ann; Marie; Jean Baptiste; Lindon; Louise; Celestin; Moguie; Charity; Jefferson Hope; Cueline

## Dates Source

Tulane University, Citizens Bank Minute Book No. 1
1834/10/14; Ascension Parish, Mortgage Book 6, p. 214, 1835/12/26

Ascension Parish, Mortgage Book 8, p. 138,
1844/04

1838-1855 Tulane University, Citizens Bank Minute Book No. 1 1835/04/20, 1836/05/30; Citizens Bank Minute Book No. 2: 1838/03/14, 1838/03/26, 1838/11/08, 1838/11/19; Citizens Bank Minute Book No. 5 : 1843/01/28; Citizens Bank Minute Book No. 7: 1853/11/22, 1853/12/16, 1855/05/15 ; Ascension Parish, Mortgage Book 6, p. 211, 1835/12/24; Mortgage Book 7, p. 18, 1838/11/23

## Owner

Landry, Trasimon and Modeste Brand
andry, Trasimon Modeste Brand

## Mortgaged Collateral

Wyatt plantation and the following individuals: Seville; Phil; Daniel; Ben; Peter;
Richard; Abe; Aaron; Isaac; Christoph; Jenny; Fred; Martin; Mark; Moses; Campbell; Peter; Jack; Francois; Dick; Jacob; Mary; Caroline and her child Henry; Ginsey and her child Ore ; Chloe; Nina; Nancy; Lucy; Sally and her child Frisly; Amanda; Ellen and her child Bob; Minerva; Henrietta; Sarah; Lucky; Leida; Jane; Mary Luke and her child Orange; Mariah; Mariah; Mariah; Sarah; Minerva; Peggy; Pallas; Ann; Winney; Sally; Martha and her children Mary and Jack; William; Sam; Fanny; Julien; Martin; Nelson; Pelagie; Marguerite; Draureir; Rosalie; Adile; Raphael; Elizabeth; Danielle; Charles; Tobias

Sugar plantation on left bank of the Mississippi and the following individuals: Nelson; Ezekial; Melville; Taylor and children Bob, Landon, and James; Nelson; Preston Stephenson; Pompey; Potters; Eliza; Loius; Blaize; Macaire ; Joseph; Dick Bently; Harry Hill; Tom Logan; Nathan Bowman; John Biveans; Cyrus; Elick; Gabriel; St. Claire; Alcide; Balin; Joe Baton Rouge; Nancy; Suzanne; Lucy; Peggy; Josephine; Mary; Louis

Philippon, Henry
St. Martin, Joseph

LeBlanc, Pharion land and the following individuals: Celestin; Benjamin; Guillamme; Rosamond; Edward; Antoine; Suzanne; Sophia; Elinor; Carmelita; Emma; Nicocerine

Orange Grove plantation and unnamed individuals

1833-1838 Ascension Parish, Mortgage Book 7, p. 512, 1833/06/08; Mortgage Book 6, p. 433, 1838/03
Ascension Parish, Mortgage Book 6, p. 459, 1838/04/13

Tulane University, Citizens Bank Minute Book No. 5

Land and the following individuals: Joseph; Bob; Isaac; Levy; Peter; Ackin; Sam Colas; Augustin; Betsey Dumond; Charlotte; Priscey; Sally; Petite Sally; Betsy; Lovicsy ; Eliza; George; Jean; Hattieu; Aguste; Lysette; Antoine; Laure; Betsey; Betsey Smith; Charlotte; William; Philippe; Mathilda

Dates
1855

Ascension Parish, Mortgage Book 9, p. 332, 1850/04/26

## Source

Tulane University, Citizens Bank Minute Book No. 7: 1855/05/15; Ascension Parish, Mortgage Book 10, p. $313,1855 / 05 / 03$

## Assumption Parish

Albagnac, Marius; John land and the following individuals: Bill; Peggy; Barnalby; Madelaine; Charity

Billsen and S. G. Philips

Barrilleaux, Francois land and the following individuals: Henry; Jacques; Jean; Michael; James Argitte ; 1838 Jim; Dinah ; Jared; Apoline

1838-1852 Assumption Parish, Mortgage Book 1834-41, p. 134, 1838/01/18; Sheriff's Sale Book B, 1841-55, p. 178, 1844/08/03; Conveyance Record 17, p. 448,1853/02/02; Tulane University, Citizens Bank Minute Book No. 7: 1852/01/06

Assumption Parish, Mortgage Book 1834-1841, p. 147, 1838/02/05; Tulane University, Citizens Bank Minute Book No. 2: 1839/03/13
\(\left.$$
\begin{array}{ll}\begin{array}{l}\text { Owner } \\
\text { Barrow, Ruffin Robert }\end{array} & \begin{array}{l}\text { Mortgaged Collateral } \\
\text { the following individuals: Thomas Spencer; Jack Kerry; Robert Will; Aaron; } \\
\text { Pauline; Felix; Davis; Honorine; Paul }\end{array}
$$ <br>

Belliam, John \& plantation and 4 unnamed individuals\end{array}\right]\)| Bertaud Brothers | plantation and unnamed individuals |
| :--- | :--- |

## Dates Source

1846 Assumption
c. 1848 Tulane University, M-1847, Citizens Bank Mortgage Book

1854 Tulane University, Citizens Bank Minute Book No. 7 1854/05/09

1841 Assumption Parish, Conveyance Book 6, p. 173, 1841/03/17

1838-1842 Assumption Parish, Mortgage Book 1834-41, p. 145, 1838/02/05; Mortgages vol. 10, p. 239, 1842/03/26
c. 1848 Tulane University, M-1847, Citizens Bank Mortgage Book

1834 Assumption Parish, Mortgage Book 1831-1935, p. 217, 1834/09/08

1839 Assumption Parish, Mortgage Book 1834-1841, p. 229, 1839/01/22

1848-1854 Tulane University, Citizens Bank Minute Book No. 6: 1848/05/23, 1848/12/27, 1851/05/20; Citizens Bank Minute Book No. 7: 1853/04/28, 1853/03/21,
1853/03/17, 1854/05/02; Assumption Parish, Mortgage Book 11B, p. 150, 1848/06/13; Mortgage Book 12A, p. 649, 1854/11/06

1856
Tulane University, Citizens Bank Minute Book No. 8: 1856/06/06

Assumption Parish, Mortgages 1834-1841, p. 138, 1838/08/10

1847-1848 Tulane University, Citizens Bank Minute Book No. 6: 1847/01/07; Assumption Parish, Mortgage Book 11B, p. 119, 1848/04/01; p. 122, 1848/04/08

1838
Assumption Parish, Mortgage Book 1834-41, p 157, 1838/02/09

| Owner Isourd, Antoine | Mortgaged Collateral <br> land and the following individuals: Dick; Bob; Catherine; Marie; Lucie | Dates <br> 1838 | Source <br> Assumption Parish, Mortgage Book 1834-41, p. |
| :---: | :---: | :---: | :---: |
|  | land and the following individuals: Dick; Bob; Catherine; Marie; Lucie |  | Assumption Parish, Mortgage Book 1834-41, p. 162, 1838/02/20 |
| Jordan, Francois and Elodie Tete | plantation and the following individuals: Henry; Jacob; Abraham; George; Moses | 1853 | Assumption Parish, Mortgage Book 12, p. 413, 1853/04/26 |
| Kittredge, Ebenezer E. and Martha | plantation and the following individuals: Jesse Harris; Aaron; Anthony; Frederick; Ned; Joe; Tom; Ben; John; Adam; Aleck; Charles; Charley; Metit; Elisha; Julianne; Julie; Lyn; Peggy; Patty; Betty; Flora; Laurette; Linney; Marcelite; Harriet; Fanny; Alva; Jenny; Ninny; Silva; Leanna; Daniel | 1834 | Tulane University, Citizens Bank Minute Book No. 1: 1834/07/22; Assumption Parish, Mortgages 18311835, p. 238, 1834/10/10 |
| Knox, Charles | land and the following individuals: Harry; Hanna; Oscar; Abby; Eliza;Guay; Hanna; Julia Ann; Sophia; King; William; Charles; Jeremiah; James; Joseph | 1835 | Assumption Parish, Mortgage Book 1834-41, p. 140, 1835/02/05 |
| Lalande, Joseph and Augustine | plantation and the following individuals: Thomas; Mingo; Peter; Anthony; George; Ursule; Josephine; Betsy | 1834 | Assumption Parish, Mortgages 1831-1835, p. 227, 1834/09/24 |
| Landreaux, Pierre and Ursin | land and the following individuals: Brister; Lamon; Lucien; Ned; Ben; July; Alexandre; Pompe; Charles; Yorick; Janvier; Joe; B. James; Celestine; Henry; Avril; B. Simon; Mingo; Andre; Toussaint; Lewis; B. Simon; Dick; Peter; John; Ralph; Gilbert; B. James; Davy; Rhody; Diana; Marguerite; B. Suzanna; Lydia; Mary Ann; Patsy; Euphrosine; Agga; Polly; Adelaide; Eliza; Celeste; Becky; L. Swan; B. Letty; Jenny; Lellany; Bellary; Sylvia; Catherine; L. Letty; William; Leandre; Tom; Cyrille; Jacob; Winny; Magdeleine; Jessey; Handfield; Carimir; Emile; Arthemise; Thomas; Pascal; Clemence; Kitty; Mars; Barile; Justine; Aime; Vanny; Susanne; Simon; Rosalie; William; Henriette; Auguste; Rody; Louis; Davis; Martiner; Celertin; Samon; Little Jim; Millien; Munck; Celeste; Polly; Maria; Dina; Big Mary; Little Mary; Big Suzanne; Lacy; James; Cebon; Nancy; Tepy; Body Little Amelie; Maxemillian; Josephine; Bazile; Handsel; Geno; Casener; Emilee; Auguste; Charlie; Bavin; Archie; Gibon; Taron | 1834-1844 | Tulane University, Citizens Bank Minute Book No. 1: 1834/07/22, Minute Book No. 2: 1838/12/06; Assumption Parish, Mortgage Book 1834-41, p. 28, 1835/11/24; p. 77, 1837/01/03; p. 106, 1837/06/01; Conveyance Book 22, p. 727, 1844/03/01 |
| Landry, Joseph | the following individuals: Seveille; Clarisse | 1837-1839 | Assumption Parish, Mortgages 1835-1841, p. 177, 1837/05/10, p. 277, 1839/12/02 |
| Landry, Mrs. Marguerite | land and the following individuals: Auguste; Louis ; Lewis; Francois; Philippe; Leon; Etienne; Tato ; Jacques; Antoine; Theodore; Celeste; Phany; Pit ; Clarisse; Delphine | 1835-1838 | Tulane University, Citizens Bank Minute Book No. 1: 1835/05/11; Citizens Bank Minute Book No. 2: 1838/01/1; Assumption Parish, Mortgage Book 10, p. 239, 1837/08/10 |
| Lesage, Pierre Martin and Robert Campbell | plantation and the following individuals: Thomas; Andre; Tom; Gacques; Abraham; Julia; Phebe; Phebe; Georges; and unnamed individuals | 1837-1842 | Assumption Parish, Mortgage Book 10, p. 239, 1837/08/10; Mortgage Book 10, p. 69, 1842/03/26 |


| Owner <br> Marquette, Monteque | Mortgaged Collateral the following individual: Samuel |
| :---: | :---: |
| Martin, Joseph | land and the following individuals: Georges Lot; Joseph Monnot; William; Washington; Moses; Petit James; Newton; Sandy; Clementine; Rachel; Louise; Estelle; Joseph; Ben; Washely; Adam; John Cadieu; Tom White; Philip; Grand Tom; Augustine; James; Tucker; Salatin; Cain; Bellow; Lindor; Cajinir; Cesar; Emanuel; Meuttie; Jaiques; Prosper; Jean Lou; John Ameire; Sephuer; Sylvain; Celestin; Grosse Sulley; Petite Sulley; V. Betsy; S. Betsy; Melinda; Henriette; Grosse Rosette; Rosette; Betty; Charlotte; Lucy; Eliza; Susanne; Chetin; Celina; Nancy; Sarah; Petite Sarah; Elvira; Azelie; Sylvestre; Tom; Charlotte Poucette; Leon; Charles; Sophie; Marianne; Eugenie |
| Mollere, Raphael and Clarisse | land and the following individuals: Coco ; Parisien; Caroline; Euphrosine |
| Monginot, Louis | land and the following individuals: Ned; Ben; Cadio; Louis; Adam; Abraham; Henriette; unnamed individual |
| Monnet, Charles | land and the following individuals: Pithion; Pierrot; Ursue; Nancy; Aphroisine; Victoire; Adeline; Justine; Thomas; Leonide; Ursin; Lucy |
| Phillips, George W. and Sarah Rhea | plantation and 15 unnamed individuals |
| Phillips, W. P. | land and the following individuals: Bill Owen; Isaac; Gaston; Solomon; Dick; Joseph; Smith; Helina; Polly; Marie; unnamed individuals; Bud; Kevin; Milley; Mary; Tiny; Tom; Eduard ; Adelina; Liz |
| Pichot, A. W. | land and unnamed individuals |
| Pugh, Thomas | land and the following individuals: Charles; Jacob; Bob; Lewis; Isaac; Ned; Willis; Louis Brag; Dick; Rachel; Daphne; Peggy; Julia; Martha; Prudence; Violet; Maria; Mina; Sally; Patsy; Polly; Sampson; Neptune Reuben; Betsy |
| Pugh, William W. | the following individuals: Ben; Britler; Laray; Pompey; Randal; Salera; Penny; Lesina; Esther; Caroline; Martha; Antoinette |
| Sewall, Mrs. Maria Laura | Appy; Eliza; Marguerite |

## Dates Source

1836

1834-1844 Tulane University, Citizens Bank Minute Book No. 1 1834/08/29; Assumption Parish, Mortgage Book 1831-1835, p. 228,1834/11/16; p. 230,1834/11/17 p. 236, 1834/10/04; p. 237, 1834/10/04; Mortgage Book 10A, p. 320, 1844/06/22

1838-1841 Tulane University, Citizens Bank Minute Book No. 3 1841/03/11, 1841/04/22; Assumption Parish, Mortgage Book 1834-41, p. 150, 1838/02/05

1837 Assumption Parish, Mortgage 11B, p. 119, 1848/04/01

1836-1837 Assumption Parish, Mortgage Book 1834-41, p 117, 1837/08 ca.

Tulane University, Citizens Bank Minute Book No. 5 1846/01/29

Assumption Parish, Mortgage Book 1834-1841, p 201, 1838/10/26

Assumption Parish, Mortgage Book 1834-1841, p. 70, 1836/12/12; Tulane University, Citizens Bank Minute Book No. 1: 1836/06/15
Assumption Parish, Conveyance Record 6, p. 307, 1842/03/04

## Dates Source

| Owner <br> Sparks, N. | Mortgaged Collateral unnamed individuals |
| :---: | :---: |
| Templet, Florentin | land and the following individuals: Jacob; Ned; Arthemise; Louise; Silvany; Constance; Ursule; Azema |
| Tete, Auguste | plantation and the following indivduals: James; Fulton; Phillip; Pridy; Francois; Robert; Baptiste; Marcilene; Anna ; Genevieve; Marie; Betsey; Jane; Milly; Sam; Jack; James; Solomon; Phillip; Polly; Jim Hazard; Julian; Jenny; Winsor Williams; Mary Ann Greeves ; Maria; Babes; Sarah; Diana ; Ephraim; Edmond; Patrick; Henry; Moses; Carson; Jacob; Abraham; George; Honorine; Suzette; Affi; Moses; Anais; Henry Bett; Jim Newson; Elizabeth; Eveline; Alfred Myer; Omson |
| Tete, Francois and Anne | plantation and the following indiv idividuals: William Carpenter; Henry; Jerry; Justin; Raphael; John; Jack; Lewis; Charles; Henry; Barber; Alfred; Agnes; Maria; Louisa; Adele; Henriette; Emiline; Mary; Ann; Elizabeth; Samantha; Melite; Octave; Eugene; Camilia |
| Timmerville, C. T. | plantation and unnamed individuals |
| Tournillon, Julien | land and the following individuals: Francois; George; Henry; Moulard; Hypolite; Thom; Boatswain; Joseph; John Brown; Cyrus; Ellick; Kitt; Hector; Little Cyrus; Alphonse; Will; Ned Blacksmith; Ebby Cooper; Altimore; Moise; Big Joe; Leonard; Maria; Poza; Aimmee; Phillis; Jenny; Delphine; Celestine; Celie; Priscilla; Charlotte; Madelaine; Nancy; Marie; Elsy; Betsy; Little Celie; Helene; Carmelite; Jean Baptiste; Adam; Henriette; Marie Jeane; William; Jean Pierre; Louis; Marinette; Caterine; Paul; Clarisse |
| Tournillon, S. F. | unnamed individuals |
| Trowbridge, William; Pierre Bourg | land and the following individuals: Lucie; Rosalie and her two children Adam and Eve |
| Verret, Carville | the following individuals: Collin; Sam; Davis; Melinda; Caroline |

1835

1843 -

Jack; James; Solomon; Phillip; Polly; Jim Hazard; Julian; Jenny; Winsor Williams; Mary Ann Greeves ; Maria; Babes; Sarah; Diana ; Ephraim; Edmond; Patrick;
Henry; Moses; Carson; Jacob; Abraham; George; Honorine; Suzette; Affi; Moses; Anais; Henry Bett; Jim Newson; Elizabeth; Eveline; Alfred Myer; Omson
plantation and the following indiv idividuals: William Carpenter; Henry; Jerry;

1834-1836 Tulane University, Citizens Bank Minute Book No. 1 1834/10/20, 1836/03/17; Assumption Parish Mortgage Book 1831-1835, p. 256, 1835/03/20

## Owner

Wilson, James

## Mortgaged Collateral

plantation on Bayou Laforche and the following individuals: Joe; Mary; Elias;
Rosanna; Huston; Heriet Johnson; William Byersters; Alfred Vass; Nat

Dates
1851

## Source

Tulane University, Citizens Bank Minute Book No. 6 1851/01/07,1851/03/26; Assumption Parish,
Mortgage Book 12, p. 69, 1851/04/28, 1851/03/28

Tulane University, Citizens Bank Minute Book No. 8 : 1858/05/24

Avoyelles Parish, Conveyance Book U, p. 428, 1849/08/02

Tulane University, Citizens Bank of Louisiana Papers, 1834-1914, Folder 3, 1850/04/15

## Bienville Parish

Ambrose, James
the following individuals: Rina and her son Jefferson

Bienville Parish, Mortgage Book 1849-1855, p. 3, 1849/08/08
Avoyelles Parish, Conveyance Book N, p. 175, 1838/03/20, St. Landry Parish, Conveyance Book IJ1, p. 207, 1838/04/09

## Owner

Bissell and Schlater plantation and 56 unnamed individuals

Dates
1853

## Source

Tulane University, Citizens Bank Minute Book No. 7: 1853/02/24

## Caldwell Parish

| Hyams, Henry M. | Esserance Plantation and the following individuals: Charles; Sarah; Catherine; |
| :--- | :--- | :--- |
|  | Mary Ann; Little Charles; Sancho; Lucy; Moses; Marion; Toby; Bitsy; Clarissa; |
|  | Phillis; Little Sancho; Richard.; Gabriel; Nab; ;nne; IIsaac; Lorenzo; Abram; |
|  | Amanda; Llyod; Eliza.; Elsey; Old Grace; D Williams; Jefferson; Elizabeth; |
|  | unnamed infant; Fanny; Minerva; Jessie; Suckey; Edward; Jacob; Harry; |
|  | unnamed infant; Alfred; Jenny; Little Jesse; Nelly; Dovoght; Clarisa; Cynthia; |
|  | Golden; Louisa; Franklin; Magaret; Celia; Mahala; Maria; Rivers; Randall; Trissy; |
|  | Manuel; Maria; Betty; Thomas; Harriet; Essex; Elvira; Martin; Little Bill; Edwin; |
|  | Sam Wallace |

Caldwell Parish, Mortgage Book C, 1858/04/26;Tulane University, Citizens Bank Minute Book No. 8: 1857/10/05

## Claiborne Parish

Ambrose, James farm and 2 unnamed individuals

Bassett, R. land and 4 unnamed individuals

## Concordia Parish

James, illegible and plantation and 12 unnamed individuals
John Norment

Tulane University, Citizens Bank Minute Book No. 8: 1859/03/10

| Owner | Mortgaged Collateral | Dates | Source |
| :---: | :---: | :---: | :---: |
| Lapice, Peter M. and Joseph | plantation and the following individuals: Allain; Cumbacy; Sophy; Anderson; John; Soloman; Charlotte; Robert; Kitty; Pin Barkell; Jenia ; Maria; Carlotta; Arthur; Marie; Daniel ; Jim; Malvina; Wyat; Betsy Thompson; Ellen; George; Dania; Zelia; Zick; Big Zack; Dianah; Big Leny; Marie Keating; Keating; George; Kentucky Burn; Leticia; Billy Barrett; Rachel; Reuben; Ellick; Mathilda; Henderson; Jim Darcus; Judy; William; Phobe; William; Milly; Walter; Leny; Eliza Scott; Nancy; Sarah; Henry; Mathilda; Juis; Louisa Harding; Othello; Old Sandy; Harriett; Big Sandy; Peter; Dick; Patrick; Caroline; Richardson; Willia; Isaac; Robin; Dally; Hannah; Onia; Aaron; Old London; Anna; Jim Rivers; Cesar Bosman | 1839 | Concordia Parish, Mortagage Book J-K, p. 222, 1839/03/25 |
| Lapice, Peter M. | plantation and the following individuals: David; Big Tom; Big Peter; Lewis; Bob; Black Tom; Richmond; William; John Boots; Morgan; Roberts; York; Black Gin; Jordan; Big Joe; Little Joe; Long Joe; Jack Nelson; Anthony; Homochito; Dick; Joe; Little Tom; Levy; Gin Patt; Old George; Henry Chapman; John Page; Little Peter; Leonard; Leonard; Phil; Horace; Big Ned; Linian; Willis; Big Gen; Moses; Nathan; Little George; Big Peter; Old Ben; Washington; Henry; Anthony; Wiliam; Sophia; Little Eliza; Little Betsy; Dorcas; Minerva; Lucy; Little Cornelia; Yellow Betsy; Bathsheba; Long Dorcas; Big Peggy; Little Peggy; Betsy; Mary; Nelly; Little Else; Luckey; Kitty; Harriett; Old Else; Diana; Suzan; Nina; Kitty; Ann Beckey; Beckey; Melly; Ann; Henny; Little Anna; Old LIsha; Melly; Pegay; Hannah; Ann; Caroline; Maria; Maria Betsey; Paga; Sarah; Vina; Stephen; Gim; Jackson; George; Nathan; Henry; Little Stephen; Ned; Tom; Yellow Dick; Pleasant; Aaron; Moses; Lewis; Little Isaac; Moses; Andrew; Bill; Randall; Edmond; Bob; Violette; Hetty; Henny; Venus; Liza; Liza Morris; Linia; Pegay; Juliana; Delila; Polly; Cynther Cinthy; Sophy; Vina; Isabelle; Francis; Mary; Maria; Emeline; Emily; Rosana; Mary Jane; Little Amy; | 1841 | Concordia Parish, Mortgage Book L, p. 207, 1841/05/14 |


| O |  | te |
| :---: | :---: | :---: |
| Little, Peter | plantation and the following individuals: Ambrose; Dabney; Tobe; John Winston; Lewis; Frank; Eliza; Lucy; Ailsey; Maria; Cloe; Ann; Gabe; Richard and his wife Harriet; Albert; Thomas; Cynthia; Charlez. Abraham, his wife Eliza, and her children Denis and Fortrim; Thomas and his wife Cynthia; John Vincent and his wife Ginnia; William and his wife Charlotte; her child William; Frank; his wife Cloe; and their five children Celiste; Elizabeth; Esther; Richard; Alexander; John Davis; Nelly and her three children Eliza, Daina, and Sophia; Ben; Laura; Bob; Ese; Peter; Abby; Canda; Dabney, his wife Ann, and her unnamed infant; Burrill, his wife Harriet, and her four children WIlliam, Harrena, Randall, Emeline, and Alfred; Emanuel; George Miley; Wiley; John; Hanson; Henry; Milton; Rose; Hetta; Louisa; May | 838 |
| Miller, David P. | plantation and the following individuals: Sem; Phil; George; Nick; Hyatt; Gui; Henry; Lewis; Moses; Edmund; Jane; Sarah; America; Angeline; Mary; Ellen; Polly; Adeline; Julia; Henry | 1838 |
| Routh, Stephen M. | plantation and the following individuals: Amos; Sam; Jim; John N.; Mosez Mazea; Wesley; George S.; George Bazea; Harry B.; Sam B.; Nick; Hezekiah; Moses B.; Isaac;York; Bill Brown; John S.; Harry; Wilson; David; Henry C.; Perry; Oarrett; Peter; Henry S.; Richard; Stephen Boots; Julius; Ralph Bird; Ralph; Gilbert; Robert; Jim Taylor; Stephen Taylor; Catherine; Agniz; Violet; Elizabeth; Betty; Betsy; Betsey McKil; Mary Scott; Airy; Charlotte; Feriby; Ann; Lear; Alviyra; Fanny; Fanny B.; Lucy; Lilly; Rachel; Agnis; Eliza; Susan; Matilda; Mary; Lucy; Elvira; Mary; Henry; Canadis; Hannah; Maria; Harriet; Cynthia Ann | 1838 |
| Williams, Austin | plantation and the following individuals: Phil; Peggy; John; Fanny; Hannah; Sarah; Henry; Lavinia; Nelly; Lane; Manuel; William; May Johnson; Daniel; Dick; Cynthia; Virginia; Stephen; Julia; Ned; Julian; Caleb; Harriet; Letty; Nathan; Leah; Amanda; Hannah Jane; Martin; Big Maria; Susan; Mason; Maria Feany; Divee; Emmeline; Pleasant; Mary; Isaac; Frank; Frank; Emily; Marey Jones; Nancy; Tipporah; George; Catherine; George; Eliza; Fanny; Yellow Caroline; Grace; Joshua; Lee; Polly; Bill; Little Maria; Levi; Yellow Leah; Harry; Louisa; Rebb; Polivia; Samson; Jim; Hannah; Jourdan; Simon; Jena; Sim; Moses; Coffey; Orean; Rachael; Lucinda; Kitty; Harry;Leah; Peggy; Ellick; Nelly Knox; Big Caroline; Mary Tucker; Mary Prince; Washington; Upsher; Martha; Robert; Margaret; Levi; Richard; Henry; Orange; Milly; Lewis; Jim Mitchell; William | 838 |

Owner
Little, Peter

Miller, David P

Routh, Stephen M

## Mortgaged Collateral

plantation and the following individuals: Ambrose; Dabney; Tobe; John Winston is, Frank, Eliza; Lucy; Ailsey; Maria; Cloe; Ann; Gabe; Richard and his wie children Denis and Fortrim; Thomas and his wife Cynthia; John Vincent and his wife Ginnia; William and his wife Charlotte; her child William; Frank; his wife Cloe; and their five children Celiste; Elizabeth; Esther; Richard; Alexander; John Davis; wife Harriet, and her four children WIlliam, Harrena, Randall, Emeline, and Alfred; Emanuel; George Miley; Wiley; John; Hanson; Henry; Milton; Rose; Hetta; Louisa;
plantation and the following individuals: Sem; Phil; George; Nick; Hyatt; Gui; Henry; Lewis; Moses; Edmund; Jane; Sarah; America; Angeline; Mary; Ellen Polly; Adeline; Julia; Henry Petr; Robert; Jim Taylor; Stephen Taylor; Catherine; Agniz; Violet; Elizabeth; Betty; Betsy; Betsey McKil; Mary Scott;Airy; Charlotte; Feriby; Ann; Lear; Alviyra; Fanny; Fanny B.; Lucy; Lilly; Rachel; Agnis; Eliza; Susan; Matilda; Mary; Lucy aria, Harret, Cynthia Ann Henry; Lavinia; Nelly; Lane; Manuel; William; May Johnson; Daniel; Dick; Cynthia; Virginia; Stephen; Julia; Ned; Julian; Caleb; Harriet; Letty; Nathan; Leah; Amanda; Hannah Jane; Martin; Big Maria; Susan; Mason; Maria Feany; Divee; Emmeline; , Mary; Isaac; Frank; Frank; Emily; Marey Jones; Nancy; Tipporah; Poly; Bif Lite Maia; Levi; Yelow Lea; Hary; Lousa; Rebb; Poivi; Samson; Jim; Hannah; Jourdan; Simon; Jena; Sim; Moses; Coffey; Orean; Rachael; Mary Prince; Washington; Upsher; Martha; Robert; Margaret; Levi; Richard; Henry; Orange; Milly; Lewis; Jim Mitchell; William

## Dates Source

1838-1859 Tulane University, Citizens Bank Minute Book No. 6: 1847/01/11; Concordia Parish, Mortgage Book J-K, p. 39, 1838/02/05; Mortgage Book J-K, p. 118, 1838/07/13; Mortgage Book M, p. 282, 1848/06/19; Mortgage Book N, 1859/03/18

## Concordia Parish, Mortgage Book J-K, p. 37,

 1838/02/05; Mortgage Book J-K, p. 53, 1838/02/22Concordia Parish, Mortgage Book J-K, p. 463, 1838/05/06

Concordia Parish, Mortgage Book J-K, p. 50, 1838/02/20; Tulane University, Citizens Bank Minute Book No. 2: 1838/12/13

| Owner | Mortgaged Collateral | Dates | Source |
| :---: | :---: | :---: | :---: |
| East Baton Rouge Parish |  |  |  |
| Alexander, Joshua | land and the following individuals: Jack; Stephen; Dick; Chester; Jupiter; Charles; Maria; Rachel; Sophia; Lucy | 1837-1848 | Tulane University, M-1847, Citizens Bank Mortgage Book; Citizens Bank Minute Book No. 6: 1848/09/26 East Baton Rouge Parish, Mortgage Book J, p. 433, 1837/12/26; Mortgage Book K, p. 49, 1838/12/26 |
| Allain, Sosthene | cotton plantation and the following individuals: Alfred; Andre Big; Laquer; John; Peter Bayon; Tony; Cathaniali ; Narcesse; Small Pelia; Louis; Paul; Joseph; Martin; John; Long Davey; Tony; Lucy; Big Lenon; Small Tony; Julie; Melende; Poley; Indich; Cocola; Maynette; Jenny and her two unnamed children; Polieape; Celestin; Pierre; Jean; Carmel; Moses; Louise; Celestine; Melite; Celame | 1838 | Tulane University, Citizens Bank Minute Book No. 1: 1838/05/21; East Baton Rouge Parish, Mortgage Book J, p. 502, 1838/06/06 |
| Beal, Robert | the following individuals: Hurvy; Bradford | 1855 | East Baton Rouge Parish, Mortgage Book E, p. 278, 1855/07/14 |
| Davis, Illegible ; Sharp Mathews | the following individuals: Baptiste and his wife Eliza; Nathan; Julia; Rosalie; Chisey; Beu and his wife Rachel; Winy; Silvey; Horace and his wife Maria; Ellen; Nanny; Arrange; Giur | $\begin{aligned} & \text { c. } 1850- \\ & 1860 \end{aligned}$ | East Baton Rouge Parish, Mortgage Book F, p. 145; Tulane University, Citizens Bank Minute Book No. 8: 1860/05/10 |
| Duer, Robert | plantation and the following individuals: Wyatt; John; Olive and her unnamed child | 1838 | East Baton Rouge Parish, Mortgage Book J, p. 450, 1838/01/22 |
| Dunbar, John and Kendall | plantation and the following individuals: John; Phil; Thomas; Truman; Sam; Celia; Nancy; Dailey; Dulley; Warren; Jimmy; Louisa; Moses; David; William; Emily; Miles; Dalia | 1838-1845 | East Baton Rouge Parish, Mortgage Book J, p. 381, 1838/08/01, Mortgage Book K, p. 11, 1845/05/31 |
| Duplatier, Alberic | land and the following individuals: Louis; Bob; Jack | 1837 | East Baton Rouge Parish, Mortgage Book J, p. 407, 1837/10/09; Tulane University, Citizens Bank Minute Book No. 2: 1837/05/10 |
| Elder, C. | plantation and 14 unnamed individuals | 1860 | Tulane University, Citizens Bank Minute Book No. 8: 1860/05/28, 1860/11/19 |
| Lilley, Thomas | land and the following individuals: John; Thomas | 1845 | East Baton Rouge Parish, Mortgage Book K, p. 30, 1845 |
| McCalah, James | planation and the following individuals: John; Thomas; Sam; Celia; Nancy; Dalia; David; Warren; Jenny; Emma; Moses; David; William; Emily; Miles; Dalia | ; 1845 | East Baton Rouge Parish, Mortgage Book K, p. 453, 1845/05/01 |


| Owner | Mortgaged Collateral |
| :---: | :---: |
| McCauley, L.P. | plantation and the following individuals: Ruben; London; Ben; Peter; Sam; Toby; Joe; Anderson; Henry; Alfred; Isaac; John; William; Ruffin; James; Lewis; Oscar; |
|  | Hannah; Lucy; Patsy; Sarah; Ann; Adaline; Pauline and her child Eliza; Pelly; |
|  | Peggy; Delia; Ann; Esther |
| Posey, Carnot | plantation and the following individuals: William; Carter; Martha; Bill; illegible; Rose; Susan |
| Scudder, J. B. | plantation and 14 unnamed individuals |
| Vail, Samuel | plantation and 28 unnamed individuals |
| East Carroll Pa | ish |
| Dogherty, George | plantation and unnamed individuals |
| Flynn, H. S. | plantation and 9 unnamed individuals |
| Goza, Aaron and | the following individuals: Emanuel; Jackson; Bill; Plummer; Brid; Pompey; Harry; |
| Joseph H. Moore | Rebecca; Andrew; Amy; Charlotte; Johnson; Wiley; Charles; Matilda; Delia; Mary; Leah; an unnamed child; Fanny; Mina; Mahala; Jane; Nelly; Lenah; Mary and her unnamed child; Betsy; Alcinda; Lotty; Ann; Margaret |
| Kerr, James D. | 11 unnamed individuals |
| Lawson, Thomas | land and the following individuals: John; Warick; Isaac; Edmond |
| Maher, Philip; William | the following individuals: Abraham; Ned; Simon; Henry; Charles; Ben; Claiborne; |
| S. Parham; Thomas | Eaton; Ben; David; Hannah and her 3 unnamed children; Cecile; Eliza; Nina; |
| FitzWilliams | Charlotte; Nancy; Little Ned; George; Jack; Frederick; William; Celia; Harriet; and Sevilla |

## Dates Source

1858-1859 East Baton Rouge Parish, Mortgage Book R, p. 55, 1858/12/14, p. 156, 1859/03/04

## 1840-1859 East Carroll Parish, Mortgage Book B, p. 95,

 1840/05/08; Mortgage Book B, p. 330, 1842/04/18; Mortgage Book C, p. 228, 1859/03/07; Tulane University, Citizens Bank Minute Book No. 3: 1841/05/27; Minute Book No. 6: 1850/01/071838-1856 East Carroll Parish, Mortgage Book A, p. 507, 1838/04/25; Mortgage Book B, p. 1, 1838/10/20; Tulane University, Citizens Bank Minute Book No. 7: 1856/02/08

| Owner | Mortgaged Collateral | Dates | Source |
| :---: | :---: | :---: | :---: |
| Morancy, Honore | the following individuals: Sam; Ben; Bill Johnson; Washington (alias Lloyd); | 1837-1838 | East Carroll Parish, Mortgage Book A, p. 529, |
| Perigny | Wesley; David; John; John Benson; John; Perry; Will; Dick; George Middleton; George; Peter; Chatham; Adam; Mark; Kell; Ambrose; Warren; Henry; Stephen; |  | 1838/08/06; Tulane University, Citizens Bank Minute Book No. 2: 1837/05/20 |
|  | Prince; Stephen; Gilbert; Henry; Maria; Maria and her child Delphine; Jane and her child Thornton; Hannah; Betsey; Irene; Mary; Lucy; Nancy and her child |  |  |
|  | Nancy; Matilda; Charlotte; Maria; Jane; Milly; Mina; Letty; Evelina and her child |  |  |
|  | Henry; Nancy; Temperance and her child Maryanne; Jim; Lizy; Caroline; Julyann; Washington; Sam; and Phoebe |  |  |
| Pool, Robert | unnamed individuals | 1847 | Tulane University, Citizens Bank Minute Book No. 6: 1847/02/04 |
| Prescott, James B. | the following individuals: Nace; Ben; Willis; James Munroe; Mary; Esther; Nelson; Aley; Harriet; Peter; and Allen | 1838 | East Carroll Parish, Mortgage Book A, p. 490, 1838/03/31 |
| Sellers, Mathew Bacon | the following individuals: Solomon; William; Andrew; Ned; Ben; Peter; Elijah; John; Mat; Brister; Jack; Priscilla; Crawford; Kizy; Maria; Mary; Dorinda; Sarah; Elijah; Milly; Else; Alice; Ann; Sophia; Matilda; Ellen; Maria; Obi; Floyd; Nancy; Lucretia; Henry; Caroline; George; Martha; Matilda Jane; Lucille; Minerva | 1837 | East Carroll Parish, Mortgage Book A, p. 414, 1837/07/15 |
| Yarborough, Stephen | 39 unnamed individuals | 1838-1839 | Tulane University, Kuntz Collection, No. 600, 1838/02/12; Citizens Bank Minute Book No. 2: 1839/03/25 |
| East Feliciana P | arish |  |  |
| Booker, James | land and the following individuals: Willis; Anne; Phebe; Emeline; Ellen; Wesley; Will; Joe; Mark | 1837 | East Feliciana Parish, Mortgage Book E, p. 198, 1837/11/02 |
| Bowman, Matthew | land and the following individuals: Philip; Willis; Milo; Thomas; John | 1837-1858 | East Feliciana Parish, Mortgage Book E, p. 223, 1837/10/12; Tulane University, Minute Book No. 8:1858/04/15 |
| Bradford, Harrison | land and the following individuals: Simon; Sady | 1837 | East Feliciana Parish, Mortgage Book E, p. 211, 1837/09/29 |
| Bradford, Leonard | land and the following individuals: Peter; Archy; Joe; Isaac; Simon | 1838 | East Feliciana Parish, Mortgage Book E, p. 187, 1838/01/15 |

## Owner

Carter, Albert G.
Carter, Howard

Cocks, John J.

Conner, James R.

DeLee, John L.

Delie, John L.

Dougherty, George

Linnel, William

Myers, Burrel

Perry, Robert and
Hilary Bretin Cenus
land and the following individuals: Henry; Maria and her son Gibson; Cady
land and the following individuals: Joe; Ben; Isaac; Dick; Jack; Vinny; Mary
land and the following individuals: Louis; Milly;River; Mahala; Robert; Anny; Nathan
land and the following individuals: Limaz; Goin; Winny.
land and the following individuals: George; Charles; Joe; May; John; Ralph; James; Malinora; Violet; Milly; Viney

McDonald, John D. land and the following individuals: Foust; Hampton; Louise; Emily; Hester; Joe

Newport, Robert W. land and the following individuals: Stephen; Ben; Jim; Second Jim; Charles; Lot; Breidget; Caroline; Malinda; Charles; Sylvia.

## Mortgaged Collateral

land and the following individuals: Harry; Tom ; Abraham; Mariah; Flora; Cati; Joe
land and the following individuals: Cesar and his wife Jane; Henry; Starks; Cesar; no date Franklin; Polly Ann; Mary Ann; Abram
land and the following individuals: Susan and her child William; Celia

The following individuals: Hampton; Joe; Laura; Emily; Ester; Jane child of Laura; 1846 John child of Emily

Dates
1838

3

## Source

East Feliciana Parish, Mortgage Book E, p. 183, 1838/01/15

East Feliciana Parish, Mortgage Book E, p. 554

East Feliciana Parish, Mortgage Book E, p. 310, 1838/05/05

East Feliciana Parish, Mortgage Book E, p. 374, 1838/06/11

East Feliciana Parish, Mortgage Book E, p. 544, 1853/01/13

East Feliciana Parish, Mortgage Book E, p. 243, 1838/01/22

East Feliciana Parish, Mortgage Book G, p. 194, 1838/10/02

East Feliciana Parish, Mortgage Book E, p. 168, 1837/10/14

East Feliciana Parish, Mortgage Book E, p. 250, 1837/12/14

East Feliciana Parish, Mortgage Book E, p. 353, 1838/05/17

East Feliciana Parish, Mortgage Book E, p. 173, 1837/12/28
East Feliciana Parish, Mortgage Book E, p. 176, 1838/01/12

East Feliciana Parish, Mortgage Book E, p. 163, 1837/09/05

East Feliciana Parish, Mortgage Book E, p. 194, 1837/11/04
East Feliciana Parish, Mortgage Book E, p. 217, 1837/12/20

East Feliciana Parish, Mortgage Book G, p. 569, 1846/02/18

## Owner

Piper, David
Reddin, George

Rirt, John

Rook, Robert

Saunders, Lafayette
Tilden, Stephen

Yarborough, Steven

## Mortgaged Collateral

land and the following individuals: Bob; Willy; Joe; Fanny; Harriet; Andrew
land and the following individuals: Jane; Hannah; Ann; Luke
land and the following individuals: Jury; Henry; Bill; John; Charles; Rachel; Lizza; Jury; Sarah; Buda; and her child Sally; Viny
land and the following individuals: James; Sam; Wiliam; Ciss; Easter; Lawson Milly; Jocey; Abram ; Minerva; Willis; Laudy; Livinia
land and following individuals: West; Frederick; Hannah and her two children, John, and Catharine; Clara and her children, Anthony, Malinda, John Brown
land and the following individuals: Charles; Joe; Milo; Dave; Browdie; Sophia; Fanny; Susan; Lucinda; Sophia; Nathan; Sylvia
land and the following individuals: Jack; Romeo; Oliver; Barber; Linda; Matilda;

William; Francis; Rose; Edmund; Dick; Henry; Oliver; Barber; Charles; Jim, his wife Nicey and their daughter Ann; Winney Ann

## Iberville Parish

## Owner

Armandez, Jean
Baptiste

Arnandez, Gilbert and Rosemond Berrett

Arnandez, Jacques,
Daigre, Honore

## Mortgaged Collateral

plantation and the following individuals: Baptiste; Francis; Louis; Bernard; Valentin; Antoine; Jenny and her four children Celeste, Manuel, Polite, and Clarisse; Victoire; Marie
plantation and the following individuals: Jean; Marie and her children Adolphe and Fanny
plantation and the following individuals: Daniel; Charlotte; Sylvina and her unnamed child; Felicite; Caroline; Arianire; Josephine; Milly; Eugene

## Dates

1837

1838-1843 East Feliciana Parish, Mortgage Book E, p. 304, 1838/04/12; East Feliciana Parish, Mortgage Book G, p. 337, 1843/08/29

1838-1840 East Feliciana Parish, Mortgage Book E, p. 281, 1838/03/06; East Feliciana Parish, Mortgage Book G, p. 168, 1840/12/11

## Dates Source

1835-1836 Iberville Parish, Conveyance Book O, no. 474, 1835/04/03; Conveyance Book P, no. 262, 1836/03/03

1836-1843 Iberville Parish, Conveyance Book R, p. 144, 1836/11/08; p. 286, 1837/01/27; Conveyance Book U, p. 301, 1841/06/22; Conveyance Book V, No. 383, 1843/11/15
1837-1845 Iberville Parish, Conveyance Book R, p. 590, 1837/08/05; Conveyance Book S, p. 131, 1838/04/11; Conveyance Book W, No. 264,1845/03/27; Tulane University, Citizens Bank Minute Book No. 5: 1845/01/16

## Owner

Bell, Robert and Caroline B.

Bettison, Joseph and Ann E.
Blanchard, Joseph; Achille Delphine and Marie Savory

Breaux, J. B.

Brent, Robert; Labauve Hobard, C. W. Keep, and Joseph Schlater

Bush, Philip and Josephine Bush

Camp, Robert; W. W. plantation and unnamed individuals

## Pugh

Clement, Henrietta; the following individuals: Big Bob; Daniel; Sophia; Tepey
Louis Desobry

## Mortgaged Collateral

several lots of land and the following individuals: Frank; Anthony; Jim; Dick; Isaac; Joe Gray; Martin; Jacob McNairy; Louis Sawyer; Nat; Jacob; George McNairy; Ben; Charley; William; Joe; Plato Sawyer; Washington; Big Davey; Davey; Moses; Wapin; Rachel and her child Daphnie; Nelly; Lucy and her child Charlotte; Suzan and her children Jack, Nelly, and Louis; Patsy and her daughter Caroline; Chansey; Eliza; Maria; Luckey and her children Harriet, Abraham, Spencer, Esace, and Jenny; Sarah and her children William and Martha; Daphne; Abby; Phyllis; Mary; George; Ann; Big Maria; Haucey and her unnamed child; Katy; Charity and her son Lincon; George; Mathilda; Edmond; Peter; Ben; Randal; Saul; Archibald; York; John; Peter; Abraham; Fielding; Sam; David; Cyrus; Eliza; Lucy; Robert; Francis; Emily; Caroline; Cezar; Winny; Patsy; William; Alex; Wyatt; Anderson; Hannah; Cely; Miles; Letty; Jones; Maria; Mary; Harriet; Louisa; Tom; Ned; Juliet; Ned; Nancy
plantation and the following individuals: Spencer; Horace; Jerry; Horteuse and her 1837 unnamed child; Bella; Will; Peter; Rachel
plantation with the following individuals: Francois; Sam; illegible ; Tom; William; Guillame; Sanieda; Mary; Mickey; Sulalie; Poupone; Elizabeth; Henny; Joe; Edmond; Augustine; Tom; Amelia; Ellick; Priscilla
sugar plantation in right bank of the Mississippi River and the following individuals: 1848 Phill Root; Andrew Jackson; Jackson Finey; Elizabeth Powers and her three children John, William, and Jersey; Philip; Jack; Peter; Amy; Venus and her child George
plantation with the following individuals: Ben; Dick; Patience and her unnamed child; Mary; Louisa; Pug
land on Bayou Goula and the following individuals: Philip; Wilson; Celestine

## Dates Source

1837-1839 Iberville Parish, Conveyance Book R, p. 603 1837/08/21, p. 636 1837/10/02; Conveyance Book S, p. 334, 1838/08/08; Conveyance Book T, p. 177, 1839/09/20; Tulane University, Citizens Bank Minute Book No. 2: 1837/06/22, 1837/08/03; St. James Parish, Book 16, p. 395, 1837/08/31

Iberville Parish, Conveyance Book R, p. 645, 1837/10/13, p. 677, 1837/11/07

1837-1857 Tulane University, M-1847, Citizens Bank Mortgage Book; Iberville Parish, Conveyance Book R, p. 504, 1837/06/05; p. 537, 1837/06/13; Conveyance Book 5, No. 115, 1857/08/15

Tulane University, Citizens Bank Minute Book No. 6: 1848/06/06; Iberville Parish, Mortgage Book 2, p. 147, 1848/08/22

1837-1853 Tulane University, M-1847, Citizens Bank Mortgage Book; Tulane University, Citizens Bank Minute Book No. 7: 1853/02/17; Iberville Parish, Conveyance Book R, p. 633, 1837/0928; Conveyance Book S, p 32, 1838/02/10
Iberville Parish, Conveyance Book R, p. 74, 1836/11/21, p. 240, 1836/12/27; p. 170, 1836/12/28,

Tulane University, Citizens Bank Minute Book No. 8: 1857/06/20

Iberville Parish, Conveyance Book S, p. 700,1839/05/08

## Owner

Daigre, Honore

Dardenne, J.
Deblicun, Mrs. Benjamin; D. L. Orillion and Paul Deblicun

## Mortgaged Collateral

the following individuals: John; Richard; Joe; Frederick; Rose and her child Andre; Pauline and her children Julienne, Antoine, and Mary; Agathe

## Dates Source

1844-1845 Iberville Parish, Conveyance Book W, No. 97, 1844/08/22, No. 207, 1845/01/27; Tulane University, Citizens Bank Minute Book No. 4: 1842/06/07; Citizens Bank Minute Book No. 5: 1845/01/16

Tulane University, Citizens Bank Minute Book No. 8 : 1861/01/28

Tulane University, Citizens Bank Minute Book No. 7 1853/05/19

| Dickinson, Charles H. | several tracts of land and the following individuals: Lewis; Will; Jim; Milly; Martha; Mary; Peggy | 1838-1842 | Iberville Parish, Conveyance Book S, p. 208, 1838/05/08; Conveyance Book U, No. 470, 1842/04/22 |
| :---: | :---: | :---: | :---: |
| Dodd, Wiliam | plantation on Payou Plaquemines and 33 unnamed individuals | 1835-1836 | Tulane University, Citizens Bank Minute Book No. 1 1835/04/20; Iberville Parish, Conveyance Book P, no. 240, 1836/02/20; p. 363, 1836/03/14 |
| Doyle, George and Ann M. | plantation and the following individuals: Bill; Abe; Mitchel; Syphax; Cyrus; Minor; Siye; Harry; James Mickey; Sarah and her child Robert; Vicey and her child Jane; Tobey; Rose; Scillia; Maria; Sophy and her children Louis and Ann; Sydney; Suzan; Mary; Sally | 1836 | Iberville Parish, Conveyance Book R, p. 87, 1836/11/21, p. 447 |
| Druilhet, Jules | plantation on the left bank of the Mississippi River with the following individuals: William Brook; Absolon; Pleasent; Mary and her children Josephine and Martha; Marianne | 1837-1840 | Iberville Parish, Conveyance Book R, p. 372, 1837/03/08; Conveyance Book T, p. 627, 1840/09/29; St. James Parish, Book 18, p. 684, 1840/08/28 |
| Duplessis, Francis | plantation and the following individuals: Pierre; Violette; Washington; Magdeline; Dalby; John Hill; Betsy; John; Anderson; Fanny; Eliza; Crecy; Charles; Ned Ward; Phoebe; Mary Ann; Suzette; George; Ned; Harriett; Lewis; Jessey; Anna; Delila; Spencer; Sally; unnamed individual; Mat; Jerry; Hariette; Dan; Philip; Lewis; Henry | 1838-1851 | Tulane University, Citizens Bank Minute Book No. 2 1838/05/21; Iberville Parish, Conveyance Book S, p. 362, 1838/08/24, p. 603, 1848/06/13; St. Martin Parish, Conveyance Records Book 11, p. 28, 1838/08/15; Record 20, p. 373, 1851/12/03 |

## Owner

Dupuy, Adolphe and Uranie D. Dupuy

Dupuy, Adolphe

Edwards, W. E.
Erwin, Lavinia and William Robertson

## Mortgaged Collateral

plantation on the right bank of Mississippi River and the following individuals: Jacob; Jefferson; Henry; William; Denis; Sam; Nancy and her child Rosette; Gudy; Ellen; Angele
plantation on Bayou Plaquimine and the following individuals: William; George;
Alfred; Alexander; Edmond; Polly; Elisa; Sally and her children Guillaume and William; Tom; John; Polite; Frank; Reuben; Charlotte; Rachel and her child Lewis; Milly and her child Ann
plantation and unnamed individuals
plantation and the following individuals: Big Charles; Isaac; John; Hector; Lye; William; Moses Gray; Anthony; William Brinly; David Young; Summerset; American William; Big Anthony; Mac; Tom; Harry; Sam; Little Ned; Ann Stewart; Betsy; Big Ned; Yellow Willy; Horace; Kitty; Henry; Eliza; Kitty; Big Margaret; Caroline; Jim; Hannah; Prissy; William; Little Lydia; Francis; Bob; Big Hanna; Anna Brinly; Mary Dodd; Louisa; Lucinda; Little Helen; Charity; John Sommerset; Celestine; Big Nancy; Emily; Mary Emily; Little Minty; Charlotte; Pamela; Gracy; Lydia; Kitty; Betsy; Yellow Hannah; Little Sye; Liza; Little Harriet;Dittley Lyde; Julienne; Nancy; Washington; Miama; Celine; Abraham; Big Minto; Suzanne; Mary Magdelen; Black Mity; Little Betsy; Rose; Little Charles

Erwin, Thomas R. and sugar and cotton plantation and 216 unnamed individuals
Lavinia; Andrew Hynes,
Mrs. Nancy Erwin, and
Joseph Craighead

Erwin, Isaac and
Carmalite
Estevan John and
Marie E.
plantation on Bayou Grosse Tete and the following individuals: Peter; Edmond; Bob; Vicy; Rachael; Ritter; Catherine; Ann; Nancy; Milly plantation on the left bank of the Mississippi River with the following individuals: Honore; Michel; Etienne; Clement; Cyprieu; Klein; Celestin; Maurice; Catharine; Harriette; Josephine; Eugice; Cecile; Darius; Kitty; Marie Joseph; Melitte and her two children Abraham and Azelie; Rosa; Philis and her child Clemetine; Charlotte and her children Jean Louis, Celeste, Alfred, Manor, and Philiomene

## Dates Source

1837-1838 Iberville Parish, Conveyance Book R, p. 564, 1837/07/15; Conveyance Book S, p. 31, 1838/02/07

1845-1846 Iberville Parish, Conveyance Book W, No. 488, 1845/11/07; Conveyance Book X, p. 70, 1846/02/24; Tulane University, Citizens Bank Minute Book No. 5: 1846/02/13

Tulane University, Citizens Bank Minute Book No. 7: 1852/03/30
1835-1847 Iberville Parish, Mortgage Book 1, p. 249, 1847/07/27, p. 249, 1847/06/05, Conveyance Book P, No. 274, 1836/03/10; Tulane University, Citizens Bank Minute Book No. 1: 1835/02/20

Iberville Parish, Conveyance Book P, p. 497, 1836/06/01

Iberville Parish, Conveyance Book U, p. 186, 1841/04/30

1837-1839 Iberville Parish, Conveyance Book R, p. 580, 1837/07/25; Conveyance Book S, p. 153, 1838/04/25, p. 313, 1838/07/18, p. 674, 1839/04/27

## Owner

Estevan, Marie R and Jean

Flack, E.
Gaillard, Raymon P.

Garlick, John

Greaud, Alfred

Hamilton, J. D.

## Mortgaged Collateral

plantation on the right bank of the Mississippi and the following individuals: Dominque; Andre; Jean Baptiste; Clarielle; Cecile and her children Francis, Joseph, and Sylvestre; Benoit; illegible; Bonaventure; Caspare; and Theophile; Eggare; Marianne; Ellene; Agathe
unnamed individuals
plantation on the left bank of the Mississippi with the following individuals: Andre; 1841 Dominque; Cecile; Jean Baptiste; Clarville; Francis; Joseph; Sylvester; Benoit; Dominque; Bonaventure; Theophile; Agatha; Marianne; Agar; Helene; Gaspard
plantation on the north bank of Bayou Goula and 19 unnamed individuals
plantation and unnamed individuals
land and the following individuals: Basket; James; Charles; Edward; Tom; Abraham; Rose; Felicite; Amy; Marie; Esther; Louis; Barney; Martin; Harriette; Silsy; Britannia; Martin; Madison; Soloman; Malissa
the following individuals: Patrick; David; Desir; Jackson; Hardy; Cyrus; Jesse; Talbert; Mabaley; Sally; Mary; Mathilda; Martha; Caroline; Nancy; Bob; Elsy

Gerville plantation and 80 unnamed individuals
land and the following individuals: Abraham; Francois; Henry; John; Louise; Jenny; Laura; Norbert; Jean Louis; Paul; Telesphone

18 unnamed individuals

## Dates

1838

## Source

Iberville Parish, Conveyance Book S, p. 106, 1838/03/23

Tulane University, Citizens Bank Minute Book No. 1: 1835/02/20
Iberville Parish, Conveyance Book U, p. 337, 1841/07/29

Harding, John; Louis
Desobry and Charles
Clements
Harrison, Samuel
Herbert, Achille and Marcelite

Hebert, Treville

Hebert, Valery and
Clarisse B.

1835-1842 Tulane University, Citizens Bank Minute Book No. 1 1835/02/06; Iberville Parish, Conveyance Book P, no. 254, 1836/02/29, p. 362, 1836/02/12; Conveyance Book V, p. 171, 1842/12/12

1859 Tulane University, Citizens Bank Minute Book No. 8: 1859/03/07

1835-1848 Tulane University, Citizens Bank Minute Book No. 2 : 1835/02/06, Minute Book No. 5: 1844/06/07; Minute Book No. 6: 1847/03/07; Iberville Parish, Conveyance Book P, no. 250, 1836/02/29 Conveyance Book W, no. 65, 1844/06/27; Mortgage Book 1, p. 465, 1848/03/28

1838-1839 Iberville Parish, Conveyance Book S, p. 233 1838/05/21, p. 448, 1838/11/17, S, p. 523,1839/02/07; Tulane University, Citizens Bank Minute Book No. 2: 1838/05/17, 1839/01/21
1849-1851 Tulane University, Citizens Bank Minute Book No 6: 1849/07/11, 1851/06/17
1836-1839 Iberville Parish, Conveyance Book R, p. 67, 1836/11/18, p. 261, 1837/01/16; Conveyance Book T, p. 44, 1839/06/12

1835-1836 Tulane University, Citizens Bank Minute Book No 1: 1835/03/23; Iberville Parish, Conveyance Book P no. 247, 1836/02/27, p. 366, 1836/03/14
Tulane University, Citizens Bank Minute Book No. 1 1835/02/06; Iberville Parish, Conveyance Book no. 242, 1836/02/23, no. 265, 1836/03/03

## Owner <br> Herbert, Paul

Marie B.
Ivy, Isaac; Lucinda and land and the following individuals: Lewis; Will; Jim; Milly; Martha ; Mary; Peggy William Terrel

| Johnson, Henry | two plantations with 17 unnamed individuals; and Marigny plantation with 32 |
| :--- | :--- |
| unnamed individuals |  |

Kleinpeter, Georg plantation and 4 unnamed individuals

Landry, Camille plantation on the Mississippi River with the following individuals: Manuel; Charles; Aaron; Peter; Lewis; Henry; Auguste; Eliza; Maria; Francoise; Betsy; Mary; Julie; Nelson; Louisa; Evelina; Rosalie
Lauve, Evariste and Celeste

Lauve, Evariste and sugar plantation on the right bank of the Mississippi River and the following Celeste; H. Moses Shiff individuals: Griffin; Richard; illegible ; Joe; Simon; Big David; Big Willis; Ben; Harry Brown; David; Jacques Richard; Adam; Sam; Big Ben; Young; Little Jack; Plato; John; Big Ian; Yellow Anthony; Anthony Wood; Cesar Suille ; Little Willis; Moses Lamb; Peter Whiles; Moses Matter; John White; Joe; Jesse; Cesar Scott; Daniel; Tom Singleton; Matthew; Manuel; Little Faucy; Flora; Billy; Bachus; Little Suzan; Peggy; Mathilda; Little Maria; Little Jenny; Agnis; Big Lucinda; Eady; Louisa; Biddy; Kitty; Kitty; Big Jenny; Molly; Rosetta; Lucinda Jackson

## Mortgaged Collateral

plantation on the right bank of the Mississippi and the following individuals: Abraham; Jim; Charlotte; Stephen; Edmond; Ben; Colas; Jenny and her children Jim and Eliza; Jeanette; Sarah; Polly; Ann; Julienne and her children Sally, Honorine, and Manette
unnamed individuals

Iberville Parish, Conveyance Book S, p. 23 1838/01/31, p. 66, 1838/03/03, p. 585, 1839/03/19

1838-1839 Iberville Parish, Conveyance Book S, p. 138,
1838/04/13, p. 181, 1838/04/28, p. 414,
1838/10/06, p. 632, 1839/04/11

Iberville Parish, Conveyance Book R, 1837/12/02 Iberville Parish, Conveyance Book T, p. 590, 1840/07/17

## Owner

## Mortgaged Collateral

Neraut, Bernard and
Mathilde; Gustave and
Emilie L. Rousseaux

Orillion, Louis

Pritchard, Jeramiah;
Mrs. George Mather

Pugh, Mary Ann land and 21 unnamed individuals.
Reams, Richard and Eliza J.

Rils, J. and C. Brusle
unnamed individuals

Rivet, Lewis and Henrietta

Robinson, Abner et al and George A. Botts Charlotte; Ira; Charles; Henon; Louis
plantation and 23 unnamed individuals
plantation on the left bank of the Bayou Plaquimine with the following individuals Ruben; Morris; William; Harry; Sam; John; Sam; Jacob; Edmond; Frank; Poulite; Kitty; Rachel and her child Lewis; Milly and her unnamed child; Mathilda; Dolly;
plantation and the following individuals: Abraham Hill; George; Frank
plantation on the right bank of the Mississippi River and the following individuals: John; Harry; Jack; Charity; Mary and her child Wallace; Louisa; Lucy; Josephine
plantation and the following individuals: Lindor; Francois; Celeste; John; Thom plantation and the following individuals: Frank; Anthony; Jim; Dirk; Isaac; Joe Gray; Martin; Jacob McNayer; Lewis; Nat; Jacob; George McNayer; Ben; William; Joe; Plato; Washington; Big Davy; Davy; Moses; Wapping; Rachel and her child Daphny; Nelly; Lucy and her child Charlotte; Susan and her children Jacob, Nelly, and Lewis; Patsy and her child Caroline; Chany; Elizabeth; Maria; Luckey and her children Harriet and Abraham; Spencer; Esau; Fanny; Sarah and her children William and Martha; Daphny; Abby; Phillis; Mary; George; Anne; Big Maria; Fanny and her unnamed child; Kitty; Charity; Susan and her unnamed son; George; Matilda; Edmund; Peter; Ben; Bandals; Sam; Archibald; York; John; Peter; Abraham; Fielding; Sam; David; Gras; Eliza; Lucy; Robert; Francis; Emily; Caroline; Henry; Patsy; William; Alexander; Wyatt; Anderson; Hannah; Ceyley; Milly; Letty; Tom; Maria; Mary; Harriet; Louisa; Tom; Ned; Juliet; Ned; Nancy

## Dates Source

1841-1846 Iberville Parish, Conveyance Book U, p. 79, 1841/03/22, p. 340, 1841/07/30; Tulane University, Citizens Bank Minute Book No. 5: 1846/02/13

1838-1846 Iberville Parish, Conveyance Book S, p. 205, 1838/05/07, Mortgage Book 1, p. 13, 1846/09/17

1835-1859 Tulane University, Citizens Bank Minute Book No. 1 1835/05/11; Citizens Bank Minute Book No. 8 : 1859/04/11; Iberville Parish, Conveyance Book P, no. 260, 1836/03/02, p. 367, 1836/03/14 1848/05/30

Iberville Parish, Conveyance Book S, p.235, 1838/05/23, p. 281, 1838/05/15,

1835-1836 Tulane University, Citizens Bank Minute Book No. 1 1835/02/06; Iberville Parish, Conveyance Book P, no. 230, 1836/01/15, no. 264, 1836/03/03

1836-1837 Iberville Parish, Conveyance Book R, p. 142, 1836/12/08, p. 288, 1837/01/27 1840/02/21

## Owner

Slack, Eliphalet and
Abigail
Surry
Trier, A. and
Dominique Bouligny
Wilson, Elisa

## Mortgaged Collateral

plantion on Bayou GrosseTete with 49 unnamed individuals
plantation and unnamed individuals
plantation and 34 unnamed individuals
plantation and 60 unnamed individuals

## Dates

1836184118521839

## Source

lberville Parish, Conveyance Book P, no. 259 1836/03/02, p. 364, 1836/03/14

Tulane University, Citizens Bank Minute Book No. 4 1841/09/30

Tulane University, Citizens Bank Minute Book No. 7 1852/09/09; Iberville Parish, Conveyance Book 3, p 3, 1852/09/24

Tulane University, Citizens Bank Minute Book No. 2 1839/02/26

1834-1851 Tulane University, Citizens Bank Minute Book No. 1 1834/07/22; Citizens Bank Minute Book No. 6: 1851/01/071842184218341839

Tulane University, Citizens Bank Minute Book No. 1 1835/02/20

Tulane University, Citizens Bank Minute Book No. 1 1835/04/10

Tulane University, Citizens Bank Minute Book No. 1: 1834/12/19

Tulane University, Citizens Bank of LA Papers, 1834-1914, Folder 1: 1836/07/25

Tulane University, Citizens Bank Minute Book No. 1 1834/07/22

Tulane University, Citizens Bank Minute Book No. 4 1842/04/28

Tulane University, Citizens Bank Minute Book No. 4 1842/04/21, 1842/04/28

Tulane University, Citizens Bank Minute Book No. 1: 1834/10/14

Tulane University, Citizens Bank Minute Book No. 2 1839/02/21

Fortier, Berthies Tom; Nelson; Louise

Fortis, Edmund plantation and unnamed individuals
plantation and unnamed individuals
Faustus
Gesseau, Eugene
unnamed individuals
two tracts of land and unnamed individuals

## Owner

Marshall, L. R. and
Charles Fortis
Mason, W.
Ribas \& Colminaro; J. plantation and 31 unnamed individuals
M. De Gama

Saules Balthazar the following individuals: Vincent; Jacques; Edward; Baptiste; Azor; Jerry; Clarissa; Charlotte; Rodie; Henrietta; Francis; Charles; Perry; Ben; Auguste;

Saulit, Mrs.
Trudeau, Mrs. A.

Stephen; Fine; Silie; Maria; Sara

## Mortgaged Collateral

plantation and unnamed individuals
Milly Bishop; Catherine; and Jane

20 unnamed individuals
plantation and 31 unnamed individuals

## Dates Source

1854 Tulane University, Citizens Bank Minute Book No. 7: 1854/05/30

1851 Tulane University, Citizens Bank Minute Book No. 6 1851/01/07

1834-1847 Tulane University, Citizens Bank Minute Book No. 1: 1834/08/29; Citizens Bank Minute Book No. 3: 1841/05/06; Citizens Bank Minute Book No. 6: 1847/12/17
1834-1835 Tulane University, Citizens Bank Minute Book No. 1: 1834/12/19, 1835/02/05

Tulane University, Citizens Bank Minute Book No. 6: 1850/01/15
Tulane University, Citizens Bank Minute Book No. 7: 1853/05/05

## Lafayette Parish

McCaskill, Daniel and land and 24 unnamed individuals on Bayou Vermillion.
Chevis, J. W.
McCaskill, Samuel land and the following individuals: Lewis; Gabreil; Cyrus; Caleb; Geuin ; Wilson; Moses; Collins; Willough ; Henry; Jep; Charlotte; Charity; Kazzy; Sally; Rose ; Ellick ; Tim ; Sophia; Louisa; Gabe; Marissa; Saul; Thases

Thrall, John B. plantation and the following individuals: Dick; Sally; Catherine; unnamed individual; Jane; Mary; Seysus

1850-1851 Tulane University, Citizens Bank Minute Book No. 6: 1850/11/05; Tulane University, Citizens Bank Minute Book No. 7: 1851/12/23
Lafayette Parish, Copies of Notarial Acts, no. 2816,1838/04/30

1837-1838 Tulane University, Citizens Bank of Louisiana Papers, 1834-1914 Folder 2: 1837/09/28; Lafayette Parish, Copies of Notarial Acts, entry 2770, 1838/01/04

## Lafourche Parish

| Baudoin, S. | plantation and 12 unnamed individuals |
| :--- | :--- |
| Bernard, Jean Baptiste land and the following individuals: Etienne; Paul; Honore; Ursin ; Moses; Dick; <br> and Marie Esther Joe; Alexandre; Marie; Lucinda; Joseph; Dransin; Victoire; Juilliens |  |

c. 1848 Tulane University, M-1847, Citizens Bank Mortgage Book
1838-1845 Lafourche Parish, Conveyance Book N, p. 224, 1838/03/06; Book U, p. 436, 1845/05/12

## Owner

Biagg, Barton
Bourgeois, J. and H. unnamed individuals
Champagne
Brown, John Conway land and the following individuals: Thomas; Daniel; Eliza; Jacques
unnamed individuals
plantation and the following individuals: Nace; Stephen; Stanner; Philip; Isaac; Jack; Hanson; Henry; Thomas; Saulbring; Armstrong; Charles; Basil; Stanner Jr.; Leonora; Frank; Hanson Jr.; Lewis; Alfred; Reason; Henry; Sal; Rachel; Polley;
Theresa; Juno; Emily; Juliana; Sarah; Nancy Jr.; Nancy; Hager; Elvia; Sarah Ann; Tempe; Jane; Hannah; Hannah Jr.; Julia; James; Henry; Bernard; John; Joseph; Sally Camilla; Cassandra; Nancy; Mary Ann; Margaret
Frederic, Marie
Madelain and Jean
Omar Nicolas
Gaillard, Raymond P. land and the following individuals: Andre; Jean Baptiste; Clairville; Francis; Joseph; Sylvester; Benito; Bonaranture; Theophile; Marie; Cecile; William; Honore; Marianne; Oreline; Catherine; Celestin; Helene; Agathe; Domstele; Celestine; Mary; Solby; Anna; Suzette; Estele; Henriette; Odile; Lutelia; Baptiste; Dick; Randall; James; Sam; Melite; Madeleine
Gordon, Alexandre and the following individuals: Lewis; Spencer; Lymus; Betty; March; John; Martha; Jean Baptiste Maureau Charles; Will; Melinda; Edmund; Mary Jane; Frances; Fanny; Octavee; Barbary Margaret; Louise; Julien; Alexandre; Victoriae ; Sophie; Agnes; Betsy; Nathan; Henry Smith; Jack; Henry; Alfred; Tommy; Glaster; ittle Sam; Jack; George; Bazile; Frank; Mina; Saul; Yellow Willam; Philip; Stephen; Stanney; Little Stanney; Leonard; Big James; Cisar; Little William; Davy; Henson; Barnett; John; Joe; Thomas; William; John; Adam; Juillick; Emily; Nancy; Julian; Old Jenny; Mary; Winney; unnamed individual; Pervey; Miley; Hagar; Sarah; Sally; Eliza; Hannah; Milah; Mary; Rachel; Penny; Nancy; Cashlien; Jessey; Holly; Joe; Rose; Frank; Heline; Kitty; Rachel; Mary; Abraham; Patty; five unnamed children

## Dates Source

c. 1848 Tulane University, M-1847, Citizens Bank Mortgage Book

Tulane University, Citizens Bank Minute Book No. 1 1834/10/20

Lafourche Parish, Conveyance Book N. p. 278, 1838/05/24

Tulane University, Citizens Bank Minute Book No. 1: 1834/06/26

1837-1858 Lafourche Parish, Conveyance Book N, p. 185, 1837/12/11; West Feliciana Parish, Mortgage Book K, p. 129, 1838/01/25; Terrebonne Parish, Convenance Record Aug 29, 1832 - Jan. 5, 1841, Entry 2271, 1858/01/01; Tulane University, Citizens Bank Minute Book No. 5: 1844/10/04

Lafourche Parish, Conveyance Book T, p. 474, 1834/12/30

Lafourche Parish, Mortgage Book AA, p. 380, 1845/07/21; Tulane University, Citizens Bank Minute Book No. 6: 1849/02/06, 1849/03/16, 1851/02/11

Lafourche Parish, Conveyance Book W, p. 115 1845/08/09; Tulane University, Citizens Bank of Louisiana Papers, 1834-1914, Folder 5; Citizens Bank Minute Book No. 5: 1844/10/04; Citizens Bank Minute BookNo. 5: 1845/07/31

Nicholas, W. and J. Plantation and the following individuals: Michele; Jim; Joe; Valette; Bob; Hanney;

## Owner

Guion, George L.

Haydel, Nel and Carmelite

Heriot, Justinian and Suzanne Lépine; Mrs Charles Degauche

Ledet, Henry and Anne Dauphine Levron

Lepine, Evariste and Marie Nathalie Martin

Pitre, Mathurin

Seely, John L.
Tucker, Joseph W

## Mortgaged Collateral

plantation and the following individuals: Arthur; Littleton; Jesse; George; Henry; Scarlett; Big Peter; Wallace; Jake; Dick; Joshua; Anderson; Harding; Westley; Little Peter; Dave; Spencer; Melvin; Monroe; Moses; Thorton; Millie; Lany; Eliza; Little Anny; Sydney; Betsy; Big Amy; Mary; Louisa; Violet; Basheba; Minerva; Matilda; Prissy; Rachel; Cynty
land and the following individuals: Casimine; Antoine; Esprit; Alexis; Basile; Sannon; Jean Baptiste; Jeannette; Catherine; Marie Josephe; Daphne; Pauline; Susanne; Martine; Feliciane; Isabelle; Eveline; Rosette; Felicite; Manette; Marie; Eve; Marie; Jules; Joachim; Edouard; Jean; and three unnamed children plantation and 6 unnamed individuals
land and the following individuals: Westley; Enree; Lalie; John; Euphrosine; Philippe; Drausin; Charlotte
land and the following individuals: Lubin; Louis; Sam; Baptiste; Noel; Augustin; Joseph; Madeleine; Francoise; Helene; Emilite; Amelia; Celeste; Aimee; Marie; Cecile; Justine; Paul; Laurent; Lazare; Eugene; Valentin; Louise Debby; Rosa; Mary; Bob; Randall; Nancy; Mariah; James; Nancy; George; Esther; William; Nancy; Edmund; Puoponne; Marguerite; Clarisse; America
plantation and the following individual: Godfrey
plantation and the following individuals: Lewis; Louis; Allick; Melinda; Betsey; Winson; Coco
plantation and the following individuals: Edmond; William; Simon; Manuel; Gilbert; 1849 Dick Peyton; Alick; John Baily; Bob; Peter; George William; Robin; Henry; Sam; Toussaint; George; Grandisan; Little George; Dick; John Ben; George Gaudet; Polly; Jacob; Rebecca; Little Mary; Big Rachel; Harriet; Big Mary; William; Toussaint; unnamed indivual; Phoebe; Nathan; Patty; Belinda; Sarah; Thilda; Letty; Rachel; Maria; Davy; Sophie; Sylvia; French Sylvia; Rose; Frances; Eliza; unnamed individual; Andy; Dynah; Elizabeth

## Dates Source

1840-1845 Tulane University, Citizens Bank Minute Book No. 3: 1840/12/17; Lafourche Parish, Mortgage Book R, p 164,1840/12/31, p. 509, 1842/08/12; Conveyance Book R, p. 510, 1842/08/12; Conveyance Book, p. 115,1845/08/09

Lafourche Parish, Conveyance Book N, p. 199,1837/07/26

1858-1860 Tulane University, Citizens Bank Minute Book No. 8: 1858/03/22, 1860/05/03

Tulane University, Citizens Bank Minute Book No. 1 1834/10/20; Lafourche Parish, Mortgage Book L, p. 105, 1834/12/30; Conveyance Book S, p. 360,1843/10/02

Lafourche Parish, Mortgage Book N, p. 128,1837/08/01

Lafourche Parish, Mortgage Book N, p. 151,1837/08/17
Lafourche Parish, Conveyance Book AA, p. 424, 1849/04/07; Conveyance Book BB, p. 225, 1849/05/18

## Owner

## Madison Parish

Butler, Ira Charles; Henry; John; Hynson; Peter; Michel; Bennet; Lannon; Moriah; Sam

James, Joshua
plantation and 147 unnamed individuals
Shadburne, George D. the following individuals: Hatch; Bob; Bill; Mitch; Marshall; Logan; Susan; Rose;
Nance; William; Red; James; Ambrose; Fayette; Betsey; Mahalu; Josephine; Mary; Ella; Ike

## Morehouse Parish

Brigham, Sarah<br>Davidson<br>the following individuals: Harriett; Pleasant; Armstead; Aleck; Davy; Kit; Charles; Abraham; Joe Simmons; Tom; Mason; Cheney; Peter; Dick; Judy; Nancy; John; Sally; Sam; Lucinda; Harvey; Stephen; David; Fanny; Little Harriet; Mary; Zeke; Nelly; Jack; Lewis; Harvey; Glasco; George; Patience; Mira; Old Peter; Masin; Madison; Adam; Manuel; Hassell<br>Jordan, H., W. Jodan, and W. Gillespie

## Dates Source

Madison Parish, Mortgage Book A 1838-1861, p. 7 , 1838/04/24; Mortgage Book A 1838-1861, p. 130, 12/13/1842; Concordia Parish, Conveyance Book H, p. 346, 1838/04/24

Tulane University, Citizens Bank Minute Book No. 8: 1859/06/02

Madison Parish, Mortgage Book A 1855-1859, p. 463, 1858/09/06

## Natchitoches Parish

Boyce, Michael
land and the following individuals: Johnson; Calife; Jean Baptiste; Robert; Frank; Charles; Emery; Leman; David; Sam; Bob; Huittiem; Patrick; Prince; Jess; Lewis; Reuben; Harriette and her children Zenan and Helene; Debby and her child George; Mary and her child Henry; Larrisa and her child Thomas; Dicy and her child Eliza; Caroline and her child William; Harriette; Rachel; Lucy; Hannah and her child Albert; Marie

1837-1839 Nachitoches Parish, Book 23, p. 2, 1837/12/05, Book 10, p.340, 1838/02/07, Book 23, p. 239, 1839/03/04

| Owner <br> Robinson, J. | Mortgaged Collateral <br> plantation and the following individuals: Andre, Jean Baptiste, Clairville, Francis, Joseph, Sylvester, Benito, Bonaranture, Theophile, Marie, Cecile, William, Honore, Marianne, Oreline, Catherine, Celestin, Helene, Agathe, Domstele, Celestine, Mary, Solby, Anna, Suzette, Estele, Henriette, Odile, Lutelia, Baptiste, Diek, Randall, James, Sam, Melite, Madeleine |
| :---: | :---: |
| St. Amans, Bernard | land and the following individuals: Hector; Cesaire; Gustu; Sara; Frank; Robert; Robert; Dick; Richard; Pita; Cyprian; Simpson; George; Old Sam; Sam; Bandan; Oculi ; Frank; Bob; George; Patrick; Henry Lewis; Felix; John; Betsy; Molly and her child Maria; Jean Baptiste; Lucy; Laiza; Vallette and her child Alexandre; Mary and her unnamed daughter; Angel; Henrrietta; Zaire and her child Valsin; Hannah; Big Ann; Priscilla; Diana; Little Ann; Nancy and and her child John; Suzette; Suzette and her child Felicite; Hane and her child Martha Ann; Dackey; Charity and her child Livan; Clemmice ; Minty; Eugene; Henry |
| Sampayrac, A. | land and the following individuals: Sam; Jose; Bob; Carret; Bill; Jesse; Abraham; Petit Sam; Barrel; Arci; John Green; Petit John; Levy; Grand Abraham; Isaac; Alfred; Noe; George; Devis Charpuntuir; Wilson; Thomas; Henry; Archer; Isaac ; Albert; Betty; Derasin; Adams; Williams; Julien; Belf; Cesair; Rachel; Jenny; Helene; Sally; Silvy; Nancy; Josephine; Mariah; Betsy; Caroline; Mary; Henriette; Petite Betsy; Anne; Cealy; Peggy; Aimu; Malvany; Julie; Rose; and 12 unnamed children |
| Unknown | land and the following individuals: Phil; Isaac (alias Dory); Jacob (alias Martin); Dave; Mary (alias Charity); Elcy; Betsy |
| Orleans Parish |  |
| Bernard, B. | plantation, brickyard, and 38 unnamed individuals |
| Bouligny, Alfred and Dominique | plantation and 9 unnamed individuals |
| Bradford, H. | farm and 2 unnamed individuals |
| Caffin, Charles | unnamed individuals |

## Dates Source

1841

1834-1840 Nachitoches Parish, Book 26, p. 150, 1840/06/20
Book 31, p.338, 1834/06/10, Book 10, p.389,
1838/08/17, Book 26 p. 149 no.1443, 1840/06/20,

Nachitoches Parish, Book 22, p.1, 1834/11/19
c. 1848 Tulane University, M-1847, Citizens Bank Mortgage Book

1849-1853 Tulane University, Citizens Bank Minute Book No. 6 1849/09/18; Book No. 7: 1853/02/24
c. 1848 Tulane University, M-1847, Citizens Bank Mortgage Book

Tulane University, Citizens Bank Minute Book No. 3 1841/02/10; Nachitoches Parish, Book 32, p. 50, 1841/03/27

Nachitoches Parish, Book 23, p. 60, 1838/03/18, Book 10, p. 360, 1838/05/18


## Owner

Cocke, P. B.
Ducros, Antonio and
Casimir Lacoste
Forestall Brothers; Poiney

## Mortgaged Collateral

unnamed individuals
the following individuals: Remond; Louis; Mary
several plantations and 68 individuals, including: James; William; Bill; Aaron
Cusinaru; Jaques; James Bourguel; Adams Boiny; Celir; Jams; Saior; Charisse; Betsy; Ann; David Copeland

Garidel, Louis Armand bakery with Charlotte and other unnamed individuals

Hoa, Albert and Pierre
plantation and the following individuals: Baptiste; Big George; John Rousseau; Jerry; Bernard; Gabriel; John Ameneaiux; Reuben; Tom; Grand William; Gros Joseph; Jerry; Squire; Abraham; Petit William; Mitchel; Richmond; Bob; Charles Fegg; Dembo; Petit John; Francisque; Penon; Coco; Jean Louis; Joseph; Doyle; Hosborn; Philippe; Tom Hibon; Daniel; Charles; Joseph; John Challender; Azor; Isaac; Felicite and her child Jim; Charlotte; Jessette; Sophie and her unnamed child; Augustine; Marie Chamber; Marie Jeanne and her son Theogere; Angelle; Henry; Louisa; Pyrhus; Abraham Cagelar; David
Lacoste, Pierre and
Antoine

Lacoste, Pierre and
Antoine; Antoine
Bellegarde; Casimir
Lacoste

Levee Steam Cotton
Press Company
plantation and the following individuals: Basile; Tom; Jean Louis; Antonio; Voltaire; Sam; Hyacynthe; John; Louis Labrique; Leon; Lindor; Antoine; George; Jupiter; Hippolyte; Reuben; Lewis; Dick; Jean Louis; Joseph; Francois; Charlot; Phillis; Fanny; Melite; Sophie; Edmond; Jerry; Noel; Robert; Toby; Henry; Auguste; Marie; Phrosine; Louise; Leocadie; Maria; Pierre; Marie; Joshua; Frank; Bob
plantation and 60 individuals, including: Bazile; Ellick Forestier; Auguste; Ben and 1850 his son Ben; Charlot; Congo; Dick; Edmond; Louis Labrique; Millien; Nelson; Octave; Plaisance; Pichon; Nrain; Rubin; Angele and her child Eugene, Braman, and her three children Jeanne, Ursin, and Emile; Claire; Cilia and her children, Henriette and Marie Louise; Frozine; Mary Laroude; Mary Jacob; Mary Pierre and her child Amelie; Poupoine; Sarah; Therize Bienvenu; Therize Lacoste; Nelly Martin and her child Cidalyse
steam saw mill and unnamed individuals

## Dates Source

1835

Tulane University, Kuntz Collection, No. 600, 1834/1835 and 1836/04/19

Tulane University, Citizens Bank Minute Book No. 6: 1850/06/11; Tulane University, Kuntz Collection No. 600; 1850/6/20

Tulane University, Citizens Bank Minute Book No. 5: 1843/11/20

## Owner

Livaudais, Jacques Adolph

Livaudais, Jacques
Adolphe and Pierre

## Lacoste

laudon, L. and
Nicoletz, T.
Parrin, Charles

Ribus, M.

## Mortgaged Collateral

plantation and 30 individuals, including: Petit Edmond; William; Pichon; Valentin; Marie Pierre; Amelie; Cydalise; daughter of Marie Martin; Marie Jacob; Edouard Guoye; Jack; Charles; Henry Dix; Gustave; Claire; Antonia; Eddy; Zoe
the following individuals: Raymond; Charles; Anthony; Tom; Ned; Harry; Gilbert; Joseph; Mills or Milne; Ellick; Lewis; Simon; Jasmin; Jean; William; Bill; Vulcain; Marie Joseph; Marie Martin; Rose; Justine; Grand Ellick; Tom Gros; Anthony; Louis Coulon; Vulcain; William; Ned; Charles; Gilbert; Raymond; Jean; Harry; Bill; Simon; Mills; Joseph Coulon; Jasmin; Justine; Marie Joseph; Rose Coco; Jean Louis
$\begin{array}{ll}\text { unnamed individuals } & 1834\end{array}$
unnamed individuals
20 unnamed individuals

## Ouachita Parish

## Braird, D.

Dates
1851

1834-1851 Tulance University, Kuntz Collection, No. 600, 1834/1835, 1851/10/09

Tulane University, Citizens Bank Minute Book No. 1: 1834/09/20
Tulane University, Citizens Bank Minute Book No. 1: 1834/12/12

Tulane University, Citizens Bank Minute Book No. 3: 1840/04/09

## Plaquemines Parish

Baphy, B. sugar plantation and 29 unnamed individuals
Bayby, Mrs.

Bayhi, Pierre
Bonneral, Alexander
plantation and 11 unnamed individuals
land and 18 unnamed individuals
land and the following individuals: Bob; Dirk Glover; Ben Jones; Tom; Susanne and her children Julienne, Justine, Cato, and Levy; Edmond Ruffin; Nancy; Nathan Dugas; Lannette; James Smith
C. 1848 Tulane University, M-1847, Citizens Bank Mortgage Book

Tulane University, M-1847, Citizens Bank Mortgage Book
c. 1848 Tulane University, M-1847, Citizens Bank Mortgage Book

Tulane University, Citizens Bank Minute Book No. 6: 1848/05/02

Plaquemines Parish, Mortgage Book B, p. 212, 1855/08/08

|  | Mortgaged Collateral |  | Source |
| :---: | :---: | :---: | :---: |
| Courbault, J. | unnamed individuals | 1834 | Tulane University, Citizens Bank Minute Book No. 1: 1834/08/07 |
| de Lizarde, Hermanos | unnamed individuals | 1834 | Tulane University, Citizens Bank Minute Book No. 1: 1834/12/26 |
| Dufau, C. B. | unnamed individuals | 1834 | Tulane University, Citizens Bank Minute Book No. 1: 1834/06/26 |
| Egana, Juan Ignacio | Fanny Plantation and the following individuals: Frank King; Daniel Honard; Alfred; Richard; George; Claiborne; Buford; Wilson; John Robinson; Bruja; John Hawkins; Lot; Henry Lot; Collins; Hezekiah; Pleasant; Lu; Leon; William Parker; Peter Kelly; Israel ; Peter Fischer; Moses; Jim Fischer; Jack; Daniel Pope; Big Jim; Alexander; Dick Campbell; July; George Burke; Coon; Frank Duplessis; Robert Sternan ; Dave; John Burke; John Dawson; Nelson; Charles; Charles; Robert Wise ; Martin; Abraham Bonlin; Sambo; Long Tom; Ismael; Bob; Cesar; Lisbon; Abraham; Sam Homer; February; Ashley; Felis; St. Louis; Edward; Sam Roman; Marie; Sarah; Kitty; Rachel; Sally; Jules; Celeste; Lewis; Minerva; John; Catherine; Burgess; Warren; Phillis; Rose Ashley; Josephine; Julia; Beckey; Charlotte; Zarbelle ; Frances; Ellen; Caroline; Ben; John ; Emily; Rachel King; Rose Burke; Emily; Lee; Ping; Harriet; Susanne; Louise; Ellen; Peggy; Rachel; Jener; Lucinda; Jeannette; Martha; Sidney; <br> Ann; Sophie; LIddy; Phoebe; Flower; Rose; Simon; George; Elizabeth; Catherine; Bessy Miller; Louise Smith; Joe; Happy; Nancy; Rebecca; Washington; Harie; Juliette; Charlotte; Jane; Long Becca | 1858-1859 | Tulane University, Citizens Bank Minute Book No. 8: 1859/05/23; Plaquemines Parish, Mortgage Book B, p. 416, 1858/06/05, p. 468,1859/05/30, |
| Erwin, James | plantation and the following individuals: Joe; Henderson; Ned; Abraham; Watts; Moses; Valerie; Baptiste; Andrews; Phebe; Rose; Judith; Eugenia; Judy; Kitty; Hortense; Delsy | 1839 | Tulane University, Citizens Bank Minute Book No. 2: 1839/05/02, 1839/05/09, Citizens Bank Minute Book No. 3: 1841/02/27; Plaquemines Parish, Mortgage Book R-4, p. 85, 1839/07/03 |
| Farrar, Mary | 66 unnamed individuals | 1848 | Plaquemines Parish, Book 2 p. 151, 1848/03/21 |
| Frederic, Adam | land and the following individuals: Mars; Isaac; Charles; Thom; Rose and her two children Joseph and Jim; Tris; Rachelle | 1838 | Plaquemines Parish, Mortgage Book R-4, p. 39, 1838/03/24 |
| Knox, Andrew and Maria Jane Prince | plantation and the following individuals: Abram, his wife Kitty, and son Phil; Dick; Any; Malfored; Philis; Harriet; Maryland Dave; Washington; Jack | 1845 | Tulane University, Citizens Bank Minute Book No. 5: 1845/03/13; Plaquemines Parish, Book R-4 p. 279, 1845/03/18 |


| Owner | Mortgaged Collateral |
| :--- | :--- |
| Latour, Mrs. Arsine |  |
|  | land and the following the following individuals: Ben; Bob; Dick; Tom; Levy; Cato; |
|  | Edmond Ruffin; Nathan Dugas; James Smith; Habelle; Laurette; Nancy Ruffin; |
|  | Arinella; Clay; Mary Ann Scott; Maria Jane; Susannah and her children Julie and |
|  | Julian. |
| Lizardi, Manuel Julian; |  |
| Egana, Juan Ignacio | plantation and the following individuals: Auguste; Frederick; Sam; Henry; |
|  | Lawrence; Justin or Juctin; Jim; Cornelius; William; Philippe; William Taylor; |
|  | Edmond; Allick; Jack; Henry; James Rouge; Marion or Mary; John; George; |
|  | Edward; Francis Forstall; Ephraim; illegible Forestall; Alexis; Armstron; Joshu; |
|  | Abraham; John (alias Rosemonde); Ben; Argin; Robert; Henry Black; Sam;; |
|  | Lymus; Frederick; David (alias Davis); Anatole; Jefferson; Hammel; Steven; Tom; |
|  | Ben; Rose and her two children Caliste and Edward; Eliza; Nancy and her two |
|  | children Guillamme and Peggy; Sarah and her three children Chedric, Henry, and |
|  | Sarah; Frank; Lydia alias Adelaide; Betsy alias Garielle; Clara; Helen; her three |
|  | children Louisa; Aimee; Cesarine; Violette; Ernestine; and her child Bacchus; |
|  | Rachel; Leontine; Nancy; Nancy and her child Harriet; Bassine (alias Marienne); |
|  | Kitty; and her children Helena, Solomon, and Louis; Letty; Cecilia; Lucy; Florence; |
|  | Henrietta; Eleonor |
|  | land and the following individuals: Blaise; Gilles; Ben; Charles; Augustus; Allen; |
|  | Riny; Henderson; Grand Olivier; Olivier; Grand Henry; Ephraim; James; Isaac; |
|  | Garry; Thom; Anthony; Little Henry; William; Peter; Randall; Alli; Manuel; Sandy; |
|  | Gorman; Brutus; Lubin; Taliba; Augustin; Campre; Thomas; Michel; Bonann; |
|  | Pilate; Soleman; Ondon; Phaeton; Francois; John; Grande Diana; Petite Diana; |
|  | Marthe; Elvy; Agnes; Ammy; Lucinda; Polly; Grandel Marie; Terry; Fanny; |
|  | Susanne; Little Fanny; Charlotte; Little Mary; Rachel; Jeanne; Phebee; Jucie; |
|  | Julienne; Lisa; Aimee; William; Sam; Miner; Frank; Elisa; Charles; Fenton; Maria; |
|  | Denis; Marie Covington; Marie Bill; Biguy; John Maguan; Marriam; Grande Juan; |
|  | Aimer; Colutin; Theodore; Manuel; Ackrel; Pelam; Sam; Sam; Camil; Jacob; |
|  | Henry; Ben; Lanon; Davie; Squire; Celestin; Perry; Adam; Anna and her unnamed |
|  | child; Jane; Leocadre; Marthe; Mathilde; Gaines; Patrina; Harry; Randall; Allen; |

Owner
Latour, Mrs. Arsine
land and the following the following individuals: Ben; Bob; Dick; Tom; Levy; Cato; Rum, Nathan Dugas, James Smith, Habelle, Laurette, Nancy Ruffin; Arinella; Clay; Mary Ann Scott; Maria Jane; Susannah and her children Julie and

Lizardi, Manuel Julian; plantation and the following individuals: Auguste; Frederick; Sam; Henry; Ednot; Alck; Jack; Edmond, Allck, Jack, Heny, James Rouge, Manion or Mary, John, George, Abrd; Lymus; Frederick; David (alias Davis); Anatole; Jefferson; Hammel; Steven; Tom; Ben; Rose and her two children Caliste and Edward; Eliza; Nancy and her two Sarah; Frank; Lydia lia Adelaide; Betsy alis Garielle; Clara; Helen; her three children Louisa; Aimee; Cesarine; Violette; Ernestine; and her child Bacchus; Rachel; Leontine; Nancy; Nancy and her child Harriet; Bassine (alias Marienne); Henrietta; Eleonor
and and the following individuals: Blaise; Gilles; Ben; Charles; Augustus; Allen Gary; Then, Gra Ull He W, Gran Peter; Landall All Man, Isaac, Gorman; Brutus; Lubin; Taliba; Augustin; Campre; Thomas; Michel; Bonann; Pilate; Soleman; Ondon; Phaeton; Francois; John; Grande Diana; Petite Diana; Marthe; Elvy; Agnes; Ammy; Lucinda; Polly; Grande Marie; Terry; Fanny; Suan; Lisa; Dens; Marie Covigion; Marie Bil; Bidu; Fran Magua; Maria; Ferand Jaria; Aimer; Colutin; Theodore; Manuel; Ackrel; Pelam; Sam; Sam; Camil; Jacob; Henry; Ben; Lanon; Davie; Squire; Celestin; Perry; Adam; Anna and her unnamed child; Jane; Leocadre; Marthe; Mathilde; Gaines; Patrina; Harry; Randall; Allen; Anny; Ersis ; Sam; Peter Manuel; Petite Anna; Henriette; Lariane; John

Reggis, Charles

Saul

## Dates

1836-1845 Tulane University, Citizens Bank of Louisiana Papers, 1834-1914, Folder 1: 1836/06/23, Citizens Bank Minute Book No. 5: 1843/01/07; Plaquemines Parish, Mortgage Book R-4, p. 315, 1845/10/28; St. Tammany Parish, Book 64, p. 479, 1845/10/28

[^3] 1834/06/26

## Owner

Stackhouse, W. and H. Five Oak Grove plantation, New Hope Plantation, land, and the following individuals: Abraham Knox; Abraham Boukrout; Mary Jones; William; Bill; Coradon; Kate; Henry; Phelia; Lucy and her unnamed child; Perry; Milly; Angelina; Julia; Roland; Prude; Lewis Bradley; Phil; Deer Creek Jesse; Wilford; Axey; Crockett; Solomon; Arthur; Isidore; Humphrey; Colbert; Sarah and her unnamed child; Henriette and her child Nancy; Omaretta; Feliz Guillaume; Fanny and her four unnamed children; Nancy; Joe; Deek Kite; John; Lewis; Little Phil; Jaonna; Ephraim; Sully; Jim; Squire; Theodore; Ackrel; Telan; Sam; Daniel; Jacob; Henry; Ben; Lanon; Davis; Celestin; Adam; Allen; Fanny; Antoine; Eugene; Claire; Jane; Leocudre; Martha; Anny; Mary; Aimee; Anna; Lorianne; Joe; James; Thom; Peppee; Tom; Phill; Peter; Sam; Henry; Jackson; Mary; Isaac; Jacke; Ned; Bazile; Raymond; Rachel; Adam; Honore; Laurent; Theodore; Pegne; Petion; Camille; Acknel; Felan; Sam the priest; Tom; Daniel; Jacob; Henry; Ben; Lanon; Davis; Celestin; Perry; Adam; Allan; Fanny; Antonio; Eugene; Eloise; Jane; Lucinda Martha; Patience; Anny Burtre ; Mary; Aimee; Sarah; Anna; Lucianne; Jour (alias Joe); James; Thom; Raymond; Margarita; Joseph; Philomon; Henrietta; Charles; Heloise; Marianne; Celestin; Pierre; Frozine; Constance; Celestin; Joseph; Lannon; Francois; Dotreville; Victor; Dorothee; Rob; Melite; Pauline; Rose; Louis; Joe; James; Therese; Mariette; Edouard; Augustin; Baptiste; Francois; Eulalie; Peter; Dick; Tom; Bill; Lucile; Lucile Joe; Henry; Phoebe; Rachel; Mary; Ledy; Olivia; Charlotte; Jean; Valcone ; Charles; Albert; Henry Meyer; Long John; Colonel; Celeste; Tom; Ursine; Antoine; Bazile; Raymond; Lloyde; Rachel; Adam; Honore; Laurent; Theodore; Regan; Petion; Camille; Raymonde; Marguerite; Eclante; Babet; Joseph; Philemon; Henrietta; Charles; Helios; Ursin; Antonio; Marianne;Celestin; Pierre; Frazine; Constance; Casimir; Celestine; Joseph; Janen; Francoise; Detreville; Carter; Porachi; Bob; Neclite; Zanlin; Rose; Louise; Zoe; Hiers; Fox; James; Theresa; Henriette; Edward; Augustine; Baptiste; Francis; Evalie; Brisson; Peter; Criske; Jean Congo; Tom; Bill; Lucille; Lucille Joe; Fanny; Phoebe; Rachel; Mary; Liddy; Olivia; Charlotte; Jean; Valcour; Charles; Alberte

## Dates Source

1851-1865 Tulane University, Citizens Bank Minute Book No. 7 1851/11/11, 1852/01/13, 1852/01/17, Citizens Bank of Louisiana Papers, 1834-1914, Folder 4: 1865/03/24, Folder 5; Plaquemines Parish Conveyance Book 6, p. 430,1852/10/13; Mortgage Book B, p. 293,1856/10/15

## Owner

Starck, Mary F.

Stinson, Joseph

Verbois, N.

Wilkinson, Catherine; Peggy; Buck; Lydia; Alexander; Betsy; Ben; Mary Jones; Margaret; Sally; Mary Ann; Martha; Hannah; Suzane; Lucy Jane; Colbert; Kitty; Little Ben; Alfred; Jane; Winey; Thurston; Sam; unnamed child; Edward; Littleton; Harry; Fanny; Willis; Jackson; Adeline; Amy; Daliallia; Ellen; Hamilet; John Tilman; Emily; Louisa; Rachet; Julia; William; Jim Martin; Sandy; Washington; Sam; Frank; Big George; Henry; Albert; Gras; unnamed child; Hilary George; Riddle; Richard; Ben; Dary; Jane

## Mortgaged Collateral

land and the following individuals: Billy Ruffin; Scylla; Ben; James Ruffin; Nelly; Fanny; Godfrey; Francois; Little Fanny; Jack; Becky; Sam; Nancy; Hick; Peggy; Scipio; Solomon; Little Nelly; Grandisson; Dick; Ben; Richard; Mary; Alexander; Melita; Betsy; Susannah; Susan; Betsy; Lydia; Dick; Lucy Jane; Lydia; James Perry; Rose; Emilia; Joe; Sally; Gradisson; Hannah; Meary; Frankie; Colbert; Jim; Kitty; Big Ben; Little Ben; Alfred; Emilia; Isaac; Aimee; Harriet; Winny; Edward; Littleton; Harry; Delfy; Fanny; Adeline; Louise; Rachel; Emily; Sarah; John; Elisa; Thomas
the following individuals: Ben; Dary; Jane; Grandison; Ron; Anna; Ben; Suzanne; 1857 Charlotte; Serina; Lucy Jane; Mithia; Suzan; Dick; Peterson; Little Betsy; Same; Joe; Colbert; Kitty; Alfred; Littleton Ben; Jeane; Amy; Harriet; John Tilman; Thoedore; Fanny; Jackson; Henry; Cyrus; Louisa; Rachel; William; Handy; Sam; Big George; George; John Richard; Presecilla; Ellen; Emily; Winny; Edward; Jefferson ; Harry; Willis; Adeline and her child Alberty; Julia; Jim Martin; Washington; Frank; Hilary; Grace; Guillame; Nathan
the following individuals: Joseph; Nancy; Jamie; Little Nelly; Old Nelly; Francis;

## Dates

18481857
land and unnamed individuals

## Pointe Coupee Parish

Blush, John<br>49 unnamed individuals

Tulane University, Citizens Bank Minute Book No. 8 1857/01/02

Tulane University, Citizens Bank Minute Book No. 3 1841/03/11

## Owner

## Mortgaged Collateral

| Clairborne, Ferdinand | plantation, land, and the following individuals: Phil; Ed; Robert; Ketly; Barrus; |
| :--- | :--- |
|  | Dempse; Charlotte; Fanny; Henry; Melina; William; Mary; Joe; Francis; Creacept; |
|  | Claiborne; Marshall; Catherine; Cornelia; Julia; Francis; Laura; Henriette; Bishop; |
|  | Alfred; Mariah; Desire; Arch; Oscar; Celia; Martin; Little Creacy; Celestin; Rhody; |
|  | Madeline; Alexander; Fill; Lewis; Rebecca; Cranville; Harriet; Emma; Flecher; |
|  | Suzan; Rene; Allen; Caleb; Polly; Louisa; Benedict; Francoise; Sibby; Marcelin; |
|  | Ambroise; Terence; John; Walker; Viney; Big John; Ann; Jack; Alex; Minor; |
|  | Hamrole; Israel; Little Mary; Washington; Tom; Allen; Little Charlotte; Harrisson; |
|  | Rachel; Bambre; Edmond; Foster; Eliza; Pusle; Mimy |

Cooley, Ebenezer; Mary plantation and the following individuals: Richmond; William Hunter; Jack; William Elizabeth Collins; and Thomas; Wades; Xavier; Madison; Jean Baptiste; Black Jim; Joe; Marshall; Henry John Holmes

Gwynn, Samuel
Hall, George Otis;
Alphonse Miltenberger;
Gustave Miltenberger
Harrision, John plantation and 67 unnamed individuals
Harrision, John plantation and 67 unnamed individuals

| Hubert, Louis A. | land and the following individuals: James Allen; Charles Clayton; James Nett; <br> Sam; Edward; Washington; George Wart; Albert; Isaac; John; George; Charles; <br>  <br> Betzy; Maria; Lucy; Sally Anne; Flora; Fanny; Sally John;Eliza Roves; Helene; <br> Julia; George; Mary; Eveline; Jane; Eliza; Mara; Peter |
| :--- | :--- |
| Knapp, Mrs. Sophia | plantation and the following individuals: John Suzan and his wife Nancy; Stevens; <br> Joe; Hannah and her child Christimas; illegible; Frank; Toby; Ann; Sarah; Billy; <br> Genny; Jane |

Ledoux, Amaron and the following individuals; Randall; Beverly; unnamed individuals
1861 Claiborne; Marshall; Catherine; Cornelia; Julia; Francis; Laura; Henriette; Bishop; Mariah, Desire, Arch, Oscar, Celia, Maran, Litte Creacy, Celestin Suzan; Rene; Allen; Caleb; Polly; Louisa; Benedict; Francoise; Sibby; Marcelin; Ambroise; Terence; John; Walker; Viney; Big John; Ann; Jack; Alex; Minor; , Tsael, Litle Mary; Washington; Tom; Allen; Little Charlotte; Harrisson; Rachel; Bambre; Edmond; Foster; Eliza; Pusle; Mimy
Elizabeth Collins; and
John Holmes or Harry; Lamon; Victor or Joe; Abraham; Allen; Maria; Mathilda; Era; Yellow Sally and her child Howard; Paul; Andrew; Fanny; George; Louisa; Sara; Sally Jackson; Jackson; Isaac; Eliza
Gwynn, Samuel
Hall, George Otis;
Alphonse Miltenberger;
Gustave Miltenberger

George Hall

9 unnamed individuals
unnamed individuals
-

## Dates <br> Source

Tulane University, Citizens Bank Minute Book No. 8 : 1861/04/11; Pointe Coupee Parish, Legal and Conventional Mortgage Book H, p. 325, 1861/04/14; West Feliciana Parish, Mortgage Book Q, p. 92, 1861/04/13

Tulane University, Citizens Bank Minute Book No. 8: 1859/06/27; Pointe Coupee Parish, Legal and Conventional Mortgage Book G, p. 641, 1859/07/05

Tulane University, Citizens Bank Minute Book No. 3: 1837/05/20

Pointe Coupee Parish, Lega and Conventional Mortgage Book H, p. 173, 1857/05/11

Tulane University, Citizens Bank Minute Book No 8: 1860/01/23

Pointe Coupee Parish, Legal and Conventional Mortgage Book C, 1836/12/31

Tulane University, Citizens Bank Minute Book No. 7 1854/05/05;Pointe Coupee Parish, Legal and Conventional Mortgage Book F, p. 161, 1854/05/06

Pointe Coupee Parish, Legal and Conventional Mortgage Book C, No. 1365, 1841/03/18

| O |  | Dates |
| :---: | :---: | :---: |
| Miltenberger, Ledoux; <br> J. Patrick | plantation and unnamed individuals | 1860 |
| Moceriu, Mrs. Adelina | plantation and the following individuals: Ben; Jean Pierre; Paul; Robert; Jim; Arthimis; Caroline; Martha; Routhe; Louisa; Marie illegible; Remi; Celestin; and three unnamed individuals | 1837 |
| Morrison, Jacob Haught and Virginia Julia Seghers | plantation, land, and the following individuals: Pollo; Isaac; Prince; Rebecca; Prescilla; Scipio; Daniel; Will; Harotinus ; Phillis; Anclia or Amelia; Rushwood; Mary; Emma; Suc; George; Caesar; Michel; Rose; Kate; Henry; John Baptiste; Victoria; Stephen; Buck; Paulina; Sam; Dick; Robon or Robert; Milton; Cynthia; Susan; Henry; John Trusbee; Hannah; Big George; Mary; Laurear or Laurent; Martin; Rosella; Harry; Presillia; Lucy; Lewis; Michel; Adele; Julienne; John; Big Mary; Delia; Madelaine; Virginia; Gustine; Lyman; William; Paulin; Mary Tom; Charles; Little George; Marallin or Marcellia; Ann; Bazile; Cecilia; Sylvia; Tom; Cecilia; unnamed individual; Hard Times; Victoria; Symoora; Mary Jane | 1860 |
| Moore, Philip M. and Mary Elizabeth Collins | plantation and the following individuals: Dick; Daniel; Joe; Esan; Thirence; Bazil; <br> Prince; Milly; Arsene; Hannah; Lewis; Germain; Abesse; Mathilde; Felicity or Prince; Charlotte; Amelia; Azilia; Etienne; Fanny; Frivoh; Old Hannah; Ponpon; Celia; Sarrah; Zaire or Rachel; Theresa; Milto | 1859 |
| Morgan, Charles and Hyacinthe Allain | plantation and the following individuals: Archer; Y. Case; Peter; George Walden; Isaac; Solomon; Henry illegible; Hypolite; Jean Pierre; Javier; Jean Baptiste; Alisies; Joe; Rob; Lee; Fransis; George; Pierre; George Langdon; Henry; Amos; John; Black John; Jon Fuller; American Bill; Perry; Upton; Jessup; Remond; Walker; Gabe; Punch; Polly; Ally; Rachel; Mary Ann; Isabel; Nancy; AnnMarie; Victorine; Clare; Grace; Mary; Boby; Lucey; Milley;illegible; Silbey; Rosine; Dolly; Fanny; Hanny; Muckey; Mary Ann; Caroline; Rickey; Nancy; Lucey; Amanda; Louise; Susan; Lucy; Sibricy; Jeneh; Eliza; Malriney; Lindey; Lied;Hipolian; Poladne; Hannah; Jacob; Pierre; Denis; Joe; Susan; Molinda; Gabriel; Philip Patience; Viriginia; Harrison; illeg.; Jean; Ellick; Cozy; Little Claire; Mary; Jean Louis; Charity; Henry; Stephen; Jonke; illegible ; and 7 unnamed individuals | 1838 |

Owner
J. Patrick

Moceriu, Mrs. Adelina
rt; Jim;
Arthimis; Caroline; Martha; Routhe; Louisa; Marie illegible; Remi; Celestin; and
plantation, land, and the following individuals: Pollo; Isaac; Prince; Rebecca; Prescilla; Scipio; Daniel; Will; Harotinus ; Phillis; Anclia or Amelia; Rushwood; Mary; Emma; Suc; George; Caesar; Michel; Rose; Kate; Henry; John Baptiste; ; Stephen, Buck, Paulina, Sam, Dick; Robon or Rober, Milon, Cyntia; Susan, Henry; John Trusbee, Hannah, Big George; Mary; Laurear or Laurent Martn, Rosella, Harry, Presilia, Lucy, Lewis, Michel, Adele, Julienne, John, Big Mary; Delia; Madelaine; Virginia; Gustine; Lyman; William; Paulin; Mary Tom Cecilia; unnamed individual; Hard Times; Victoria; Symoora; Mary Jane

Moore, Philip M. and
plantation and the following individuals: Dick; Daniel; Joe; Esan; Thirence; Bazi Prince, Milly; Arsene; Hannah; Lewis; Germain; Abesse; Mathilde; Felicity or Prince; Charlotte; Amelia; Azilia; Etienne; Fanny; Frivoh; Old Hannah; Ponpon Celia; Sarrah; Zaire or Rachel; Theresa; Milto
plantation and the following individuals: Archer; Y. Case; Peter; George Walden; Isaac; Solomon; Henry illegible; Hypolite; Jean Pierre; Javier; Jean Baptiste John; Black John; Jon Fuller; American Bill; Perry; Upton; Jessup; Remond; Walker; Gabe; Punch; Polly; Ally; Rachel; Mary Ann; Isabel; Nancy; AnnMarie; Victorine; Clare; Grace; Mary; Boby; Lucey; Milley; illegible; Silbey; Rosine; Dolly; , Manny, Muckey, Mary Ann; Carolne, Rickey, Nancy, Lucey, Amanda Louise; Susan; Lucy; Sibricy; Jeneh; Eliza; Malriney; Lindey; Lied;Hipolian Patience; Viriginia; Harrison; illeg.; Jean; Ellick; Cozy; Little Claire; Mary; Jean Louis; Charity; Henry; Stephen; Jonke; illegible; and 7 unnamed individuals

## Dates

1860

Pointe Coupee Parish, Legal and Conventional Mortgage Book C, p. 753, 1838/05/31

|  | Mortgaged Collateral |  |  |
| :---: | :---: | :---: | :---: |
| Simmes, Bennett and Mary Jones Kirk | plantations, land, and the following individuals: Godfrey; Drady; Flora; Ted; Lewis; Godfrey Jr.; Cross; Marth; Pierce; Ignatius; James; Richmond; Daniel; Mary Ann; Sciania; Betty; Moses; Sarah; Lucinda; Claim and his wife Suzan; Aleck; Ann; Cliam Jr.; John; Menia; Lely; George; Lucy; Ellis; Joe; Harriet; Robert; Christian; Julia; Mary Turner; Mary Brown; John; Rebecca; Madison; Lewis; Rose; Chapman; Tracy; Joe; Cora; Agnes; Amanda; Dennis; Rachel; Marthas; Mary Ann; Eugene; Marceline; Norwood and his wife Brund; Henry; Martin and his wife Doly; Dick; Rosaline; Albert; William; Martha; Destin (alias Adestin); Field; Paul; Mary; Robert; Charlotte; Ben; Wamson; Sarah Ann; Billy; Ellen |  | Tulane University, Citizens Bank Minute Book No. 8: 1857/09/28; Citizens Bank of Louisiana Papers, 1834-1914, Folder 5; Pointe Coupee Parish, Legal and Conventional Mortgage Book G, p. 291, 1857/10/07 |
| Smith, Montgomery | land and the following individuals: Gilbert; Randall; Kielen; Lorenzo; Little Randall; Maria; Ann; Eliza; Ellen | ; 1837-1839 | Tulane University, Citizens Bank Minute Book No. 2: 1837/05/17, 1839/03/12,1837/11/16; Pointe Coupee Parish, Legal and Conventional Mortgage Book C, No. 628, 1837/05/29; No. 662, 1837/12/13; No. 799, 1838/08/20 |
| Sorid, Eugenia M. | plantation and the following individuals: Abram; Allen; Bob; Coleman; Dave; Elleck; Frank; George; Henry; Jack M; Lakel; Moses; Nace; Richmond; Sandy; Aggy; Chancey; Dianah; Elisa; Sarah; Virginia; Caroline; Elsey; Cynthia Ann; Noah; William; Winny; Lucinda; Chancy; Christine; Isabella; Mathilda; Mary Ann; Roderick; Bob; Cuffy; Lydia | 1859 | Pointe Coupee Parish, Legal and Conventional Mortgage Book H, \#50, p. 24, 1859/12/08 |
| Taylor, William and Lucy | plantation and the following individuals: Eliza; Taylor; Davis; Troy; Nancy; Parrot; Letitia; infant; Richard; Siby; Mary Ann; Nancy; Jane; Lucinda; Winney; Tom, cook; Jenny; Francis Black; Matilda Taylor; Tom Black; Susan; Loyd; Joe; Peggy; James; Jack; Mars; Betty; Stephen; Sina; Sophy; Judy; Anthony; Luke; Gins; William; Henry; Mary; Sarah; Parris Black; James; John; Willis; Sanny; illegible; illegible | 1838 | Pointe Coupee Parish, Legal and Conventional Mortgage Book C, No. 693, 1838/02/15 |
| Williams, Henry A.; John and Robert Boyd | plantation at Bayou Letsworth and the following individuals: Henry; Hannah; Adam; Francis; Ben; Washington; Adam; Letty; Biddy; Harriet and her child Louis; Ely; Polly; Judy and her child Mary; Emily and her child Eliza; Joe; Letitia; Joe; Lamb; Randall; Nancy and her child John; Davy; Jenny and her child Louisa; Mathilda; Frank | 1830-1853 | Tulane University, Citizens Bank Minute Book No. 6: 1850/07/15; Citizens Bank Minute Book No. 7: 1853/05/19; Ascension Parish, Mortgage Book 6, p.428, 1838/03; Pointe Coupee Parish, Legal and Conventional Mortgage Book C, No. 694, 1838/02/26, No. 784, 1838/07/18; Legal and Conventional Mortgage Book E, p. 376, 1850/08/12 |


| Owner | Mortgaged Collateral | Date |
| :---: | :---: | :---: |
| Rapides Parish |  |  |
| Archinaud, Cesar | plantation and 47 unnamed individuals | 1838 |
| Archinaud, E. | Joseph Gale; James Johnson; William McClain; Hannah Bell; Ann; Young Dave; Young Henry; Young Harriet; George | 1860 |
| Archinaud, Francois | land and unnamed individuals | 1839 |
| Archinaud, Richmond and Evariste | the following individuals: Seipio; Peter; Joe; Marck; Charles; Henry; Dick; Thomas; Ellick; Wilson; Tom; Edward; George; Oliver; James; Noah; Jerry; Jamen; Joseph; Lucy; Grace; Judith; Isabel; Louisa; Minda; Selvey; Harriet; Nelly; Anny; Naney; Annette; Jude; Martha; Mary; Hannah; Rose; and Louisa | 1838 |
| Gasseau, Mrs. J. B. | plantation and 19 unnamed individuals | 1853 |
| Gill, A.B and W. H. | plantation and unnamed individuals | 1843 |
| Ryan, Michael | plantation and unnamed individuals | 1858 |
| Sullivan, J. B. | plantation and 108 unnamed individuals | 1859 |
| St. Bernard Parish |  |  |
| Allard, G. N.; E. Durrim | unnamed individuals | 1834 |
| Beauregard, L. F. | unnamed individuals | 1834 |
| Bienvenu, Antione | unnamed individuals | 1834 |
| Bienvenue, L. | plantation and 16 individuals, including the following: Peter; Euphsosine; Alistine and her daughter Angel; Angel's daughter Laudine; Dilli; Mark; Charles Banks; Peter Lasker; Joshua; Sophie | 1834 |

## Rapides Parish

Archinaud, Richmond the following individuals: Seipio; Peter; Joe; Marck; Charles; Henry; Dick; Thomas; Ellick; Wilson; Tom; Edward; George; Oliver; James; Noah; Jerry; Jamen; Joseph; Lucy; Grace; Judith; Isabel; Louisa; Minda; Selvey; Harriet; Nelly; Anny; Naney; Annette; Jude; Martha; Mary; Hannah; Rose; and Louisa
plantation and 19 unnamed individuals
Gill, A.B and W. H. plantation and unnamed individuals

St. Bernard Parish
1834-1837 Tulane University, Citizens Bank Minute Book No. 1834/08/29; Citizens Bank Minute Book No. 2 : 1837/08/03

1834 Tulane University, Citizens Bank Minute Book No. 1 1834/07/22

Tulane University, Citizens Bank Minute Book No. 1 : 1834/10/20

1834-1856 Tulane University, Citizens Bank Minute Book No. 1 1834/09/20; Citizens Bank Minute Book No. 8:
1856/11/04; M-1847, Citizens Bank Mortgage Book

## Dates Source

1838-1848 Tulane University, Citizens Bank Minute Book No. 2 1839/03/21, 1838/11/08; M-1847, Citizens Bank Mortgage Book
Tulane University, Citizens Bank Minute Book No. 8 1860/12/27

Tulane University, Citizens Bank Minute Book No. 2 1839/03/21

Tulane Univeristy, Citizens Bank Papers, Folder 5, 1838/02/24

Tulane University, Citizens Bank Minute Book No. 7: 1853/04/07

Tulane University, Citizens Bank Minute Book No. 1 1835/03/27; Citizens Bank Minute Book No. 5 : 1843/01/28, 1843/08/19

1858-1861 Tulane University, Citizens Bank Minute Book No. 8 1858/07/01, 1861/02/11

Tulane University, Citizens Bank Minute Book No. 8 : 1859/01/27

| Owner | Mortgaged Collateral |
| :---: | :---: |
| Canaby-Peyroux, Aime | plantation and unnamed individuals |
| Darcantel, Charles and | 22 individuals including: Joe; Petit Joe; Joseph; Severin; Ovide; Henry; Alfred; |
| Fred E. Roy | Charlotte Creole; Rosn; Laurette |
| Darcantel, Henry | unnamed individuals |
| DesBouchel, Victor | unnamed individuals |
| Ducros, L. and J. | plantation and 22 individuals near Bayou Boeuf including: Lonnie; Mary; Caty; Amis; William; Jesse |
| Freme, B | unnamed individuals |
| Heligsbury, S. G. | land and unnamed individuals |
| Hiligsberg, J. | brickyard and 38 unnamed individuals |
| Hiligsberg, L. G. | unnamed individuals |
| Jordan and Reggio | 121 unnamed individuals |
| Jordee, P. | plantation and unnamed individuals |
| Lanquilles, brothers | 7 unnamed individuals |
| Lorrin, illegible | plantation and unnamed individuals |
| Olivier, Eliza | land and 22 unnamed individuals |
| Peyroux, Emile | land and the following individuals: Mathilda; Dorestan; Celestin; Cecile; Isaac Essex; Henry; Isaac |

## Dates Source

1844

1856

1834-1843 Tulane University, Citizens Bank Minute Book No. 1 1834/09/20, Minute Book No. 5: 1843/11/20

1834 Tulane University, Citizens Bank Minute Book No. 1 1834/09/20

1862

1855-1857 Tulane University, Citizens Bank Minute Book No. 7: 1855/02/02, Citizens Bank Minute Book No. 8: 1857/01/30

1834-1842 Tulane University, Citizens Bank Minute Book No. 1 1834/09/20; Citizens Bank Minute Book No. 4: 1842/04/04

1851-1854 Tulane University, Citizens Bank Minute Book No. 6 1851/02/18; Minute Book No. 7: 1854/06/16; Citizens Bank of Louisiana Papers, 1834-1914, Folder 3: 1854/06/29

## Owner

Peyroux, P. Oscar

Peyroux, Sylvain

Reaud, Pierre; V
Reaud
Reggis, Mrs.

Roy, Fred E.

## Mortgaged Collateral

11 individuals, including: Celestine; Marguerite; Felicite; Mirthe; Felicia; Francis; Sophie; Kathy

Dosesthan and other unnamed individuals
plantation and 41 unnamed individuals
10 unnamed individuals including Mary and her unnamed child
land and 12 unnamed individuals

## Dates Source

1834-1853 Tulane University, Citizens Bank Minute Book No. 1: 1834/08/22; Minute Book No. 6: 1846/08/2, 1850/06/18, 1850/06/25; Minute Book No. 7: 1853/11/15
1834-1851 Tulane University, Citizens Bank Minute Book No. 1: 1834/09/20; Citizens Bank Minute Book No. 7: 1851/09/16

1851 Tulane University, Citizens Bank Minute Book No. 6: 1851/01/21

1842-1851 Tulane University, Citizens Bank Minute Book No. 4 : 1842/05/09, Citizens Bank Minute Book No. 7: 1851/11/25
1856
plantation and unnamed individuals, including the following: Charles; Julie; Louis; 1852-1855 Tulane University, Citizens Bank Minute Book No. 7: Louisa; Isabelle; Congo; Henrietta; Polka; Joe; Janvier; John; Sam; Rubin; Peter
plantation and unnamed individuals
1860
Tulane University, Citizens Bank Minute Book No. 8: 1860/02/27

1841-1853 St. James Parish, Book 19, p. 621, 1841/08/19; Tulane University, Citizens Bank Minute Book No. 1 : 1834/09/20; Minute Book No. 5: 1846/03/26; Minute Book No. 6: 1846/10/30; Citizens Bank Minute Book No. 7: 1853/03/10

| Owner | Mortgaged Collateral | Dates | Source |
| :---: | :---: | :---: | :---: |
| St. Charles Parish |  |  |  |
| Bouligny, D. | plantation and the following individuals: Jean Louis; Bernard; Celestin; Bob; Henry; Elizabeth; Mevanthe ; Fanny and her son Albert; Sally; Long John; Bill; Jules; Abraham; Meg; Daniel; John Davis; John Tilewton; Ben; Jacob; Harry; Sam Williams; Bandal; Yellow Harry; Yellow Abraham; Mary; Mary Louise; Louisa; Louise; Zoe Silvie ; Delly ; Linda; Sophie; Adolphe; Cloe; Felouise; Octave; Eugene; Peggy; Joanna; Auguste; Elizabeth; Ainee; Justine; Sarah; Asia; Benard; Louis; Madeline and her child Lucinda | 1859 | St. Charles Parish, Mortage Book 11 p. 37, 1859/03/8 |
| Boussel, Th. | the following individuals: Edmond; Elleelse | 1855 | St. Charles Parish, Mortgage Book 10, p. 77, 1855/04/0 |
| Campbell, Parker | land and the following the following individuals: Jacob; Abram; Archy; Aleck; Black Sam; Bill; Fisher; George; Hepps; Merraday; John; Jordan; Thos Lune; Manuel; Moses; Moses Harris; Major; Matthew; Philip; Phill; Peter; Soloman; Sam; Toby; Talleyrand; William; Washington; Aussie; Caroline; Lisa; Marianne; Nancy; Jodie; Sally; Lalie; Maria; Rachel; Angele; Vincent; Suzanne; John; Milite; Edward; Julianne; Sarah; Pierre; Betsy; James; Richard; Paul | 1859 | Tulane University, Citizens Bank Minute Book No. 8: 1859/02/03; St. Charles Parish, Book B, p. 370, 1859/0/05 |
| Darpy | the following individual: Sarah | 1859 | Tulane University, Citizens Bank Minute Book No. 8: 1859/07/11 |
| Davis, Ezra | plantation and unnamed individuals | 1859 | St. Charles Parish, Mortgage Book 11, p. 68, 1859/11/14 |
| Fortier, Mrs. A. | plantation and unnamed individuals | 1848 | St. Charles Parish, Mortgage Book 7, p. 71, 1848/0/16 |
| Fortis M. A. | land and 10 individuals, including the following: Auguste; Auguste | 1851-1856 | Tulane University, Citizens Bank Minute Book No. 7: 1856/03/14, 1851/12/23 |
| Garcia, Felix | plantation and the following individuals: Bella; Henry | 1847-1850 | St. Charles Parish, Mortgage Book 7 p. 66, 1847/11/13, p. 39, 1847/06/1, p. 40, 1847/0/08; Conveyance Book A, p. 131, 1850/06/05 |

## Owner

Garcia, Felix; Charles,
Theodule, and Elvine Roussel; Julian Vienne

## Mortgaged Collateral

land and the following individuals: Abraham; Bill; Jacob; Peter; Jordan; Madison (alias Marcelle); Capitan Fish; Baptiste; Sam; Philippe; Edmond; Marianne;
Suzanne and her children Jean and Nelly; Rachel and her two children Angile and Victor; Liza (alias Lily); Sully; Caroline; Toby; Talleyrand; Nellie; Nathan; Arthur Field; Sam Carroll; Alexander Jackson; Archer Carroll; George McHenry; Moses Harris; Henry Nazareth; Henry Hews; Betsy Gatewood and her children Marth and James; July Ann Johnson and her unnamed son; Eppse Johnson; Solomon Jones; William Denning; Henry Whetson; Len Thompson; Moses Howell; Rhody Flagg; Major Gillian; John Ashby; Nancy Rivers; Sam Red; Amy; Washington Spencer; Edmund; Allick

| Haydel, Bd. | land and the following individuals: William; Rene; Peter Jean; Jacob; Gran Jean Louis; Edmond; Phanor; Victorise (alias Groton); Sebere; Henrietta; Marie and her three children Julie, Lewis, and Anais; Ursula; Julia; Michael; Laurand (alias Capitain ); Felossese ; Adele; Heloise; Cital ; Adeline; Pierre; Zoe and five unnamed children | 1846 | St. Charles Parish, Mortgage Book 7, p. 84, 1846/08/05 |
| :---: | :---: | :---: | :---: |
| Labranche, Alcee | plantation and the following individuals: Nomme; Bartlett and unnamed individua | 834-1851 | Tulane University, Citizens Bank Minute Book No. 1: 1834/12/26, Minute Book No. 5: 1843/05/24, Minute Book No. 6: 1849/10/30, 1851/06/17; St. Charles Parish, Mortgage Book 9, p. 30, 1851/08/30 |
| Labranche, L. | unnamed individuals | 1834 | Tulane University, Citizens Bank Minute Book No. 1: 1834/07/22 |
| Landreaux, Mrs. H. | unnamed individuals | 1847 | St. Charles Parish, Mortgage Book 7, p. 184, 1847/3/7 |
| Lansaux, Adele Rixner | land and the following individuals: Daniel; John; Anne and her Felonise , Pierre, and Jim; Andrew; Michael | 1860 | St. Charles Parish, Mortgage Book 11, p. 185, 1860/10/31 |
| Logan, Samuel | Eddy and his daughter Patsy; Masin; Sandy | 1849 | Tulane University, Citizens Bank Minute Book No. 6: 1849/06/07; St. Charles Parish,Mortgage Book 9, p. 16, 1851/06/04 |
| Lurupuru, W. A. | plantation and 40 unnamed individuals | 1842 | Tulane University, Citizens Bank Minute Book No. 4: 1842/02/09 |
| Mailes, George | plantation and unnamed individuals | 1860 | Tulane University, Citizens Bank Minute Book No. 7: 1860/04/04 |

## Dates Source

1853
Charles Parish, Mortgage Book 9, p. 111
1853/01/03; Conveyance Book A, p. 174,
1853/01/03;Tulane University, Citizens Bank Minute Book No. 7: 1854/08/18
ulane University, Citizens Bank Minute Book No. 1
 Book No. 6: 1849/10/30, 1851/06/17; St. Charles

Tulane University, Citizens Bank Minute Book No. 1 1847/3/7

St. Charles Parish, Mortgage Book 11, p. 185, 1860/04/04

## Owner

Piscros, Francois H.

Taylor, Lucy Thorn,

Walker, A. W.; J. T. Piseros; Bayles and Victoria Lebranche; Thomas Bisland

## Mortgaged Collateral

plantation and the following individuals: Lewis; Anson; Ben; Colos; Hatani; Laurence; Francois; Gabriel; Hanalin; Charles; Joe; James Green; Jaques; Lazaou; Harry; Henry; Henry Holloway; Abraham; Michael; Alepis; Sandy; Richard; Jean Baptiste; David Livandais; Sawyer; Nat; Moses Holloway; Macke; Andres; Gross Davis; Richard Congo; Hyacinth; Anderson; Pierre; Gros Neilson; Ludolpohi; Baptiste; Hasse; George; Lydia; Helene; Fanny; Judith; Frances;
Petvone; Sally; Sylvie; Louise; Ursula; Polly Classear; Grosse Polly; Charity; Anna;
Trippy; Grosse Anna; Emilie; Jasse; Martha; Maria; Rachel; Paul; Robertson; Joseph; Robess; Francois; Henry; Sesaphine; Antoinette; Emilie; Eugenia; Celestine; Francois; Sally; Suzette
land and the following: Bill; Maria; Ben
plantation and the following individuals: Leurs ; Antoine; Hilaire; Francois; Marcuirie ; Charles; Joe; Jack; Henry; Colad; Richard; Jean Baptiste; Davis Louadais ; Maidsle ; Pierre; Baptiste; George; Paul; Robert; Haul; Little Francois; Bastier; Ursin; Jean; Prosper; Sam; Ledge; Gros Davie; Lazarus; Alex; Andre; Hyancinth; Sally; Julie; Louise; illegible ; Polly; Charity; Anna; Rachel; Jeanne; Martha; Emelie; Celestine; Lydie and her daughters Coralie, Little Lydie, and Justine; Melinda; Job Pranson ; Robert Jackson; Bazile; Gabriel; Ned; John Aime; Isaac; Pierre; Helene; Aaron; Adam; Aduni; Alfred; Anderson; Anthony; Althea; Bartlett; Buck; Burton; Caldo; Chapman; Charles; Christopher; Eliza; Edwin; Eugene; Frank; Gurga Munsford; Giles; Henry; Humphrey; Jacob; Big James; Little James; Jessy; Joe; Big John; John; John C.; Little John; Josiah; Jordan; Joe; Juntum; Gerry; Lundum; Jenny; Manuel; Michael; Ned; Nickerson ; Norman; Patrick; Paul; Phette; Pierre; Solomon; Sam; Sandy; Stanny; Stephen; Sawny; Thurston; Addam; Abey; Candide;Charlotte; Frances; Little Henrietta; Big Big Maria; Little Maria; Marie; Marie Jeanne; Mary; Matilda; Martha; Pilagie; Sally; Sarah; Sylvie; illegible; Ursula; Victoria; Jdee; Susannah; Rachel; Louisa; Toby; Edouard; illegible; William; Sylvie; Zoe; Sissy; Elizabeth; Lidia; Phrasim; Manuel; Beamais; illegible; Aleck; Sarah; Emilie; Elsey; Jeanne Boone; Toby; Harriet; Lydie; Nanny; James; Marie; Sambo; Adam; Eve; Henry; Jean Baptiste; Bastien Francois; Oscar; Hilarie; Sally; Ned; Uriah; Libby; Caroline; Phillip; Susan; Maria Yellow; Frank; Bella; Samson; Venus; William; Linda; Hanes; Beck; Charleston; Lavinia Maria; Dorsey; Hyacinthe; Paul; Annah; Rachel; Sam; Solomon; Maney; Rose; Ursine; Julia

## Dates Source

1838-1853 Tulane University, Citizens Bank Minute Book No. 1 1835/03/27, Citizens Bank Minute Book No. 5: 1843/11/02, Citizens Bank Minute Book No. 7 : 1853/06/23; St. Charles Parish, Mortgage Book 7, p. 14, 1835/04/20

St. Charles Parish, Conveyance Book C p. 189, 1853/04/28; St. Charles Parish, Mortgage Book 11, p. $256,1853 / 04 / 28$

1852-1857 Tulane University, Citizens Bank Minute Book No. 7 1853/06/23, Citizens Bank Minute Book No. 8: 1857/04/23,1857/06/01; St. Charles Parish, Conveyance Book A, p. 203, 1853/07/15, p. 148, 1852/09/01; Conveyance Book B, p. 263, 1856/02/20; Mortgage Book 9, p. 161, 1853/07/15

## Owner

## St. Helena Parish

## St. James Parish

Leon and Arthemise Bergeron

Mortgaged Collateral

Kemp, Demcy<br>land and the following individuals: William; Samuel; Henry; Anthony; George; Lewis; Thomas; Richmond; Albert; Harry; Hannah; Rose; Sophia; Sarah; Sam; Delphy; Debly; Mary; Priscilla; Kizzy; Martha; Charles; Ephraim; Anderson; Manda Israel; Charlotte; Adaline; Benjamin; Frank; Susan; Norrell; Jacob; Dennes1838

Aime, Valcour and Josephine Roman; Valerin Choppin
the following individuals: Grand Augustin; Charles Creole; Ben; Celestin; Julien; Gabriel; Kito; Tom; Lewis; Plato; Manuel; Petit Augustin; Auguste; Gros John; Jack; Sibra; Gros Jim; Georges Murray; Petit Jim; Charlot; Davis; Frank; John Cochen; Benjamin; Ned; Matt; Louis Davy; Jerry; Watson; Jaret; Henry; Adams; Jeorg Taylor; Gim Sim; Harrison; Charles Martail; Ben Lunette; Gros Louis; Petion; Nielisse; Theodule; Adolphe; Frontise; Rosette; William Cordounier; Baptiste; Susanne and two children; Poyon and Noel; Grande Isabelle; Magdeline Eulalie; Maraya and her child Juliette; Syhrie; Ketty; Dianah; Mathilde; Virqinie Marie; Henriette; Becky and an unnamed infant; Celeste and her three children Pierre, Celestine, and Antonine; Fanchennette and two children Eugine and Sally;Charite and her four children Francois, Cressey, Jasmin, and Jauir; Catharine and her two children Joseph and Cateau; Kesier; Heddy and her two children William and Bastin; Amiee; Nancy; Melicere; Liza; Francoise (La Grosse) and her two children Alexandre and Ceriasse; Euragie; Souky; Betsey; Juliette; Becky; Bony; Kety; Gilblas;Angelique and her unnamed infant; Francoise (Petit); Annette; Pichon; Gineriere; Kedy; Andre; Valere; Francis; Lubin; Sanape; Papillon; Charles; Mercure; Casimir; Marlborough; Cartonch; Smith; Hector; Piram; Cupidon; Jupiter; Ajax; Radamanthe; Polleux; Achille; Agobar; Baptiste; Toussaint; Rosette; Venus; Jeannette; Fanchon; Clotho; Mani; Hemide; Penelope; Martha; Zabllle; Marinette; Abenite; Jeanie; Hibe; Hyacinthe; Cephale; Tounsered; Annah

Arceneaux, Joseph
plantation and the following individuals: Lindor; John; Ned; Naripe ; Henry; Liza;
Mary; Seraphine; Celeste; Adam; Laurette; Jean Baptiste; Martha; Gregoire


Dates
$\square$
Citizens Bank of Louisiana Papers, 1834-1914 Folder 2, 1838/04/14

St. James Parish, Book 15, p. 444, 1836/09/03, p. 464, 1836/11/03; Book 16, p. 43, 1836/12/28, p. 384, 1837/08/22, Book 17, p. 352, 1838/07/18, Book 17, p. 377, 1838/08/01; Book 28, p. 199, 1849/10/11; Book 27, p. 117, 1850/04/12; Tulane University, Citizens Bank Minute Book No. 2: 1838/03/14, 1838/03/27; Citizens Bank Minute Book No. 8: 1860/05/28

St. James Parish, Book 16, p. 363, 1837/0727

## Owner

Armant, Family

Armant, Jean Baptiste and Rose Carmelite Cantrelle

## Mortgaged Collateral

the following individuals: Pompii; Charles; Robin; Flasian, Angelique; Agnes and her unnamed children; Clara; Isabelle; Caeraean; Ned; and unnamed individuals

Dates Source
1860

St. James Parish, Book 34, p. 193, 1860/02/27
plantation and the following individuals: Bambara; Camire; Baptiste; Pierre Sond; 1834-1840 St. James Parish, Book 13, p. 705, 1834/08/19, p. Tom Congo; Zamor; Michel; Lubin; Louis Congo; Adams; Jean Congo; Sharlot; David; Michian; Souvenir; William Petit; Alexis; Valere; Peter; Issac; Hector; Samson; Politho; Tom; Louis Mina; William Jackson; Alexis Cadcein; Leveille; Casmir; Toussaint; Petit Jean; Celestin; Cango; Jaco; Francois Calotte; Primus; Veiux Isaac; Abraham; David Miller; William Iman; Daniel; Billy Buck; Ben Watson; Moses; Martin; Dicke; Michel Jeune; Memphis; Michel Cadein; Gros Sam; Jack Boucher; Robertson; David Braman; James O'Neill; Laray; Jack Plaquemine; Demi; Philippe; Petit Abraham;Will; James; Cilus; Humphrey; Smart; Basil; Francis; Sylvester; Mulatre; Gabriel; Mani Therese; Mandialle; Victoria; Helena; Marianne; Hennan Congo; Thebe; Francoise Macom; Rosette; Maria; Fanny; Sissley; Hennan Mina; Hannah Congo; Hannah Virginie; Emilie; Pesine; Terzile; Nancy; Sally; Julee; Nanny; Franqui; Sally Valerie; Nanny Omphrey; Marguerite Denis; Charite; Nelly; Petite Rosette; July; Becky; Sophie; George; Agnes; Jeanne; Marianne; Lisc; Pierre; Alzire; Emile; Arthemise; Stephen; Pelagie; Elizabeth; Mars; Michau; Gabriel; Aspasie; Honore; Anderson; Cyprien; Drausin; Louis; Joseph

Armant, Jean Seraphin plantation and the following individuals: Randall; Ketto; Ben; Richard; Scipio; Little and Louise Amelie Fuselier

Armant, Mrs.

Bergeron, G.

Bob; Sam; Elisa; Eliza and her son John; Lucy; Charite; Took; Diana and her daughter Betsey; Robert; Saphy; Will; Bob; Fouland; Jim; Claris; Valentine; Sarah; Maria; Melierte; Eugine; Bob Chartant; Sambo; Jerphy; Jack; Victoire; Lubin, Nuriea; Eustache; Joseph Boulanger; Joseph; Francois; Francis; Henry; Figaro; Jose; Noel; Tom; Janveir; Nancy; Jane and her two children Nancy and Marceline; Sylvain; Louis; Valentin; Henrietta; Betsey; Marie Louise; Henriette and her three unnamed children land and 41 unnamed individuals.

1836-1847
Tulane University, Citizens Bank Papers, Folder 1838/12/17; Citizens Bank Minute Book No. 2: 1837/05/17, 1837/05/27, 1840/01/03; St. James Parish, Book 15, p. 422, 1836/07/27, p. 429, 1836/08/06; Book 16, p. 313, 1837/07/03, p. 371, 1837/07/22; Book 17, p. 439, 1838/12/12, p. 447, 1838/12/17; Book 18, p. 623, 1840/08/17, p. 660, 1840/09/01; Book 19, p. 366, 1840/12/19; Book 25, p. 271, 1847/08/18

1838-1848 Tulane University, Citizens Bank Papers, Folder 2, 1838/12/17, Citizens Bank Minute Book No. 4: 1842/02/19; M-1847, Citizens Bank Mortgage Book
c. 1848 Tulane University, M-1847, Citizens Bank Mortgage Book

## Owner

Bergeron, Michel and
Constance Bergeron

## Mortgaged Collateral

plantation and the following individuals: Squire; Ben; Francois; Augustin; Simon; Michel; Louis; Pierrot; Joseph; Jean Baptiste; Cyprien; Jean Louis; Francois; Ben; Leveille; Augustin; Simon; Louis; Samson; Esquire; Andre; Augustin; Justine; Delphine; Henrietta; Manette; Elionsore ; Celeste; Marguerite; Julie; Hypolite; Zenon; Syhre; Edmond; Ophelia; Poupone; Angelina; Syhain; Adile; Millin; Etienne; Rock; Dick; Unin ; Jacques; Palsey; William; Allin; Baptiste; Grand Jean Louis; Catherine; Victorin; Victorine
Bergram, Mr.
Bienvenu, L.
Blouin, Evariste and Denise Arcenaux

Butler, Caroline

Cantrelle, Joseph
Xavier and Louise
Dejean
plantation and 23 unnamed individuals
plantation, land, and the following individuals: Becky; Sarah; Lucy; Manette; Nelly; 1835
Raymond; Philippe; Bazile; Marie Jeanne; Jean Baptiste; Paulin; Marie Louise
the following individuals: Randall; Eliza and her eight children Francis, Emily; Caroline, Cezar, Henry, Fonty, Lucy, and Robert; Saul; Winney her six children Wyatt, Bedford, Leroy, Davy, William, and Patsy, and Patsy's two children Jerry and Nelly; York; Peter; Archibald; Sam; Hannah and her five children Jones, Pleasant, Miles, and Letty; Maria
plantation and the following individuals: Justin; Nanciser; Francois; Louis; Andre; Dick; Charles; Bill; Billy; William; Adams; Ferdinand; Joe; Jean Baptiste; Eugene; William; Rose and her son Valsin; Jane; Maria; Euphrosine; Nancy and her child Francisque; Phoebe; Louise

## Dates Source

1834-1847 Tulane University, Citizens Bank Minute Book No. 1 1834/08/22; Citizens Bank Minute Book No. 6: 1847/03/25; St. James Parish, Book 13, p. 768 1834/10/10; Book 16, p. 352, 1837/07/26, p. 420 , 1837/08/30; Book 17, p. 321, 1838/06/22; p. 335, 1838/06/26; Book 18, p. 367, 1839/12/30

Tulane University, Citizens Bank Minute Book No. 2 1837/07/15

Tulane University, Citizens Bank Minute Book No. 8 1859/12/22

Tulane University, Citizens Bank Minute Book No. 1 1835/02/20; St. James Parish, Book 14, p. 113, 1835/04/09; p. 203, 1835/04/28

St. James Parish, Book 21, p. 118, 1844/07/26; p. 123, 1844/07/30, p. 189, 1844/08/06;Tulane University, Citizens Bank Minute Book No. 5: 1844/07/30

1834-1844 Tulane University, Citizens Bank Minute Book No. 1: 1834/08/07; St. James Parish, Book 13, p, 690, 1834/08/13, p. 731, 1834/08/20; Book 21, p. 128, 1844/08/03, p. 131, 1844/08/03

St. James Parish, Book 16, p. 473, 1837/12/12
Champagne, Evariste
plantation and the following individuals: Galsin ; Louis; Justin; Francois; Jean Pierre; Marianne; Charlotte
plantation, land, and the following individuals: Anachreon; Thomas; Sunday; John; 1834-1844 St. James Parish, Book 13, p. 736, 1834/09/10, p. Isaac; Gabriel; Adelle; Marie; Charlotte; Aima; Maria; Etienne; Gustave; Flore; Victorie; Zoe; Pauline; Lise

Croizet, Suzanne

748, 1834/09/18; St. James Parish, Book 21, p.
150, 1844/08/24, Book 21, p. 148, 1844/08/24
St. James Parish, Book 16, p. 100, 1837/03/21; St. James Parish, Book 16, p. 131, 1837/03/27
plantation and the following individuals: Janvier; Jim; Pierre; Benard; Jean Baptiste; Lausen; Chapio; Henry; Francoise; Clarisse; Tenerieve

| Owner | Mortgaged Collateral |
| :---: | :---: |
| Delogny Jr., Edouard | plantation and the following individuals: George; Thom Zuce; Joe Congo; Amos; |
| Robin and Caroline | Ben; Ambrose; Stepney; Oliver; Salomon; Bob Osburn; Willis; Martin; Walker; |
| Trudeau | Morris; John; Warrick; Joe Walker; Lubin; Felix; Davy; Sam; Remy; Chricopher; Washington; Charles; Tom Levox; Louis; Faro; George Congo; Bob; Manette; Venus; Maria; Betsey; Adelaide; Marie Tuseau; Catherine; Agathe; Charlotte; Annah; Eleonire; Cesaire; Rachel; Mary; Victorine; Thelma; Mary Davis; Adelaine; Effie; Victor; Louis; Celestine; Frana's; Manette; Alexandre; Jonny; Dolly; Celestin; Maurice; Harry; Gordon; Tom; Jessy; Peter; Henry; Charles; Duncan; Alerte; Chamblain; George; John Tureaud; Benjamin; Charles; Jay'ou; Premier; Marie Lucuie; Lulie; Fanny; Maria; Esther; Clessyde; Susanne; Elizabeth; Adelaide; Nannie; Toussine; Eulalie; Millicente; Ronni; Pauly; Eilbert; Bernard; Augustine; Eleonore; Irma; Molly; Eliza; Nancy; Jims |
| Donaldson, Edward | land and 43 unnamed individuals |
| Duplantier, Armant; | plantation and the following individuals: Azor; Arlequin; William; Pacane; Nick; |
| Edouard and Charles | Mimi; Coto; Phil; Harmstead; Paul; Andre; Emond; William; Brack; Celestin; |
| Fortin; Celeste Parent; | Commondore; Tom yellowbelly; George; Billy; Lindor Congo; Caira Borgene; Jean |
| Marie Arsene Fortin; | Pierre; Tamba; Charlos; Adam; George Saly; Louis Betsy; Louis Hita; Nat; |
| Felicie Communy | Eugene; William; Jacques; Noel; George; Antony; Quioter; Baltimore; Isaac; Antony Gloster; James; John Green; Johnson; Petit Billy; Allan; Riss; Willey; Francisque; Catherine; Mary; Julie; Marianne Hilow; Betsey; Canba; Manon; Cleonise; Lucie; Marie-Jeanne; Marianne; Minerve; Polly; Fity; Josephine; Edwilge; Nanette; Frederick; Souris; Florestine;Mathilde; Sally; Adelaule; Vinant; Bernard; Elsy; Bellevere ; Mina; Ketty; Ortere; Michel; Alssed; Jacob; Pelagce; Charles; Francoise; Charlotte; Julis; Francoise Petit |
| Dupresne, Isadore and | land and the following individuals: Louis; Jean Pierre; Valsin; Justin; Charlotte; |
| Adam Champagne; <br> Theodule Tupagnier | Marianno |

## Dates <br> Source

1835 1851/06/17

St. James Parish, Book 14, p. 65, 1835/03/24

Tulane University, Citizens Bank Minute Book No. 6

St. James Parish, Book 16, p. 188, 1837/04/27, p. 202, 1837/05/05; Tulane University, Citizens Bank Minute Book No. 2: 1837/05/13

[^4] 1852/09/13

## Owner

## Mortgaged Collateral

Fabre, Joseph Paul and plantation and the following individuals: Pierre Congo; Henry; Jerry; Eugenie; Amelie Perret Pompee; Baptiste Congo; Charles; Victor; Tousaint; Edmond; Benjamin; Petit George; Lucie; Octave; George anglais; Michel; Amelie and unnamed infant son; Julien; Luckey and her three children Celisitin, Armstead, and Magdeline; William; Alfred; Louisa, Damon; Apollon; Mark; Joseph; Ramien; Philippe; Flora; Hyholite; Jacquah; Tom; Marie and her son Augustin; Louis; Eliza and her three sons Etienne, Zenon, and Germaine; Conacon; Narcisse Hopier; Eugenie; Peter; Drauzine; Henriette and her two children Francisque and Drauzine; Caroline; Erivin; Louis Bourgeois; Diana; Frederic
Gaiennie, Gervais and land and the following individuals: Alexandre; Joly; Alexandre Congo; Jos; Henry; Louis Rene

James
William and Marie
Estelle Dupuis; William
Peter Welham and
Reine Seraphine
Theriot; Catherine
Mariner

Jacob, Ursin and
Eleonore Perret; Celestine Malarcher;
Jean Louis Haudressy and Adelaide Tureaud
$\begin{array}{lll}\text { Gourdin, J. unnamed individuals } & 1835\end{array}$
Hoa, Albert and Pierre plantation and the following individuals: Rose and her three children, Norbert, Denis, and Anais; Henriette; Sophie; Euiele; unnamed child of Jeanne Claiborne; Perry; Singleton; John Lonagere; Tortue ; Petit John, Wiliam Berry

C Charles; Billy; William; Iem; Isaac Forgeron; Auguste; Aimee; Hannah; Marie


Alexandre; Jos Woodlen; Priscille; Fanny; Henriette; Clementine; Marianne; Catherine; Vetcher; Washington; Marguerite; Charles; Priscillane; Marianne; Theresia; Henry; Hillard; David; Gilbert; Moses; John
plantation, land, and the following individuals: Ashly; Charles; Adam; Sandy; Will;
Gasmill; Wyott; John; Butler; Little Charles; Dick; Abraham; Rose; Hannah; Fanny;
Celina; Marguinte ; Sally; Mary; George; Arenu; Emelina; Olora; Jim Boy; Israel; Big Mary; Ann; Jenny; Prince; Henry

Harriette; Hellene; Marie

## Dates Source

1834
Tulane University, Citizens Bank Minute Book No. 1 1834/08/22; St. James Parish, Book 13, p. 786, 1834/10/18; St. James Parish, Book 13. p. 806, 1834/11/11

1842-1843 St. James Parish, Book 20, p. 25, 1842/04/15;
Tulane University, Citizens Bank Minute Book No. 5: 1843/01/28

1837-1839 St. James Parish, Book 16, p. 302, 1837/06/22, p. 340, 1837/07/15; Book 18, p. 173, p. 241, 1839/04/17

## Owner

Johnson, Henry

## Mortgaged Collateral

plantation and the following individuals: Aubry; John; Doctor; Richard; James;
Mitchell; James; Stephen; Anthony; Billy; Milly; Betty; Polly; Nancy; Sarah; Sophy

## Dates <br> Source

1839
1834-1860

St. James Parish, Book 17, p. 243, 1838/05/04, St. James Parish, Book 17, p. 284, 1838/05/12

LeBourgeois, Louis and plantation and the following individuals: Jessy Commandeur; James Cook; Joe; Geo Charpenteir; Azie; Robine; Joseph; Draid; Sassich; David; Mack; Jeffrie Spid; Jeffrie Brunt; Abraham; Toussaint; George Calfer; George Bischan; Goand Daniel; Daniel Walkins; John Jackson; Peter; Kitt; African; Tiet; Adam; Jas NeClace; Valin; Baptiste; Jean Baptiste; James Lacour; James Pagnol; Augustin; Andre; Charles; Azer; Antoine; Toussaint Jeinie; Moliere; Francois; Rachel; Syllia; Adam; Fanny; Washington; Robertson; Lucinda; Eve; Zinon; Marianne; Meley; Olivier;

Leche, Jean and Marie plantation and the following individuals: Sam; Dick; Perry; Scipion; Thelemaque; 1837
plantation and the following individuals: Washington; Peter; Samboll; Cyrus; Jim; Charley; Archy; Cato; Bacchus; Aaron; Mingo; Peter Wig; Henry Isaac; Felix; Henry; Francois; Jackson; Tom Edmonds; Vincent; Oxem; Paul; Sandy; Dick; Joe; Alfred; Isaac; Bill; Jean Baptiste; Brown; Jack; John; Honore; Montgomery; Sylvie; Winey; Vessy; Caroline; Hannah; Maria with three children Euphrosine, Charles, and Rosana; Mary with five children Livina, Mathilde; Marie; Alphonse, and Fanny; Winnie and her daughter Elizabeth; Clara and her three children Louise, Auguste, Jean; Cicey and an unnamed infant son; Amelia; Mary; Susan; Aimee; Charlotte; Alec; Honore; Henry; Daniel; Montgomery; Jackson; Louis; Tom; Levy; James; Clem; Archy; Paul; Alexandre; Axem; Jacky; John; Jerry; Marie Joseph; Sylvie; Winny; Annaka; Byra; Caroline; Sarah; Christine; Charlotte; Aimee; Rose; Anna and her son Tom; Mary and her son Jacob; Vicey; Nincne mulatto; Marie Locure; Maria; Little Louis

Landry, Joseph and plantation and the following individuals: Jackson; Bob; James; Ruban; Peter; Ethelvina

Robert; Cooper; Henry; Moses; Louise; Jane; Marie Louise; Melandy; Agnes Janvier; Leroy; Valevin ; Victoire

Claire; Suzanne; Marie Joseph; Henrietta Scholastique Keller

Celeste; Marie; Victire; Victorine

Tulane University, Citizens Bank of Louisiana Papers, 1834-1914, Folder 4, 1860/04/13; St. James Parish, Book 34, p. 735, 1860/12/03; Tulane University, Citizens Bank Minute Book No. 1: 1834/08/07; St. James Parish, Book 13, p. 696, 1834/08/16; St. James Parish, Book 13, p. 711, 1834/08/20; St. James Parish, Book 21, p. 135, 1844/08/06; St. James Parish, Book 21, p. 137, 1844/08/06
St. James Parish, Book 18, p. 244, 1839/05/29

Tulane University, Citizens Bank Minute Book No. 1 1834/08/07; Citizens Bank Minute Book No. 4: 1842/05/09St. James Parish, Book 13, p. 693, 1834/08/16, p. 712, 1834/08/16; Book 20, p. 94, 1842/05/27

St. James Parish, Book 16; 337, 1837/07/17; p. 347, 1837/07/20

## Owner

Millet, Marguerite

## Mortgaged Collateral

plantation, land, and the following individuals: Lindor; Andre; Amisise; Sylvertre; Jacques Congo; Michel Senegal; Kampe; Gabriel; Francois; Jacques; Antoine; Valentin; Elarcow doi Gaspard ; Agathe Cuineese; Henrietta; Charlotte and her unnamed child; Berthilde and her twin children; Maryann; Jean Louis; Eliza; Suzanne; Rosalee; Celestin; Rosette; Toussin; Jean Baptiste; Octavie; Francoise; Venus
Nicholas, Robert Carter plantation and the following individuals: Albert; Henderson; Armstead; Alleck and John Spear Smith More; Alleck Ellis; Barnaby; Bob; Beverley; Ben Batts; Buck; Austin;Euffy; Godfrey; Harry; Henry Green; Hendry Bedford; Joe Locust; Jesse; Louis Ellis; Louis Brackenridge; Jim Franklin; Nelson; Napper; Peter; Spotswood; Sam Page; Thomas; Winter; Betty; Delphy; Emily; Fanny; Harriet; Judy; Linder; Frances; Louisa; Maria; Mary Eustes; Lucy; Mary Prenie; Nancy Napper; Nelly; Lucky Cole; Sizan; Sarah; Sylva; Eugenice, Winny; Betty Ellis; Eliza; Spencer Powell; Milly; Edward; Syla; Jane; Gracy; Caroline; Succordy; Elmire; Tom Daphny; Bill Patterson; Salomon; Nancy Linder
Ordman, J. B.
Patin, Heirs of Louise
plantation and the following individuals: Leandre; Francois; Gilblas; Lazre; Tobie;

## Dates Source

1835-1845 St. James Parish, Book 14, p. 124, 1835/04/14, p. 140, 1835/04/18; Book 22, p. 58, 1845/04/03, p. 55 1845/04/03; Book 21, p. 118, 1844/07/26, p. 123, 1844/07/30, Book 21, p. 189, 1844/08/06; Tulane University, Citizens Bank Minute Book No. 1: 1837/05/27, Citizens Bank Minute Book No. 2: 1837/07/15, 1838/03/14, 1838/03/27, 1838/11/0

Tulane University, Citizens Bank Minute Book No. 1 1834/08/07

1835-1845 St. James Parish, Book 14, p. 118, 1835/04/11, p. 141, 1835/04/18; Book 20, p. 120, 1842/06/20; Book 21, p. 80, 1844/05/31; Book 22, p. 62, 1845/04/04; p. 60, 1845/04/04 Mandrin; Mars; Pret-a Boire; Airil; Valere; Francis; Lubin; Tanasse; Papillon; Charles; Onusre; Mercuce; Joe; Thomas; Casimir; Malborough; Cartouche; Antoine; Bacchus; Mahomet; Smith; Johnny; Paris; Hector; Pirain; Cupidon; Argus; Jupiter; Ajax; Radamanthe; Pollux; Achille; Lovelace; Thom; Gognon; Agobar; Doho; Ellick; Julian; Baptiste; Martin; Pierre; Toussaint; Jean; Augustine; Theotis; Rosette; Venus; Zaire; Jeannette; Fanchon; Clotho; Marie; Hermide; Servilie; Penelope; Adeline; Suzanne; Mary; Rose; Benedicte; Francoise; Eugenie; Marthe; Zabelle; Marinette; Pallas; Cybelle; Abenile; Jeanne; Hebe; Angelle; Hyacinthe; Celestine; Desiree; Adele; Rosine; Zephyre; Adoeris; Cephale
plantation and the following individuals: Bob; Lee; Bousgagne; Oscar; Davy; Bill; Chelsey; Ness; Tom; Leach; Charlotte; Coley; Millly

## Owner

Roman, Andre Bienvenue and the heirs of Louise Patin

## Mortgaged Collateral

plantation and the following individuals: Charles Green; Scipeon; Sylvestre; Sunday; Sam; Paris; Patrick; Long Tom; Petit Tom; John Bristle; John Scabre; John Insel; Abraham; Dick; Bill; James Parker; Joe Cabre; Charles Vieux; Charles Wagner; Wilson; William; Lodivell; Elias; Walter; Cesar; Bob; Relf; Claiborne; Ness; Honore; Frederic; Isaac; Richard; Joe; Etienne; Mary Sandy; Maria; Anne; Hannah; Kitty; Jane Dick; Harriet; Henrietta; Henny; Eliza and her two children Louisa and an unnamed child; Eliza and three children Eddo, Caroline and Jacob; Nieille Lucie and two children John and Christine; Lucie; Zemire; Lydia; Mary; Rachel; Rosette; Fanny; Alfred; Jane; Diana and her two children Henry and an unnamed child; Fanchette
Roman, Sosthene and Arthemise Landreaux; Jacob Denny, William Hiesonymus, and Webb Ross
plantation and 105 individuals, including the following: Joe Dick; Tom; Sam;
Edward; Zaccharie; Flander; Jean Baptiste; Buck; Jack; Henry; Jolly; Simon; La Fortune; Allain; July; Apollon; Joe Peytavir; Richard; James; Jean Pierre; Fortune; Frank; Isaac; Martin; Alexandre; William; Prenee; Louis; Leandre; Louis; Jean; Noble; Francoise; Nieille Lucie; Marianne; Properpine; Rose; Sylvie; Hobe;

Roman, Victoire

Smith, R. C. and Nicholas
Strong, Jesse

Maime; Sarah; Petit Phillis; Maria; Sally; Jeune Lucy; Louisa; Becky; Megere; Ketty; Little Ann; Henrietta (Jeune); Joannah; Aggay; Julia; Cecile; Charite; Dianah; Mathilda; Bazile; Jacob; Fanny; Babet; Manon; Fiyaro; Marguerite; Jeannette; Agnes; Auguste; Charles; Lubin; Charlotte; Mariette; Brigette; Flore; Leanneton; Thomas; Charles; Bob; Amable; George; Henry; Hutton; David; Alerte; Rubin; Willis; Sephin; Bien Aime; Ismael; Joe Griffe; Blaise; Lubin; Alexandre; Petit Noel; Delcy; Antoinette; Nanette; Grand Phillis; Fanchonnette; Julie; Nanette; Celestine; Ariane; Louise; Sophie; Marguerite; Stephen; John
unnamed individuals
unnamed individuals
plantation and the following individuals: Henry; Nash; Green; David Black; Ben Black; Anthony Black; Noah Black; Nelson Black; Silvia; Winney
plantation and the following individuals: Billy; Judith and her two daughters Hannah and Bazile; Agathe; Gand

## Dates Source

1834-1854 Tulane University, Citizens Bank Minute Book No. 1 1834/08/07, Citizens Bank Minute Book No. 2: 1837/06/19, Citizens Bank Minute Book No. 7 : 1854/12/29; St. James Parish, Book 14, p. 108 1835/04/08, p. 135,1835/04/18; Book 15, p. 442, 1836/09/03; Book 22, p. 65, 1845/04/05, p. 68, 1845/04/05

1835-1857 St. James Parish, Book 14, p. 350, 1835/11/02, p. 358, 1835/11/07; Book 16, p. 169, 1837/04/18, p. 195, 1837/04/28, p. 349, 1837/07/25, p. 375, 1837/07/29; Book 17, p. 170, 1838/04/07, p. 198, 1837/07/29; Book 17, p. 170, 1838/04/07, p.
1838/04/12; Book 18, p. 1, 1839/01/05, p. 29, 1839/01/11; Book 23, p. 114, 1845/11/06, p. 111, 1845/11/5; Tulane University, Citizens Bank Minute Book No. 1: 1837/05/27, Citizens Bank Minute Book No. 2: 1837/07/15, 1838/03/14, 1838/03/27, 1838/11/0; Citizens Bank Minute Book No. 6: 1850/04/09; Citizens Bank Minute Book No. 8: 1857/05/18

Taney, Louis M. and
Marie Cephalie Fabre
$\left.\begin{array}{ll}\begin{array}{l}\text { Owner } \\ \text { Votre, Mrs. George }\end{array} & \begin{array}{l}\text { Mortgaged Collateral } \\ \text { land and unnamed individuals }\end{array} \\ \text { Webre, Georges } & \begin{array}{l}\text { Linder; Agathe; Gabriel; Francis; Jean Louis; Eliza; Toussaint; Octavie; Buthilde; } \\ \text { Adam; Luzann; Rasalin; Citistin; Amisere; Campi; Sylvestre }\end{array} \\ \text { St. John the Baptist }\end{array} \quad \begin{array}{ll}\text { plantation and the following individuals: Brisson; Peter and other unnamed } \\ \text { individuals }\end{array}\right]$

## Dates Source

1842 Tulane University, Citizens Bank Minute Book No. 4: 1842/03/23

1835-1844 Tulane University, Citizens Bank Minute Book No. 1: 1835/03/25; Tulane University, Citizens Bank Minute Book No. 5: 1844/05/31

1838-1846 Tulane University, Citizens Bank Minute Book No. 2 1838/05/04, 1838/09/06, 1838/10/01, Ciitizens Bank Minute Book No. 5: 1843/05/24, 1844/10/04, 1844/10/23, 1846/02/19
C. 1848 Tulane University, M-1847, Citizens Bank Mortgage Book

1852 Tulane University, Citizens Bank Minute Book No. 7: 1852/09/09

1846-1853 St. John the Baptist Parish, Conveyance Book Y, p. 68, 1846; Tulane University; Tulane University Citizens Bank Minute Book No. 4: 1842/06/30; Citizens Bank Minute Book No. 7: 1853/05/05, 1853/05/12, 1853/07/14 1852/05/20

Tulane University, Citizens Bank Minute Book No. 4 1842/01/19

Tulane University, Citizens Bank Minute Book No. 1 : 1834/08/22

## Owner Mortgaged Collateral <br> St. Landry Parish

## Dates Source

Angamarse, Eugene Henri
Chretien, Appolite

Cooke, J. A.

Cooke, Thomas and

Doyle, John

Flaujac, Garrigues;
Chretien, Hippotite
Hill, Dr. George
land and the following individuals: Jim Bell; Moses Hall; Daniel Sharp; Ive Williams; Peter; Jim Carpenter; Andrew; Reuban; Alexander; Lizzy; Eliza; Mary Jane; Beddy; Tom
Denegre, William land and the following individuals: Sam; Peter; Tom; Richard; James Posey; John; 1858 Eugene; Joe; Amanda; Molly; Joe Saul; Nancy; Ninny; Milly; Louisa; Finny; Jane; Beck; Thomas; Willy; Lemuel; George; Flora; Howard; Anthony; Alfred; Alleck; Fanny; Maria; Agnes; Patience; Juliette; Celeste; Manuel; Mary; Charlie; Melinda; Lucinda
plantation and the following individuals: William Brown; Rose; Tom Mumford; Allen 1850-1851 Brown; Jow; Tom; Edmond Sampson; Charles Williams; Peter Camble; Ben Street; Henry Haskins; Jemen Jones; Jack Ludwick; Antoine; Chapman; Ben; Henry; Charles; Phil; Edmond; George; Fanny; Jilly; Angelique; Agathe and her child Hense; Julie; Tilly and her child Henriette; Silvestre; Sethe; Adolphe; Jules child of Tilly Ann; Mary Walker; Lucy Ann; Mareilla; Eliza Ann and her son Ernest; Becky Prior
plantation and unnamed individuals
land and the following individuals: Eliza and her child Charlotte
land and the following individuals: Anthony; Wally; Macuya; Etienne; Jefferson Marguerite; Henriette and her children Terry and Carmelite; Delphine and her child Ceaser; John plantation with the following individuals: Sam; Amanda; Thomas; Willy; Lemuel; George; Peter; Molly; Flora; Howard; Anthony; Poisante; Alfred; Alleck; Fannie; Thom; Nancy; Richard; Maria; Agnes; Patience; Winny; Juliet; Celeste; Manuel; Milly; Mary; Louisa; Charlie; Tinny; Melinda; James Posey; Jane; John; Eugene; Beck; Lucinda; Joe

Tulane University, Citizens Bank Minute Book No. 6 : 1851/02/18; St. Landry Parish, Mortgage Book 5, p.47, 1850/03/22

St. Landry Parish, Conveyance Book IJ-1, p.125, 1837/07/21

1832-1850 St. Landry Parish, Mortgage Book 2, p. 110, 1832/06/11; Conveyance Book IJ-1, p. 137, 1837/09/13; Mortgage Book 5, p. 36, 1850/01/23

1858/08/21, Citizens Bank of Louisiana Papers, 1834-1914, Foldier 5

## Owner

Moore, William

Offult brothers

Overton, John H. and
Patrick H.

Smith, Raphael J.
Smith, Robert E.

## Mortgaged Collateral

land and the following individuals: Asey Sparks; Bon Lucket; Joe Dawsey; James Hawkins; Augustus Speake; Magloire; Milley Lucket and her unnamed child; Marie and her child Laura; Delia; Millie Gage and her child Bob;Elizabeth Lucket
unnamed individuals
land and the following individuals: Virgil; Peter; William; Billy; Amos; Harry; Claiborne; Sterling; Shepherd; Charles; Azores; Peter Jones; Robert; Hector; Joe Lu; Joe Blanks; Beverly; Jeff; Daniel; Soloman; Bob; Bill; Virgil; Mitchell; Becky; Caroline and her children Henry and an unnamed chilld; Tempy with her child David; Rose and her children Bill and Lydia; Betsy and her five children Henderson, Becky, Dan, George, and an unnamed child; Hannah and her two children illegible and Sukey; Phillis and her unnamed child; Rachel and her child Phillis; Patty and her child Phebe; Flora and her unnamed child land and the following individuals: Aaron; Harriet; Henrietta; Sarah Ann; Arthelia

Susan; James; Henry; Nelson; Auguste; Mary; Henriette; Catherine; Louisa an infant girl; Julia; Clarissa

## Dates Source

1837-1838 St. Landry Parish, Conveyance Book IJ-1, p. 188, 1837/04/18, p. 190, 1838/02/24; Tulane University, Citizens Bank Minute Book No. 2: 1838/02/12

Tulane University, Citizens Bank Minute Book No. 1 1835/05/11

St. Landry Conveyance Book IJ-1, p.177, 1838/01/20

St. Landry Conveyance Book IJ-1, p.148, 1837/07/31

St. Landry Conveyance Book IJ-1, p. 137, 1837/06/29

## St. Martin Parish

Amy, Mrs Carmelite land and the following individuals: Jack; Joe; William; Guillaume; Martin; Jean Baptiste; Rose; Darg

Boutelou de St. Aubin, land and the following individuals: Sam; Bessey (alias Ellen); Isaac; Maryann; and 1838 Francois Charles 7 unnamed the following individuals

Boutte, Celeste
land and the following individuals: Louise; Hector or Nelson; Lubin; Zoe; Zenon; Edward ; Alexandre; Petit; Eliza; Victor; Jean Louis

1856-1858 St. Martin Parish, Conveyance Record 26, p. 123, 1858/04/12; St. Martin Parish, Conveyance Record 24, p. 342, 1856/07/03; St. Martin Parish, Conveyance Record 26, p. 59, 1858/11/29
Assumption Parish, Mortgage Record 1831-1835, p. 209, 1838/10/30; Mortgages 1835-1841, p. 128 1837/08/10; Mortgage Book 1834-41, p. 209, 1838/10/18; St. Martin Parish, Conveyance Record 11, p. 11; Tulane University, Citizens Bank Minute Book No. 2: 1838/09/03

St. Martin Parish, Conveyance Record 10, p. 37; p. 307, 1838/03/17, p. 370, 1838/05/29

| Owner | Mortgaged Collateral | Dates | Source |
| :---: | :---: | :---: | :---: |
| Canby, Sarah | the following individuals: Denis; John; Washington; Henry Shy; Mary; Maria; Caroline; Ned Tavis; Godfrey; Kitty Daniel; Little Daniel; Mary Daniel; Martha; Henry Rider; Tesse Rider; Little John Pickett; Sarah Pickett; Ann Rufus; Little Rufus; Edmond Daniel; Martha Daniel; Van Buren Daniel; Martha Tom; Fanny Travis; Charlotte Randolphe; Ann; Henry Kohn; Little John Pickett; Monroe Daniel; Nanncy; Henry; Henry; Peter; Sam; Manuel; Delly | 1840 | St. Martin Parish, Conveyance Record 12, p. 150, 1840/04/30, p. 217, 1840/06/04 |
| Darby, Widow S. M. | plantation and 50 unnamed individuals | 1844 | Tulane University, Citizens Bank Minute Book No. 5: 1844/04/10 |
| DeBlanc, Contance | land and the following individuals: Blaise; Dick; Bob; Dub; Hishem; Henry; George; John; Meartin; Philippe; Nelson; Harry Parker; Lajeunesse; Etienne; Green; charles; Pierre; Harry Hatcher; Sandy; Manuel; Louis; Julia; Francois; Milly; Baptiste; Fanchonnette; Jeanne; Zenon; Ursula; Fanchon; Cloementine; Alixcandre; Julia; Rose; Victoire; Annette; unnamed; Mearia; Jack and Winny; Meary; Varker; Adeline; Patience; Scilly; Marianne | 1844 | St. Martin Parish, Conveyance Record 15, p. 116, no 10565, 1844/06/15 |
| DeBlanc, Desplanet and Marie Francoise Delacroix | land and the following individuals: Charles; Lloyde; Congo; Daniel; Achilles; Alcendor; Symlior; Julien; Francois; Andre; Henry; Levende; Bill; Lewis; Cheri; Robert; George; Cesar; Pierre; Mick; John; Didier; Harry; Jacob; Jean Baptiste; Celestine; Equisthe; Tom; Malvina; Marianne; Magdelaine; Clarisse or Charlotte; Anna; Martha; Mary; July; Emmy; Caty; Pouponnade | 1837-1838 | St. Martin Parish, Conveyance Record 10, p. 202, no 8162, 1837/07/17; Conveyance Record 11, p. 5, no 8329, 1838/07/13 |
| DeBlanc, Louis D. and Marie Constance Labianche | land and the following individuals: Maria; Julie; Catiche; Caty; Betsy; Rierden; James; Dennis; James; Clarisse; Elizanne; Dublin; Nicaud; Violette; Henry Maria's child; James, Maria's child; Dominique Catiche's child | 1838 | St. Martin Parish, Conveyance Record 10, p. 294, no 8239, 1838/03/06 |
| Delacroix, Francois D. | land and the following individuals: Apollon; Louis; Allen; Steven; Henry; Delphine; Sally; Lucy; Adelaide; Felicite; Alexandre; Laurent | 1838 | St. Martin Parish, Conveyance Record 10, p. 303, no 8246, 1838/03/13 |
| Delahoussaye, Octave | land and the following individuals: Dick; Alfred; Thomas; Jim; Isaac; Julie; Edouard; Jolivet; Patsy; Ophelia; Lelia; Marie; Maria; Dickson; Patsy; Sophie; Francisque | 1849 | St. Martin Parish, Conveyance Record 1-D, p. 258, no 92, 1849/10/02 |
| Duclozel, Olivier Pierre and Marie Emeranthe Latiolais | land and the following individuals: Abraham; Doustan; Dick; Norbert; Mentor; Sam; John Bull; Bill; James; Senegal; James; Hilerie; Charles; Samuel; Nellie; Sylvie; Peggy; Zenon; Moses; John; Sam; James; Benn; Belzey; Marie | 1837 | St. Martin Parish, Conveyance Record 10, p. 204, no 8164, 1837/07/21; St. Martin Parish, Conveyance Record 10, p. 206, no 8165, 1837/07/22 |

## Owner

Eyssallenne, Joseph

## Mortgaged Collateral

land and the following individuals: Alexander; Fern; Dick; Thomas; Pem; Alfred; Isaac; Julie; Edouard; Joliet; Clemence; Ophelia; Lelia; Eleanore; Marie; Nelssey; Marie; Dickson; Patcey; Sophie; Francis; Patsy; Grace; Clemence

## Dates Source

1835-1851 St. Martin Parish, Conveyance Record 9, p. 308 no 7761, 1835/06/08; St. Martin Parish, Conveyance Record 14, p. 265 no. 10336, 1843/09/02; St. Martin Parish, Conveyance Record 17, p. 386, no 11565, 1848/07/15; St. Martin Parish, Sheriff Book 2, p. 163, 1849/07/10; Conveyance Record I-D, p. 261, 1849/10/02; St. Martin Parish, Conveyance Record 20, p. 373, no 12565, 1851/12/03; Tulane University, Citizens Bank Minute Book No. 1 1835/05/25, Minute Book No. 6: 1848/05/11

1837-1849 St. Martin Parish, Conveyance Record 10, p. 225, no 8186, 1837/09/16; Conveyance Record 11, p. 135, 1838/11/03; Conveyance Record I-D, p. 259 1849/10/02; Tulane University, Citizens Bank Minute Book No. 2: 1838/03/03; Citizens Bank Minute Book No. 5: 1843/04/29; Citizens Bank Minute Book No. 6: 1849/05/15

St. Martin Parish, Conveyance Record 10, p. 208, no 8168, 1837/08/17

St. Martin Parish, Conveyance Record 14, p. 341 no 10409, 1844/01/02

St. Martin Parish, Conveyance Record 10, p. 265, no 8216, 1838/01/06; Conveyance Record 10, p. 356, no 8292, 1838/05/15

St. Martin Parish, Conveyance Record vol 12, p. 153, no 8760, 1840/05/04

St. Martin Parish, Conveyance Record 11, p. 17, no 8336, 1838/07/29; Conveyance Record 10, p. 365, no 8297, 1838/05/10; East Baton Rouge Parish, Mortgage Book K, p. 15-16, 1838

St. Martin Parish, Conveyance Record 9, p. 178 no 7668, 1834/11/22; Tulane University, Citizens Bank Minute Book No. 1: 1834/10/20

| Owner | Mortgaged Collateral | Dates | Source |
| :---: | :---: | :---: | :---: |
| Marsh, Jonas; John Fitz | plantation and the following individuals: Austin; Alfred ; Joe Small ; Thomas | 1838-1844 | St. Martin Parish, Conveyance Record 10, p. 326, |
| Miller | Monroe; Ben Brown; Phillip; Frank; Peter Jones; George Dodssin; William Jones; Archey Zucker; Billy Quash; Monroe; Jim Henry; Bull Daniel; Henry Jones; Jacob; |  | no 8269, 1838/04/07; Conveyance Record 11, p. 57, no 8361, 1838/09/26; Conveyance Record 12, p. 38, |
|  | Old Levin; Dennis; William White; Bill Freeman; Gilfred; Jackson; Bill; Ruth |  | no 8866, 1840/08/24; Convenyance Re |
|  | Lafayette; George Wallace; Bill; Franklin; John Jackson; Nicholas; Joe Radfield; |  | 15, p. 7 no 10468, 1844/03/08; Conveyance Reco |
|  | Edward; May; Tom William; George Woolfolk; Lassin; Dick; Moses Lafayette; |  | 12, p. 110, no 8733, 1839/03/28; Tulane University, |
|  | Charles Ban; Gemison; Jane; Rachel; Franciliette; Lucky; Sally; Alley; Nancy |  | Citizens Bank Minute Book No. 2: 1838/06/21, <br> 1838/09/3, 1838/09/24 1839/05/09• Citizens Bank |
|  | Brown; Betsey; Judiah; Aveline; Arcenos Jane; Anise; Piggy; Nancy; Mathilde; |  | 1838/09/3, 1838/09/24, 1839/0 |
|  | Fanny; Rachel; Clarissa; Robert; unnamed boy; unnamed girl; George; Suzan; |  | Louisiana Papers, 1834-1914, Foldier 5 |
|  | Geoking; unnamed child; unnamed child; unnamed boy; unnamed boy; unnamed boy; unnamed girl; unnamed boy; Moses; Billy Ferry; Simbury; William; Bill |  |  |
|  | Woolfolk; Gimison; Fanny; Sudia; George; George; child of Nancy; child of Betzey; unnamed child of Sudia; unnamed child of Sudia; Martha E; Henry Davis; Adam; |  |  |
|  | Gilbert; Abraham; Josephine; Catherine; John Baptiste; |  |  |
|  | John Pierre; Kit; Cyrus; July Ann; Tim; Dorcas; John Trevosh; Becky; Nancy; unnamed child; Delphius; Isaac; Charlotte; Sophie; 2 unnamed children; Isaac; Jack; Abbe; Jim; Nelson; Clintot; Sam Cooper; Manuel; Dareas; Julian |  |  |
| Morse, Isaac Edward | land and the following individuals: Courtney; Mary; Maria; Isaac; Laura; Patsy | 1837-1844 | St. Martin Parish, Conveyance Record 16, p. 329, no. 11270, 1837/12/16; St. Martin Parish, Conveyance Record 10, p. 256, no 8209, 1844/07/21 |
| St. Marc Darby, Francois | plantation and the following individuals: Blaise;Lajumesse Martin; Pierre; Philippa; 1838 |  | St. Martin Parish, Conveyance Record 10, p. 351, no 8290, 1838/05/14; St. Martin Parish, Conveyance Record 10, p. 352, no 8291, 1838/05/15 |
|  | Charles; Manuel; Bob; Dick; Isaac Hirhem Harry; Nelson; Sandy; George; Harry |  |  |
|  | Paster Genne; Dal Louis; Adeline; Louis; Jeanne; Bank lanhomille ; Julie; |  |  |
|  | Francois; Ratier ; Sally; Mary; Jack ; Mary; Molly; Baptiste; Amante Marie; Ann; |  |  |
|  | Eustes; Ken; Victoire; Greur ; Paul; John; Rein; Barry Parker; Sherena; Henry |  |  |
|  | Hasher; Samuel; Jacksonnetta; Zenon; Frank; Fanchon; Clementine; Alexandre; |  |  |
|  | Halie; Rose; Annette; unnamed child; Sissy; Maria; Parker; Patience |  |  |
| Voorhies, Cornilius and Marie Cidalise Mouton | the following individuals: Isaac; Charles; Edward; Norbert; Ned; Nelson; Octave; | 1841 | St. Martin Parish, Conveyance Record 10, p. 86, no 9035/ p. 30, no 8995, 1841/06/08; Tulane University, Citizens Bank Minute Book No. 3: 1841/05/06 |
|  | Gustave; Joe; Zany; Sarah; Frederick; Amanda; Henry; Orphelia; Martha; Octavia |  |  |
|  |  |  |  |

Marsh, Jonas; John Fitz plantation and the following individuals: Austin; Alfred ; Joe Small ; Thomas

1838-1844 St. Martin Parish, Conveyance Record 10, p. 326 no 8269, 1838/04/07; Conveyance Record 11, p. 57 no 8361, 1838/09/26; Conveyance Record 12, p. 38 ( 8656, 1840/02/01; Conveyance Record 12, p. no. 8866, 1840/08/24; Convenyance Record 12, p. 110, no 8733, 1839/03/28; Tulane University, Citizens Bank Minute Book No. 2: 1838/06/21, 1838/09/3, 1838/09/24, 1839/05/09; Citizens Ban Minute Book No. 3: 1840/01/11; Citizens Bank of Louisiana Papers, 1834-1914, Foldier 5

University, Citizens Bank Minute Book No. 3 1841/05/06

| Owner | Mortgaged Collateral | Dates | Source |
| :---: | :---: | :---: | :---: |
| St. Mary Parish |  |  |  |
| Brushinn, W. | Billush plantation and 60 unnamed individuals | 1839 | Tulane University, Citizens Bank Minute Book No. 2: 1839/04/04, 1839/04/08 |
| Darby Brothers | plantation and the following individuals: Blaise; Dick; Green; Bob; Pub; Hishem; Henry; George; John; Martin; Charles; Pierre; Philippe; Nelson; Harry Parker; Lajeuness; Etienne; Harry Hatcher; Samly; Manuel; Louis; Julia; Francois; Milly; Baptiste; Fanchonnette; Jeanne; Zinon; Ursula; Fastron; Clementine; Alexandre; Ulalie; Rose; Victoire; Annette; unnamed individual; Maria; Jack; Winny; Mary; Parker; Adelaide; Patunia; Scilly; Mariane; Hannah; Caroline; Renny; unnamed individual |  | St. Mary Parish, Mortgage Book 17, p. 116, 1854/02/06 |
| Fuselius, Gabriel and Jules Mossy | plantation and the following individuals: Jim; Bram; Joe; Peter; Old Jim; Rhody; Dave; Guy; Nancy Joe; Josephine; Joe; Alphons; Jesse; Rosa; Nancy; Joe; Vinat; Willis; Patsy; Thomas; John Henry; Moses; Ben; Louis; Nancy Gorey; Peggy; Kitty Fulton; Edmund; Old Garey; Nelson; Jud; Phillis; Edmund (alias Kid); Sampson; Nancy; Jefferson; Ben Rosiur; Will; Jerry Hunz; Adam; Reiss; Giles; Hellier; John Barnett; Dolly; Frank Joe; Caroline; Sarah Jackson; Albert Collier; Haywood King; Violett Shephard; Phyllis; Aveline; Oliver; three unnamed individuals; Louisa Rogers; Victoria; Patience Gur; Milly; Gilbert; Eliza; William Wilson; John Clark; Dick Duncan; Nancy Donaldson; Bartley; Zenon; George; Billy; Cobb Wright; Charles; Eliza Lou Grant; Jackson; Louisa; Harriett; Hannah; Reubin; Casar Scott; Dick Bowlkes; Fielding | 1855 | Tulane University, Citizens Bank Minute Book No. 7: 1855/01/16; St. Mary Parish, Mortgage Book 18, p. 3, 1855/01/26 |
| Gerbeau, Josephine; Pinckney Bethell | plantation and the following individuals: Edmund; John; George; Charles; Philippe; Celestin; Adelaide; Sam; Louisa; Julia; Western; Rosette; Emma; Francoise; Marianne; Maria; Peggy; Minda; James; Samuel; Cornelia; Celiete alias Pousse; Azelia; Seline; Raphael; Manuel; Nancy; Christin; Jacob; Thomas; John; Harry alias Aimee; Abraham; William; Kerba; Nina; Betsy; Clara |  | St. Mary Parish, Mortgage Book 19, p. 123, 1857/04/08 |


| Owner |  | Dates | Source |
| :---: | :---: | :---: | :---: |
| Huger, John Middleton and Samuel M. Ogden | Cote Blanche plantation and the following individuals: Big Jim; Old Nelly; Washington; Nelly; Armistead; Nicey; Cinthia; Milly; Meclina; Caster; Albert; Rosine; Jefferson; Minerva; Saunders; Ted; Old Harvey; Mangey; Dixon; Edmond; Suzan; Tosch; Violet; Dave; Nelson; Caroline; Emily; Melinda; Toney; Thomas; Elizabeth; Susan; Miria; Menna; Jake; Old Tom; Munroe; Fanny; Tom; Nanny; Courtney; Beckey; John; Stephen; Eliza; Modilla; Meunda; Carey; Harry Boyston; Old Jacob; Nancy; Jack; Isham; Old Major; Major; Alick; Sophy; Old Tom; Billey; Abraham; Minta; Bolly; Edmund; Sam; Peggy; George; Roderick; Harry; Edda; Cretea; Charity; Martha; Pat; Sally; Jim; Betsey; Lucy; Joe; Calvin; Louis; Jackson; Tabby; Andy; Coleman; Dorcas; William; Artemes; Rhody; Amy; Spencer; Leah; Gilbert; Dinah; Barbara; Patience; Nathan; Peyton; Peter; Old Mary; Old Jane; Jane; Old Sarah; Toney; Affy; Patty; Phillis; Molley; Thomas; Chloe; Beck; Aaron; | 1846 | St. Mary Parish, Mortgage Book 12, p. 385, 1846/04/21;Tulane University, Citizens Bank of Louisiana Papers, 1834-1914, Foldier 5 |
|  | Sally; Andrew; Mary Poiney; Dick; Old Hannah; Tony Jack; Jenah; Stephey; Joseph; Rudy; Audez; Daphne; Little Hannah; Littly Patty; Bristol; Ned; Charlotte; June; Sabrina; Philip; Rose; Belmont Jack; Mariah or Murriah; Russ ; Gui ; Venus; Violet; Dorcas; August; William; Jackson; Anthony; Mary; Sophy; Amos; Frank; Racchus; Little Jack |  |  |
| Marsh, John C. | plantation and the following individuals: Peter; Jack; Jim; Gus; Joe; Ned; Sawney; Bill; New Frank; William; Old Frank; Cain; Arcly; Henry; Sabrey; Athena and her children Jake and Betsy; Sarah and her children Elsey and Phill; Suckey and her children John, Mary Ann, Jerry, Margaret, and Peet; Milley and her child Betsy; Little Betsy; Little Maria and her child Little Louisa; Suze; Jane; Louisa; Slyvia and her children Rosalie, Harriet, and John Lous; Sally and her children John, Effy, Mary Ann, and George; Mary and her children Frances, Purvey, and Eveline; Charity; Chloe; Grace; Big Maria and her children Edward and Durand; Hona; Foster; Bob; Gus; Durand; Bill; Little Ned | 1838 | St. Mary Parish, Mortgage Book 1837, p. 195, 1838/03/15 |
| Moore, John | the following individuals: George; George; Sam; Nancy; Rose; Bob; Caroline; Abby; Therese; Howard | 1843 | St. Mary Parish, Mortgage Book 11, p. 260, 1843/06/01 |


| Owner | Mortgaged Collateral | Dates | Source |
| :---: | :---: | :---: | :---: |
| Nicholas, R. C. and B. G. Tenney | sugar plantation on Cote Blanche and the following individuals: Abram; Nelson; | 1837 | Concordia Parish, Mortgage Book J-K, p. 10, 1837/07/11; Tulane University, Citizens Bank of Louisiana Papers, 1834-1914, Folder 1, 1836/02/06 |
|  | Washington; Edmund; John; Tom; Ruben; Amistad; Richmond; James; Henry; Major; Sam; Stephen; Peyton; Big Jim; Monday; Pompey; Poun ; Peter; Big Sam; |  |  |
|  | Charles; Major Thomas; Sanders; Jacob; Jefferson; Dixon; Marion; Harry; Bill |  |  |
|  | Cooper; Tom Cooper; Jacob; Old Ben; Lucy; Molly; Rody ; Susan; Dinah; Liza; |  |  |
|  | Amy ; Milly; Sally; Nelly; Tepi ; Fanny; Violet; Chanty; Caroline; Mary; Tabby; May; |  |  |
|  | Hormld ; Mary; Dave; Tom; Joseph; Andrew; Fred; Venus; Mannory; Edy; Leah; |  |  |
|  | Lyncheu; Amy; Polly; Milly; Susan; Barbery; Nancy; Delly; Caloin; Solomon; |  |  |
|  | Ninnals; Tom; Caroline; Edmund; Sohpy; Minerva; Cotney; Palum; Artamus; Ellen; Emily; Coleman |  |  |
| Nicholas, Robert Carter | Cote Blanche Plantation and the following individuals: Jacob; Little Mayor; | 1837 | Tulane University, Citizens Bank Minute Book No. 2: 1837/06/19; Citizens Bank of Louisiana Papers, 1834-1914, Folder 1, 1836/02/06 ; St. Mary Parish, Conveyance Book F, p. 401, 1845/08/03 |
|  | Stephen; Little Jacob; Nelson; Edmond; Armisted; Monday; Big Harry; |  |  |
|  | Washington; Peyton; John; Young Jon; Big Mayor; Bill; Peter; Fersh; Richmond; |  |  |
|  | Eliza; Tammy; Charity; Caroline; Nelly; Violet; Diana; Tubby; Nancy; Harriett; Nicy; |  |  |
|  | Milly; Lacy; Little Mary; Rhony; Sally; Minty; Saunders; Jefferson; Minerva; |  |  |
|  | Dickson; Harry; Davy; Tom; Naney; Courtney; Eddy; Paully; Susanna; Jacob; |  |  |
|  | Barley; Patrick; Coleman; Frederick; Minerva; Cintly; Molly; Penina; Abraham; |  |  |
|  | Buster; Leah; Vina; Solomon; Joe; Calvin; Martha; Amy; Jane; Edmond; Modilla; |  |  |
|  | Alexander; Handy; Little Tim; Charles; Sorberton; Sophia; Lindy; Elizabeth; Albert; |  |  |
|  | Minerva; Jack; Cerias; Betsy; Thomas; Casey; Tomy; Lewis; Marthon; Rindey; |  |  |
|  | Emily; Artemis; Patrick; Becky; Louisa; Margaret; Sam; George; Peggy; Harold; |  |  |
|  | Willy; Mamah; Jackson; Spencer; Charlotte; Lorean; unnamed individual; Harnby; |  |  |
|  | Robinson; Hisam; Virginia |  |  |
| Pavy, Pierre Joseph | plantation and the following individuals: George; Frederick; Matilda | 1837 | St. Mary Parish, Mortgage Book 9, p. 77, 1837/06/27: Mortgage Book 10, p. 131 , |

## Owner

Tenny, Bernard

## Mortgaged Collateral

Cote Blanche Plantation and the following individuals: Abram; Nelson;
Washington; Edmund; John; Tom; Ruben; Anstead; Richard; James; Henry;
Major; Sam; Stephen; Peyton; Big Jim; Munday; Pompey; Pam; Peter; Big Sam; Charles; Major Thomas; Janaus; Scott; Jefferson; Dixon; Monroe; Harry; Bill Cooper; Sam Cooper; Jacob; Old Ben; Lucy; Milly; Rody; Susan; Dinah; Lize; May; Milly; Sally; Milly; Jesse; Fanny; Violet; Charity; Caroline; Nancy; Tabby; Mary; Honield; Macy; June; Caroline; Edmund; Sophy; Dave; Tom; Joseph; Andrew; Ted; Venus; Mannary; Edy; Leah; Lynchen; Anny; Polly; Milly; Susan; Barbary; Nancy; Dolly; Calvin; Saloman; Moncron; Colney; Palnn; Actanuse; Ellen; Emily; Colmon

Tenny, Bernard and Robert Carter Nicholas

Cote Blanche Plantation and the following individuals: Ben; Jacob; Charles; Luba; 1845
Tom; Little Major; Steven; Little Jacob; Nelson; Big Sam; Edmund; Armstead;
Monday; Big Harry; Washington; Peyton; Big Jim; Reuben; Pomprey; John; Little
Jim; Young Jim; Big Major; Bill; Little Sam; Peter; Joe; Richmond; Eliza; Susan; Fanny; Charity; Caroline; Nelly; Violet; Dina;Tyret; Job; Betsey; Nancy; Hariett; Micey; Nelly; Liney; Little Mary; Rhody; Sully; Big Henry; Minthy; Saunders; Jefferson; Dickerson; Harry; Dave; Tom; Mary; Cortesey; Cury; Polly; Susan; Jacob; Andy; Jarban; Patience; Coleman; Frederick; Minerva; Sidney; Milly; Penina; Carter; Leah; Vina; Solomon; Ive; Callvin; Martha; Amy; Jane; Elinor; Mordilla; Alexander

## St. Tammany Parish

| Baham, Renez | land and the following individuals: Luca; Peter Buck; Charles; Lewis; John; Peter; Jack; Charlotte; Betsey and her unnamed infant; Caroline; Fanny; Catherine; Alexander; George; Pierre; Isaac; Cecile; Sylva |  |
| :---: | :---: | :---: |
| Belargen, David | land and the following individuals: Thurston; Justin; Sam; Nelly and her three children Lewis, Martha, and Joe; Fanny and her three children Rosalie and two unnamed children; Adam; Caleb; Amistad; Daniel; Vina and her two unnamed children | 1843 |
| Cousin, Terrence | land and the following individuals: Clark; Hesspi ; Cynes; Wesley; Sonthy; Caleb; Tom; Jessy; George; Elias ; Lewis; Hector; Old George; Joshua | 83 |

Dates
1837

## Source

Tulane University, Citizens Bank Minute Book No. 2: 1837/06/19; St. Mary Parish, Mortgage Book 9, p. 18, 1837/07/14

St. Mary Parish, Conveyance Record F, p. 372, 1845/05/03

St. Tammany Parish, Mortgage Book 1835-1838 (vol. 63), p. 516, 838/03/18

St. Tammany Parish, Mortgage Book 64, p. 399, 1843/11/07, p. 400, 1843/11/22

St. Tammany Parish, Mortgage Book 1835-1838 (vol. 63), p. 478, 1838/02/01

| Owne |  |
| :---: | :---: |
| Deguy, Mrs. F. V. | brickyard and 16 individuals; including: John Mason, his wife Elve, and their children Mary, Elizabeth, Maria, Helene, and John; Alphonse; Ned Hawkins; Charles Hawkins; Armstead; John Monk; Chidrick; Alfred |
| Dunn, William | plantation and unnamed individuals |
| Felicie, Felicite; <br> Elizabeth Elise De Gru | land and the following individuals: Zacharie; John Mason, his wife Chloe, and their 8 children: Mary, Pita, Ann, Elizabeth, Maria, Helene, John, and unnamed infant; Aaron, his wife Emeline, and their 3 children Fanny, William, and George; Hephonse; Neo Hawkins; Charles Hawkins; Armstead; John Clark; Chedrick; Aeprea |
| Griffin, Hippolyte | Fontainebleau plantation; brickyard; with the following: Nelly; Catiche; Victor; and other unnamed individuals |
| Guesnon, Omer | land and the following individuals: Charles; Henry; Jerry; James; Nick; George; Marseille; Flora; Marguerite |
| Lesassier, Camelite | land and the following individuals: John; Elizabeth and her child Pauline |
| Lewis, John Hampden | land and the following individuals: Tom; Mary; May; Rhina; Moses; Nancy; Frederick; Hannah; Cesar; Bella and her four children Sophia, Lizzy, Phillip, and Lucina; April; Hannah and her three children Isaac, Mary Ann, and Flora; Scott; Daphney and her two children George and David; Big Billy; Old Sue;Londoa; Sue and her four children Silus, Nelly, Primus, and an unnamed infant; Patrick; Amelia; Maurice; Primus |
| Marigny, Bernard | plantation and the following individuals: Big Ben; Charles; Henderson; Big Henry; Garry; illegible; Anthony; Small Henry; William Harper; Peter; illegible; Isaac; Denis; German; Taliba; Thomas; Ronamy; Pilate; Solimon; Harmon; John; Sam; Ephraim; Gilles; Big Fanny; Augustin; Milis; Sandy; Fenton; Diana; Hesly; William; Hetty; Sophie; Lucile; illegible; Grande Marie; Lizal; Fanny Carter; Areline; Lisabeth; illegible ; Jeanne; Adam; John; Nancy; Charlotte; unnamed individual; Mily; Rachel; Jeanne; Caroline; Julienne; Lizal; Lucindy; Martha; Maria; Sarah; Major; Gustave; Annee; Lavina; Celina and her unnamed two children; Anna and her children Francois and Eulahe; Augustin; St. Jean |

## Dates Source

1856-1859 Tulane University, Citizens Bank Minute Book No. 7: 1856/03/07; Citizens Bank Minute Book No. 8: 1859/12/12

Tulane University, Citizens Bank Minute Book No. 4 1841/09/30

1852-1856 St. Tammany Parish, Book B, p. 377, 1856/03/25

1852-1855 Tulane University, Citizens Bank Minute Book No. 7 1852/02/10, 1852/02/17,1855/06/15

834-1851 Tulane University, Citizens Bank Minute Book No. 1 1834/09/20, Citizens Bank Minute Book No. 3 : 1841/03/29, 1841/04/01, 1841/02/17, Citizens Bank Minute Book No. 4: 1842/02/26, 1842/01/19; Citizens Bank Minute Book No. 5: 1845/07/31; Citizens Bank Minute Book No. 6: 1850/11/19; Citizens Bank Minute Book No. 7: 1851/09/16; Citizens Bank of Louisiana Papers, 1834-1914, Folder 3: 1841/07/03

## Owner

Marigny, Bernard

Marigny, Bernand

## Mortgaged Collateral

## Dates

Source
Fontainbleu Plantation and the following individuals: Nestor; Gilbert; Manuel; Ned; 1834-1845 St. Tammany Parish, Book 62 p. 204, 1834/09/06; John; Emery; Tandely; Pierre Bastim; Bazile; Raimond; Morphine; Pierre Jason; Appoton; Wait; Capitaine; Valery; Jasmin; Ned; Hurns; Frederic; Georges; Ned Alix; George; Ponpon ; Pierre; Oreste; Virgile; Lendor; Celestin; Jackson; Lannon; Perry; Tom; Prosper; Davis; Ephraim; Jasmin; James; George; Nelson; Bob; James; Jack; Thomas; Robert; Petite Steven; Cyhrien; Mahomet; Francois; Gedale; BArtholome; George; Jean Baptiste; Davis; Anguste; Bill; Ulysse; Frosine; Leveadie; Adelaide; Coree; Delphine; Amelie; Acanchore; Petite Mary; Margaret; Marie; Marthe; Charlotte; Celie; Gran Jane; Alix; Catiche; Pinba; Petite rachel; Feliece; Anna; Nelly; Patience; Patty; Cesaire; Annah; Mehely; Constance; Amelie; Hannah; Melite; Mary; Marianne; Jane; Rachel; Louisa; Petite Melite; Adeline; Asarine; George; Juliene; Lewis; Vicotr; St. Louis Jean; Amson; Allen; Louis; Manuel; Clemence; Jacques; Rosaline; Mariannette; Celestine; Becky; Violette; Anna; Agnes; Madeline; Genevieve; Elizabeth; Climene; Rachel; Patsy; Mariannette; Bonne; Marguerite; Francoise; Dorant; Clinace and her child; Patrick; Nellzet and her children Marie Noel, Aguoi, and Jaques; Petite Melite; Violette; Allen; Louis; George; Mary Bill; Bill; Israel; Lisa; Aguoi; Julian; St. Louis; Petite Steven; Clement; Valerie Golette; Nelson; Ned Golette; Petite Prosper; Dreste; Gros Valinz; Lucille and child; Aimee Kentucky; Agathe; Matilde; Belisaine; Petite Zenon; Sam; Selina and her two unnamed children; Julienne and her two unnamed children; Poicu; Petite Mary; Abraham
land and the following individuals: Marie Corington; Marie Bill; Bigny; John Magnane; Celestin Mannane; Grande Jeanne; Anna; Jean; Adams; January; Thomas; Proster; Amelie; Reine and her son Cecil; Mary; Acquoi; El-Valentine; Grande Amelie; Lison; Antoinette; Patty; Bill; Bill (alias Belle Carting); Frederick; Pauline; Henderson; Mase; Joe; Pitu; Bon Ami; Ameline; Pinta; Alix; Fanny and her four children Antoine, Eugene, Claire, and an unnamed infant; Blaise; Gilles; Ben; Charles; Augustus; Allen; Remy; Henderson; Grand Olivier; Olivier; Grand Henry; Ephraim; James; Isaac; Garry; Thom; Anthony; Little Henry; William; Peter; Randal; Alli; Manuel; Sandy; Gorman; Brutus; Lubin; Taliba; Augustin; Canphre; Thomas; Michel; Benjamin;Pilate; Soliman; Oudon; Phaeton; Francois; John; Grande Diana; Petite Diana; Martha; Elvy; Agnes; Anny; Luncinda; Polly; Grande Marie; Jenny; Fanny; Susanne; Little Fanny; Charlotte; Little Mary; Rachel; Jeanne; Phoebee; Lucie; Julienne; Sisa; Aime ; William; Sam; Miner; Frank; Elisa; Charles; Fenton; Maria; Denis; and unnamed individual

Book 63 p. 232, 1837/05/12; Book 64 p. 221, 1841/04/28; Book 64 p. 479, 1845/10/28

St. Tammany Parish, Book 64 p. 44, 1839/04/08, p. 149, 1840/03/25; Tulane University, Kuntz Collection no. 600, 1834/11/1, 1836/7/5

## Owner

Marigny, Mrs.; Lebeuf Martial
Merle, John
McQueen, William

Morgan, David B and Mary C.

Parent, Charles

Penn, Alexander Gordon

Strawbridge, George

## Mortgaged Collateral

brickyard with Caroline and her two unnamed children; York; Charles, Lawson, and 40 other unnamed individuals
land and the following individuals: Richmond; Perry; Charlie; Humphrey; Lisbon; Joe; Pleasant; Anderson; Tannely; John; Henry; Davy; Fred; Bill; Bristo; Michel; James; John; Squire; Polley; Polly and her child Sarah; Sarah
plantation and the following individuals: Tom; Lott; Sam; Frederick; Cesar; William; Moses; John; April; Tom; Billy; Benmus ; Sun; William; Moris; Mary; Hannah; Cate and her child Patty; Renah; Patty; Jenny; Daphne; Dilla; Hannah; Nelly; Mecury; Christiana; Little Tom
land on the Black River and the following individuals: Frederick; Sally and her 8 children Agnes, Jordan, Eliza Jane, Richard, Elizabeth, Amelia, Sally, and Matilda Maria and her five children Robert, Jefferson, Edmond, Eliza, and Benjamin; Delysha and her 5 children Tom, Nelson, Jim, Elisa, and Rachel; Nancey; Grace; Louisa and her unnamed child; Yorick; Jim; Thornton; Preston; Sam; Caleb; Armistead; Daniel; Abner; Nelly and her 5 children Lewis, Martin, Jio, Deli, and Claiborne; Fanny and her children Rosalie, Alfred, William, and Alexander; Viney and her children Julia, George, Mahadier, and Charles; Frederick; Tom

## Dates Source

1850-1859 Tulane University, Citizens Bank Minute Book No. 6 1850/04/24; Minute Book No. 7: 1851/11/04, 1852/02/24, 1852/01/21, 1852/03/02, 1852/04/27, 1856/01/07; Citizens Bank Minute Book No. 8: 1859/05/23

1835-1838 Tulane University, Citizens Bank Minute Book No. 2 1838/02/15; St. Tammany Parish, Book 63 p. 442, 1835/10/14; Mortgage Book 64, p. 6, 1838/11/20

1835-1839 St. Tammany Parish, Mortgage Book 62, p. 329, 1835/03/18; Mortgage Book 63, p. 230, 1837/04/13 Mortgage Book 64, p. 79, 1839/08/15

1838-1852 Tulane University, Citizens Bank of Louisiana Papers, 1834-1914, Folder 2: 1838/01/12; Citizens Bank Minute Book No. 5: 1843/11/13; Citizens Bank Minute Book No. 7: 1852/01/06, 1852/04/06, 1852/02/10; St. Tammany Parish, Mortgage Book 63, p. 449, 1837/08/15; St. Tammany Parish, Book A (vol. 65) p. 21, 1847/08/03
land and the following individuals: Edmond; Nace; Griffin; Jacob; Adam; Solomon; 1837-1843 St. Tammany Parish, Mortgage Book 63, p. 346, John; Adam; Charles Whitman; William; Mason; Charles Day; Charles Moon; Nace Sam; Isabella; Charlotte; Emile; Malinda; Cloe; Caroline; Zacharie; Elick; Rob; Emeline; Pauline; Josephine; Maria; Henrietta; Eliza land and the following individuals: Abraham; Levin; Charles; Abbey; Ann; Mary; London; Celina; George; Betsey
brickyard and the following individuals: Joe; Sam; Jerry; Jim Burke; Jacob; Will Burke; Dorsey; Clinton; Norfle; Rose and her 6 children Mary Jane, Green, Soloman, Whitman, Emile, and Stephen; Alexander

1837/07/15, p. 540, 1838/05/08; Mortgage Book 64 р. 396, 1843/11/06

1838-1840 St. Tammany Parish, Mortgage Book 1835-1838 vol. 63), p. 502, 1838; Mortgage Book 1838-1847 (vol. 64). p. 160, 1840/05/02; Tulane University, Citizens Bank Minute Book No. 5: 1843/01/28

1855-1857 Tulane University, Citizens Bank Minute Book No. 7 1855/05/04; St. Tamman Parish, Book B, p. 238, 1855/05/11; Conveyance Book B, p. 446, 1857/05/06

## Owner

Suvis, John S. L.
Webber, Justus H.

## Mortgaged Collateral

plantation and 15 unnamed individuals
brickyard and the following individuals: Underwood; Nancy; Little John (alias Isaac); Nob; Isaac; Jim; Edinboro; Susan; John; Molly; Larry; Priscilla; Sam; Bob

## Dates Source

1842

1852-1853 St. Tammany Parish, Mortgage Book B, p. 10, 1852/10/05, p. 88, 1853/03/09; Tulane University, Citizens Bank Minute Book No. 7: 1853/01/13, 1853/02/17

Tulane University, Citizens Bank Minute Book No. 5: 1846/03/19

Tensas Parish
Butler, Ira; John land
Murdock
Terrebonne Parish

| Barrow, R. | two plantations and 20 unnamed individuals | C. 1848 | Tulane University, M-1847, Citizens Bank Mortgage Book |
| :---: | :---: | :---: | :---: |
| Chandler, Joseph | plantation and the following individuals: Set; George; Lewis; Bill; Rack; Prince; Charles; Doyd; Bean; Ann; Milly; Isabella; Kitty; Lucy; Hannah; Sarah;Rachel; Leon; Henry | 1838 | Terrebonne Parish, Mortgage Book B, Pt. I, Entry 500, 1838/05/28 |
| Gibson, Tobias | plantation and the following individuals: Jacob; Bob; Croxten; Isaac; Harry; Peter; Joe; Terry; Melissa; Barbary; Martha; Frances; Celette; Nancy; Eveline; Cassa; Sally; Henry; Watkins; Andrew; Reuben; Charles; Bennetta | 1838 | Terrebonne Parish, Mortgage Book B, Pt. I, Entry 497, 1838/03/08 |
| Lawless, R. C. | plantation and unnamed individuals | 1857 | Tulane University, Citizens Bank Minute Book No. 8: 1857/08/24 |
| Pierce, Mrs. John | plantation and the following individuals: Billy; Big John; Harry; Figin; Young Billy; George; Jim; Henry; Phillip; Sid; Charles; Eli; George; Stephen; Thomas Jefferson; Robert; Arthur; Sam; Dick; Walter; Eugene; Charles; Tom; Archibald; Howard; Webster; Betsy; Cortney; Betsy John; Milly; Rachel; Mathilda; Margaret; Frances; Rosella; Martha; Patsy; Sarah; Lydia; Maria; Amanda; Harriet; Jane; Virginia; Rebecca; Elizabeth; Ella; Lucy; Cortney; Rachel; Eliza; Cornilia; Nelson; John; Susan | 1855 | Terrebonne Parish, Mortgage Book F, Entry 1836, 1855/04/12; Tulane University, Citizens Bank of Louisiana Papers, 1834-1914, Folder 5: 1835/05/07 |
| Semple, Joseph | plantation and unnamed individuals | 1858 | Tulane University, Citizens Bank Minute Book No. 8: 1858/01/28 |

## Owner

Shaffer, William A.
Shields, R. B.

Woods, William L.

## Mortgaged Collateral

land and the following individuals: Simon; Abram; John; Joseph; Lenard; Lucy; Hanna; Sarah; Sarah Ann; Polly; James
plantation and the following individuals: Ben; Chandler; Jaret; Manson; Taylor; Louisa; Jantie; Charity; Lydia; William; Jack; Leah; Rohina; Mansero; Leri; Parker; Mark; John; Yellow John; Long John; Hannah; Rose; Kitty and her unnamed child; Amanda; Minerva; Sarah; Henry; Letty; Caleb; Sam; Cyrus plantation and the following individuals: John; Harry; Charles; Betsy; Betsy; Milly; Matilda; Rachel; Courtney; Margaret; George; Frances; Martha; Tim; Betsy; Sarah; Dick; Lydi

1838

## Dates Source

Terrebonne Parish, Mortgage Book B Pt. 1, Entry 484, 1837/10/28

Tulane University, M-1847, Citizens Bank Mortgage Book
Tulane University, Citizens Bank Minute Book No. 1: 1834/09/22
Tulane University, Citizens Bank Minute Book No. 8: 1859/05/16
Tulane University, Citizens Bank Minute Book No. 4 1841/05/31

Tulane University, Citizens Bank Minute Book No. 1 1835/11/27
C. 1848 Tulane University, M-1847, Citizens Bank Mortgage Book

| Owner | Mortgaged Collateral |
| :---: | :---: |
| Barrow, Robert H. | Patton plantation and the folllowing individuals: Dick Latimore; Mathilda; George Hallaged; Marshal; Ben; Dan; Celeste; Johan; Esther; Elsey; Rose; Eliza; Deliah; John; Jake Bradford; Mary Johnson; Sarah; Margaret; Emiline; Victoria; Julia; America; Wick; Barthy; Little Joe; Elora; John Latimore; Elizabeth; Old Nancy; Harriet Hunt; Willis; Jane; Arean; Jake Thompson; Philis; Elizabeth Cook; illegible; Louisa; Big Joe; Jenny; Dorcas; Charles Harris; Little Harriet; Isadora; Lyn; Biddy; Edmonia; Hnery; Chancy; Henny Hunt; Letty; Turner; Maria Rust; Little Turner; Celeste; Maria Morris; Arelda; George Sample; Little Mary; Ann; Zena; Joshua; Dicey; Eliza; Dick Young; Little Robert; Bob Riley; Adolphus |
| Beal, Robert | land and 2 unnamed individuals |
| Blanchard, Ziphian | plantation and the following individuals: Joe Brown; Edward; Little Joe; Ben; Pierre; Charles; Valentin; Joseph; Maurice; Politte; Silvain; Tom; Frank; Charles; Plume; Leandre; Brami; Henry; John; Pana; Charlotte; Sally; Dalize; Claire; Louise; Clemence; Marianne; Sally; Silie; Marie; Julienne; Julie; Adiline; Aimee; Sizey |
| Clark, Samuel M. D. | plantation and the following individuals: Wilfird; Lawson; John; Ed; Peter; Sara; Fanny; Martha; Leah; Hannah; Betsey; John; Harriett; Washington; Caroline; Davy; Robert; John; Thomas; Sophia; Lucy; Joe; Dick; Jim; Martin; Dolly and her child Armand; 2 unnamed individuals; Martha; Ellen |
| Devall, James and Emilie Bernard | plantation and the following individuals: Dick; Daniel; Peter; Ralph; Richard; Isaac; Louis; Will; Tony; Fanny; Marianne; Eliza; Dorothee; Henry; Charlotte |
| Dougherty, John | plantation and unnamed individuals |
| Doussan, Joseph Antoine and Lise Patin | plantation and the following individuals: Pierre; William; Fris ; Manette and her two unnamed children |
| Favort, Louis | plantation and the following individuals: Louis; Bob; Jack |
| Favort, P. | land and unnamed individuals |

## Dates Source

1853-1855 Tulane University, Citizens Bank Minute Book No. 7 . 1855/04/15; West Baton Rouge Parish, Mortgage Book U, p. 457,1853/04/17

1837-1849 West Baton Rouge Parish, Mortgage Book M, p. 68 1837/10/21, p. 273, 1838/08/02, Mortgage Book R, p. 98,1849/03/18; Tulane University, Citizens Bank Minute Book No. 2: 1838/06/04

1838-1839 West Baton Rouge Parish, Mortgage Book M, p. 66, 1837/10/19, p. 96, 1838/02/27, Mortgage Book N, p. 173, 1839/04/04
Tulane University, Citizens Bank Minute Book No. 8: 1860/12/17

1836-1837 West Baton Rouge Parish, Mortgage Book L, p. 264, 1836, Mortgage Book M, p. 75, 1837/12/09

West Baton Rouge Parish, Mortgage Book M, p. 84,1838/01/24

West Baton Rouge Parish, Mortgage Book N, p. 27, 1837/07/27

## Owner

## Mortgaged Collateral

Grand-Pre, Etienne; Patin, Mrs. C. and Mrs. F. Allain
plantation and the following individuals: Honore; Noel; Ben; John; Scott;
Hyppollite; Linore; Joseph; Celerie; Rose; Geneviere; illegible and four children illegible ; Melite; John; and Athalie; Aurilie and her child Louisa; Fris; Tina; Mary; Pierre

Hiriart, Sebastian and
Marceline Major
plantation and the following individuals: Baptiste and his wife Marianne; Yellow Dick; Moses; Adonis; Little Sam; Big Sam; Big Dick and his wife Jenny; Cornelius;

Kinchelloe, W.

Landry, A. and P. Verbois
Landry, Joseph

Landry, Ursin William; Richard; Little Tom; Jenkins; Hubers and son Fridon; Nilson; Ephraim; Marshall; Ben; Noe; Little York; Big York; Randan; Daniel; Charles; James Crack; Big John; Big Jesse; Little John; Little Jesse; Salomin; Bob; Esau; Elick; Joshua; Moses Erwin; Dick Plaquemine and his wife Marie Mahere; Big Isaac; Little Isaac and his wife Little Aimee; James Bishop and his wife Lucy; Drayman Tom; Frank; his wife Cassy; and their children Pelagre and Angela; Allen; Jenny and her son Lafayette; Baptiste; Big Abraham and his wife Molly; Jack; Constance and her daughter Chalmette; Pierre; Bebelle; Elick; Ben Borie Plaquemine; Billey Ernest; Nick; Peter; Landry and his wife Letty; Wilson; Lubin and his brother Pierre;
Rachel and her son Achille; Aleyon; Antoine; Barras; Constant; Beverley; Clinton; Petion; Jackson; Francois; Robert; Bob; Benjamin; Simon; Casto; Sarah and her children Eugene and Louise; Caroline
the following individuals: Achille; Abraham; Allen; Ben; Badgio; Dick; Eugene; Frank; Isidor; Isaac; Joshua; Big John; Petit John; Jackson; Jack; Lubin; Lafayette; Marechal; Peter; Old Pierre; Salomon; Sandy; Tom; Wilson; William; York; Angela and her son Bill; Constance and her children Adelia, Rachel, and Cidalise; Chalimette; Clemence; Little Justin; Louise; Old Lucy; Mary Ann; Mary and her children Celestin, Abraham, and Basil; Molly; Pelagia; Rachel; Letty; Harriet and her three children Alia, Patsey, and Mary; Melinda; Anna; Nancy; Cornelia
plantation and 7 unnamed individuals
plantation and the following individuals: David; Nelson; Julienne; Henriette; Julien; 1838 Jean; William
plantation and the following individuals: Jean-Louis; Alick; George; Maria; Eliza; 1838 Marianne; Augustin; Rose; Ben; Elizabeth

## Dates Source

1834-1848 Tulane University, Citizens Bank Minute Book No. 1: 1834/10/13; Minute Book No. 6: 1847/01/11; Wes Baton Rouge Parish, Mortgage Book L, p. 78, 1835/02/28; Mortgage Book O, p. 343; Mortgage Book P, p. 167, 1845/02/19, p. 530, 1848/02/15

1835-1847 Tulane University, Citizens Bank Minute Book No. 1: 1835/11/27, Minute Book No. 5: 1845/05/19, Citizens Bank of Louisiana Papers, 1834-1914 Folder 3, 1847/05/21; West Baton Rouge Parish, Mortgage Book K, p. 271,1836/02/24, Mortgage Book M, p. 493, 1841/06/26, Mortgage Book P, p 220, p. 455, 1845/07/29, Mortgage Book Q, p. 313, 1847/07/26, Mortgage Book S, p. 180,1849/07/28

West Baton Rouge Parish, Mortgage Book R, p 320,1850/07/11, p. 327, 1850/07/26; Tulane University, Citizens Bank Minute Book No. 6: 1850/07/09

West Baton Rouge Parish, Mortgage Book T, p. 312,1854/05/18

West Baton Rouge Parish, Mortgage Book M, p. 91 p. 100, 1838/02/17

West Baton Rouge Parish, Mortgage Book M., p. 120, p. 131, 1838/03/26; Mortgage Book N, p. 109, 1838/07/26

## Owner

Lobdell, John L.

Michel, Jean Pierre

Nolan, John

## Mortgaged Collateral

plantation and the following individuals: Humphrey; Little Nancy; Emma and her children Jean Baptiste and Mary Catherine; Alfred; Maria; Nannette; Peter; Henry; Sercy; Grace; Polly; Frances; Louisa; Martin; Gabriel; Handy; Nancy Sercy; Alexander; Munro; Milly Sercy; Jack; Jeannette; James Munro; Nanette; William; Randell; Sally; Amus; Edmund; Simon; Prince; Albert; Sharlotte; Shadrach; Sarah; John Reed; Jane; Charles; Turner; Jesse; Sally; George; Mathilda; John Monroe; Doctor; Esther; Harriet; Auma; William Dime; Aylsey; Abraham; Andrew; Ellazma; Presilla; Caroline; Isaac Cooper; Joe; Hillary; Little Ben; Flora; Hannah; Jourdan; Ellen; Rina; Dicey; Joycey; Joe Boon; Polly; William Boon; Isam; Emily Rean; Rosanna; Mary Ann; Lucinda; Lavinia; Old Ned; Toby; Lodaiska; Wilson; Terecine; Delphine; Clarice; Molly; Ned; Cemental; Netty; Amelia; Burnettal; Merridy; Indy; Wealthy; Adeline; William Gray; Arinall; Maria; Julia; Virgil; Eveline; Clarissa; James; Christina; Henderson; Lucy; Johny; Emma; Elizabeth; Kitty; Polly Boon; John Monroe; Edmond Harris; Litty; Yellow Joe;
Jacob; William Simom; Wesly; Terrence; Joe Sercy; George; Martha; Gabriel; Eliza Ann; Louisa; Harry; Patsy; Armand; Mernday; Hillary; Walter; Anna Gray; Sandy; Clarisse; Celeste; Jesse; Emily Leon; Margaret; L. Anna; Rosetta Pinace

## Dates Source

1855-1859 Tulane University, Citizens Bank Minute Book No. 7: 1855/06/08; West Baton Rouge Parish, Mortgage Book X, p. 83, 1855/06/15, p. 107, p. 123, p. 776; Tulane University, Kuntz Collection, No. 600, 1858/03/15

| Owner | Mortgaged Collateral | Dates | Source |
| :---: | :---: | :---: | :---: |
| Patin, Victorin and Lise | plantation and the following individuals: Pierre; William; Luci; Manette and her two unnamed children; Baptiste; Etienne; Philippe; Jean Baptiste; Didier; Magloire; Sheratin; Azenor; Theodate; Julien; Venerand; Xavier; Cerenu; Marie; Victorin; Sidey; Annette; Octavin; Fanny; Grand Hadrick; Giles; Jim Hudsun; John; Alexis; Jean Pierre; Isaac; Sam Knox; Jim Grant; Jim Ham; Randal; Hadrick Bank; Phill; Daniel; Sam Brown; Salomon; Coffer; Billy; Charlotte; Marianne; Lea; Maria; Silly; Romaine | 1836-1838 | West Baton Rouge Parish, Mortgage Book K, p. 275, 1836/02/26, p. 335, 1836/07/09; Mortgage Book M, p. 142, 1838/05/11, p. 171, 1838/06/16; Tulane University, Citizens Bank Minute Book No. 6: 1847/01/11 |
| Patrick, Jean | plantation and the following individuals: Cherubin; Azenor; Dave; Baptiste; Henry; Charles; Sam Knox; Sam Brown; James Hudson; James Ham; James Grand; Alexis; Richard; Phillipe; Venerand; Salomon; Giles; Field; Levin; Xavier; Jack; Julien; Coffer; Jean Pierre; John; Billy; Ned; Big Hadrick; Isaac; Etienne; Little Hadrick; Lewis; Daniel; Terence; Annette; Linda; Romaine and her three children Dorval; Lodoiska; and Hippolite; Hortense; Mariah; Rosalie; Lea; Dilet; Nelitto; Octavina and her child Adam; Manette and her child Edward; Marianne) and her child Merovi; Lucie and her child Robert; Mary and her child Patience; Sophie and her child Adonis; Fanny; Victoire; Pouponne; Michael Hortense and her two children Celestine and an unnamed individual; Patience; Virginia; Antonio | 1839 | West Baton Rouge Parish, Mortgage Book M, p. 310, 1839/06/05 |
| Pipes, Charles | land and the following individuals: Jim; Henry; Bill; Ned; Burr; Sam; Jefferson; Steven; Sam; Henry; Henriette; Mary; Sally; Louis; Helen; Citus; Ann; Catherine; Mary; Prince; John | 1838 | West Baton Rouge Parish, Mortgage Book M, p. 111, 1838/03/13 p. 181, 1838/06/29 |
| Robertson, Mrs. A. S. | the following individuals: Susan and her child Cornelius; Baptiste, his wife Nancy, and their three children Robert, Ella, and and unnamed individual; Diney and her three children Mahala, Melinda, and unnamed individual; Peter; Betsey; Chadrick | 1859 | West Baton Rouge Parish, Mortgage Book A-B, p. 122, 1859/03/19 |
| Robertson, W. B. | plantation and the the following individuals: Sally; Dolly; Minerva and her three children Lavinia; Essex; and Justine; Susan and her three children Margaret; Emma; and Jack; Polly; Charles; Dorcas; Stephen; Peter | 1847 | Tulane University, Citizens Bank Minute Book No. 6: 1847/08/22; West Baton Rouge Parish, Mortgage Book P, p. 451, 1847/05/15 |


| Owner | Mortgaged Collateral |
| :---: | :---: |
| Robertson, William | plantation and the following individuals: Godfrey; Sally; Robert; Old Shabe; |
| Blunt, Edward White | Frozine; Lizzie; Yorick; Louisa Jeff; Little Yorick; Lucy; Charles Lobdell; Mary Ann; |
| Robertson and Charles | Nancy; Dorcas; Joshua; Dolly; Gathy; Charles Banks; Josephine; Little William; |
| Dickinson Robertson | Dave; Little Josephine; Eugene; Charles Warner; Sam; Emily; Dorcas; Wyatt; Little Wyatt; George Sury; Sam Smith; Charlotte; Edward; Parker; Lucinda; Harriett; Little Lucinda; Peter Grimball; Louisa Parker; Tom; Jim; John; Big Ellen; Little Ellen; Kitty; Peter Verdies; Peggy; Rose; Minerva; Essex; Gustine; Margaret; Amy; Irene; Jack; Neuman; Dimery; Joe Austin; Mitchell; Cam; Winter; Prince; Tom; Lucy Gorham; Eliza Banks; George Lewis |
| Shannon, Thomas | sugar plantation, land, and the following individuals: Phill; Small Phill; George; Phill Clay; Louis; Antoine; Small Joseph; Sam; Willis; Bastien; Prince; Frederick; John Mary; Tom Congo; Isaac Lavith; George Walker; Jacque; George Mulatto; Lerne; Azinor; John Sally; Gasmay; Chapperd; Little Tom; Little Isaac; George Attakaps; Agricole; John Third; Davis; Bill; Hippolitte; Jean Louis; Honore; Pierre; Dick Clark; Cupidon; Francois; Ned; William; Martin; Charles; Opportune; Fanny; Rosalie; Guinie; Violer; Selphine; Hilene; Lisette; Rose; Small Hannah; Mariane; Phebe; Sintee; Augustine; Marie; Agnes; Mathilda; Small Lucy; Patsy; Sally Henry; Marguerite; Jane; Becky; Small Sally; Mariah; Anna; Peggy; Chrispin; Aimee |
| Verbois, Pierre | plantation and the following individuals: Antoine; Julienne and her three children Cadet, Helina, and Leverin; William; Henriette and her child Alfred; Albert; Dick; Louisa and her three children Alexandre, Adolphe, and Antoine; Nane and her child Lucie; Maria; David; Nilson; Julien; Jean |
| Ware, Joss | plantation and the following individuals; including: Peter; Baptiste; Chadrick; Susan; Sarah; Betsey; Jenny; Nancy; Cornelius; Robert; Mahala; Melinda; Ella; Aaron; Catherine; John; Adam; Alex; Julian |

## Dates Source

1859
7

West Baton Rouge Parish, Mortgage Book X, p 766, 1859/03/31; Tulane University, Citizens Bank of Louisiana Papers, 1834-1914, Folder 5

West Baton Rouge Parish, Mortgage Book K, p. 278, 1836/02/29

| Owner |
| :--- |
| West Feliciana Pa |
| Barrow, Robert H. |
|  |
|  |
|  |
| Barrow, Robert J. and |
| Mary E. Craff |

Mortgaged Collateral

## West Feliciana Parish

plantation, land, and the following individuals: Tom Sears; John; William Duke;

## Dates Source

William Davis; Aleck; Peter Wilson; Peter; William R.; Billy; Mike Marshall; Moses; Charles; Dave; Frank; Jake; Fisher; William; Nimrod; Henry; Elisha; Lotty; Harriet; Big Margaret; Little Margaret; Virginia; Chloe; Milly; Violet; Charity; Rachael; Sally; Eliza; Miranda; Edy; Ann; Betsey; Hannah; Angeline; Alix; William; Edward; Henry Carroll; Willis; Ephraim; Wilson; Manuel; Ben; Ellen; Betsey; Louisa; Emily; Rebecca; Sarah; Matilda; Phoebe; and unnamed individual

Rose Bank plantation, Bay Wood plantation, and the following individuals: Tom;
Tulane University, Tulane University, M-1847, Citizens Bank Minute Book No. 6: 1851/04/08, 851/07/08; Citizens Bank Minute Book No. 7 1851/12/02, 1855/02/02, 1852/02/06; West Feliciana Parish, Mortgage Book O, p. 119, 171,

West Feliciana Parish, Mortgage Book O, p. 575, 1855/04/18

Kate; Nimrod; Suba; Milly; Morris; Richmond; Soloman; Jim Russell; Henry Johnson; Frank; Jeff; Charles; Lewis; Stephen; Queen; Mary Smith; Harriet Foster; Cherry; Kizzy; Sylvia; Hasty; Diana; Winney; Rhody; Courtney; Maria; Hannah; Chancy; Cherry; Susan; Lucy; Cynthia; Levi; Martha; Theresa; Moses; Jacob; Joe; Peggy; Jim; Jack; Abraham; Richmond; George; Idy; Sophia; Charles; Jacob; Joe; Peggy; Jim; Jack; Abraham; Richmond; George; Idy; Sophia; Charles;
Phillis; Sarah; Lorenzo; Ben; Handy; July; Bolin; Rosina; Daphney; Jordan; Sutton; Sylvia; David; Daniel; Eli; Wilson; Dilsey; Thomas; Ann; Frances; Harry; Johnnetta; Holoway; Allen; Chancy; Rosetta; Matt; Elzy; Harry; Henry Clay Isabella; Nathan; Laurina; Emma ; Romeo
Bradford, David and
Amanda Jan
Brown, James

Causland, Robert M. land and individuals: Ben; Daniel; Fines; Jack; Sidney; Charlotte
Coulter, James H.
Essex; Deline; Issac; Mary Hall; Amy; Lizzy; Charlity; Elizabeth; Jerry; Linda; John; Henry; Harriet; Mathilda; Peter; Matthew; Deed; Nelson; Maria; Mary; Silla; Nelly; land and individuals: Boson; Eletia; Nancy and her son Emmy; Emmy's son Willis; 1838 Queen; John; Charity; Sabella; Hannah land and the following individuals: Harry; Patrick; John; Jim; George; Simon; Ned; 1837-1842 Joe; Little Simon; Sam; Jim; Cesar; Bill; Isaac; Sally; Betsy; Jane; Harriet; Silvia; Sally; Nancy; Mariah; Rinah; Kaily; Eliza; Calvin; Dick; Charles; Polly; Susan; Martha; Esther; Mary; Milly; Ellen

West Feliciana Parish, Mortgage Book K, p. 184; 1838/04/23

Tulane University, Citizens Bank Minute Book No. 5 1842/12/16; West Feliciana Parish, Mortgage Book K, p. 93, p. 107, 1837/06/24

West Feliciana Parish, Mortgage Book K, p. 156, 1838/02/27
iversity, Citizens Bank Minute Book No. 7: 1855/03/02; West Feliciana Parish, Mortgage Book O, p. 536, 1853/03/08
plantation and the following individuals: Adam; Lucy; Caroline; Amelia; Charles; John; Manuel; Sam; George; Henry; Mahaley; Sarah; Joanah; John Deut;

Louisiana; Lucy Garret; Jim; Charlotte; Eliza; Harriet; Henry; Betsey; Battiste

## Owner

## Mortgaged Collateral

Direr, Robert and Mary land and the following individuals: Watt; Tom; Vine, and her unnamed child Kilgour

| Doherty, Peter and $\quad$ land and the following individuals: Harry; Abraham; Abner; Willis; George; |  |
| :--- | :--- |
| Sarah B. | Anderson; Felix; Martha and her child Josephin; Ellen and her child Josephine; |
|  | Jane and her children Francis and Rhody; Bill; Adam; George; Alfred; Frederick; |
|  | Lewis; Jack; Patt; Jim; Bazil; Ned; Joe; Tom; Anthony; Rose; Rachel; Celia and |
|  | her child John; Hannah; Betsey and her child Rou Ann; Suckey; Henney; Eliza; |
|  | Lena; Rachel; Liz; Celine; Eve; Kitty; Caroline; Chancey; Adeline; Alsey; Old |
|  | Nancy; Emma; Hasty; Annett |

Fair, James and Mary plantation and the following individuals: John; Fountain; Jake; Roderick; Jake; Fill; 1838 Jack; Charles; Jet; Milly; Phillis; Nancy; Eady; Sabila; Charlotte; Grace; Mary; Ann; Mariah; Silda; Jenny; Wesley; Dane; Dick; Henry; Jim; Nan; Routh; Emeline; Rachael; Steven; Nancy
Farrar, Mary Ann
land and the following individuals: Alfred; Salma; Washington; Jane and her child Polly; Tempe's children Patsey, Dave, and Sabrey; Caroline's children Emily and illegible ; Amcy's children Joe, Winney, and Stephen; Loroney's children Laura Ann and Tiney Ann
Grover, Hiram J. land and the following individuals: Jim; Gabriel; John; Clara; Susan; Jane; Sylva; 1837 James; Sigudy; Tabor; Jane; Amy

Nervill, Gideon and
Nancy
Pattillo, George H.
the following individuals: George; Bob; Nelly
land and the following individuals: Jim; Lewis; George; Jess; Mike; Marinda; Harriet; Ruth; Fanny; Nathan; Frank; Marinda's daughter Martha; Charles; George Washington; Mack; Serine; Hannah; Milley

## Dates Source

1837

1834-1844 West Feliciana Parish, Conveyance Record I, p. 122, 1834/04/12; West Feliciana Parish, Mortgage Book K, p. 267, 1839/01/17; West Feliciana Parish, Mortgage Book M, p. 453, 1844/03/21

## Owner

Perkins, John and Henry

## Mortgaged Collateral

plantation, various tracts of land, and the following individuals: William; Charles; Mary; Calamine; Spencer; Henry; Parker; Sarah; Harriet; Minor; Joe; Andy; Jim Dorsey; Amy; Adam; Daniel; Margaret; Jim; Isabel; Ann; Daniel Dean; Chloe; Eliza; Nat; Abram; Charles; Alsie; George; Susan; Nelson; Daniel Johnson; Rachael; Ben; Bicky; Peggy; William Scott; John Scott; John Briscoe; Alfred; Peter; Jim Carter; John Brooks; Stanly; George Burroughs; Francis Spencer; Sally; Susan; GEorge; Robert; Priscilla; Polly; John Hiem; Anna; Stephen; Emeline; Fanny; Hiram; Morie; Jim; Harry; Hetty; Harriet; Lucinda; John; Caroline; Grace; John; Joseph; Easter; Sophia; Charlotte; Babara, Fanny Gray; Susan; Mary; Henry; Ann; Julia Ann; Amanda; Celia; Emily; Louisa; Agga; Margaret; Little Sally; Martha; Jack; Dick; Ella; Mathilda; Maria; Minta; Wash; Dica; Lucy; Amy;

Louis; Elvira; Theodira; Jim Henry; Beky; Newton; Alice; Isaiah; Bill; Morris; Viola; Vanness; Elizabeth; Patience; Leir; Abby; Ellen; Mia; Hagar; Patsy; Anthony; Judy; Tom; Fred; Wade; Green; Harvey; Abraham; Bill Gillis; Big Julia

| Sims, Mrs. Ann | land and the following individuals: Jacob; Richard; Jenny; Isaac; Louisa; Joyce; <br>  <br>  <br> William; Rose; Jim; Ben; Stephen; Green; Virginia; Bill; Commodore; Abraham; <br>  <br>  <br> Ned; Sam; Old Sam; Harry; Jackson; Henry; Eliza; Miles; Moses; Mathilda; Ellen; <br> William; Grael; Jack; Louis; Daniel; Aristin; George; Harriet |
| :--- | :--- |
| Wilkinson, Joseph | sugar plantation and 128 unnamed individuals |
| Young, Robert | the followng individuals: Joe; Milly; Spencer |1851

## Ascension Parish

Bercegeay, Alphonse the following individuals: Mary and her children William and Wilson; James

## Dates

1851

## New Orleans Canal Bank

## Source

West Feliciana Parish, Mortgage Book O, p. 61, 66, 83, 87, 1851/04/12

Tulane University, Citizens Bank Minute Book No. 7 1855/12/14; West Feliciana Parish, Mortgage Book O, p. 551, 1855/03/23

Tulane University, Citizens Bank Minute Book No. 6 1851/01/01

West Feliciana Parish, Mortgage Book M, p. 208, 1842/09/28

| Own | gaged Collater |
| :---: | :---: |
| Braud, Justine | land and the following individuals: Jean Louis; Marcel; Lisse; Jane |
| Duffel, Edward | plantation and the following individuals: Baptiste; Rosalie and her two children Jose and Jean Baptiste ; Nat; Constance and her three children Elsie, Henry, and Gustave; Raphael; Melanie and her three children Clet, Marianne, and Zeke; Auguste; Leonarde; Francis; Dinah; Hannah; Sillu and her three children Andre, Heloise, and Josephine; Maria and her three children Jean Louis, Michel, and Benjamin; Malvina and her child Stephen; Loyise and her child Colin; Jenny and her child Rose; Frank; Jim; Franchonnette and her sister Sally; Suzette; Leonarde Sam; Ben; Joe; William; Michel; Vincent; Billy; Vieux Sam; Bastien; Lan; Sam; Frank; Nace; William; Joe; Lucinda and her brother Thomas (alias Alfred); Aimee |
| Dugas, Ignace and Coralie Landry | land and the following individuals: Madelaine and her two children Julien and Celeste; Moody; Julie |
| Ford, Christopher; Randall, David | land and the following individuals: Jack; Nathan; Hanover; Randal; Joe; Jack; Richard; Brown; Squire; Elijah; Ceasar; Charles; Mary Ann; Virginia; Hannah; Julia; Aime; Martha; Latitia; Ralph; Sarah; Louisa; Henry; Mary; Susan; Aglaee Caroline; William; George Clark; Jerry ; Daniel; Lucy; Lewis; Charlotte; Jim; Sidney; Lyddy; Elizabeth; Harry Byrne; Carter; Sarah; Winny; Hames; Squire; Harrison; Davy Skinner; Crecy and her unnamed infant; Mary Skinner; George Skinner; Henry Woods; Grace S.; Bill Martin; Minta; Thomas; Mary; William; Kitty; Albert; Harry S.; Ben Bond; Cassandra; Susan B.; John B.; Sarah; Ben Bond Jr.; Satira Shadrach; Robert Woods; Cassy; Bill Amanda; Patsey; Sylvia Briscoe; Bill Briscoe; Frank; Maria; Georgiana; Viriginia; Moses Wood; Maria Wood; Nick; Dolly; Sylvia; Sarah; Calvert; Charlotte; Emma; John; Rachel; Missouri; Mary; Fanny; Mathilda; Louisa |
| Gravois, Edward and Marie Rose Landry | land and the following individuals: Celeste and her three children Louise, Elizabeth, and Bouret; Lubin; Timme ; Jamier |
| Landry, Daucet and Lisa | land and the following individuals: Victor; Prince; Jimy; Vaniz; Jean Baptiste; Fanny; Pilynaise ; Diline; Celeste; Susan; Marie Louise; Alexandre; Valentin; Nichola |

Owner
Braud, Justine
Duffel, Edward

Dugas, Ignace and Ford Chistoph ord, Christopher; Randall, David

Gravois, Edward and Marie Rose Landry Lisa

## Mortgaged Collateral

plantation and the following individuals: Baptiste; Rosalie and her two children Jose and Jean Baptiste ; Nat; Constance and her three children Elsie, Henry, and Gustave; Raphael; Melanie and her three children Clet, Marianne, and Zeke; Auguste; Leonarde; Francis; Dinah; Hannah; Sillu and her three children Andre, Henise, and Josephe, Mald her child Rose; Frank; Jim; Franchonnette and her sister Sally; Suzette; Leonarde Sam; Ben; Joe; William; Michel; Vincent; Billy; Vieux Sam; Bastien; Lan ; Sam; Frank; Nace; William; Joe; Lucinda and her brother Thomas (alias Alfred); Aimee
and and the following individuals: Madelaine and her two children Julien and
land and the following individuals: Jack; Nathan; Hanover; Randal; Joe; Jack; Richard; Brown; Squire; Elijah; Ceasar; Charles; Mary Ann; Virginia; Hannah; Julia; Aime; Martha; Latitia; Ralph; Sarah; Louisa; Henry; Mary; Susan; Aglaee , Larliam; George Clark; Jerry, Daniel, Lucy; Lewis, Charlotte; Jim Harrison; Davy Skinner; Crecy and her unnamed infant; Mary Skinner; George Skinner; Henry Woods; Grace S.; Bill Martin; Minta; Thomas; Mary; William; Kitty; Albert; Harry S.; Ben Bond; Cassandra; Susan B.; John B.; Sarah; Ben Bond Jr;
 Briscoe, Frank, Maria, Georgiana, Virginia, Moses Wood, Maria Wood, Nick, Fanny; Mathilda; Louisa
land and the following individuals: Celeste and her three children Louise,
Elizabeth, and Bouret; Lubin; Timme ; Jamier

Fanny; Pilynaise ; Diline; Celeste; Susan; Marie Louise; Alexandre; Valentin; Nichola


Landry, Narcisse and Gerade

Landry, Trasimon and Wife Modeste Brand

Landry, Valery

Landry, Victor and Janette

Lange, Albert

| Owner | Mortgaged Collateral |
| :--- | :--- |
| Landry, Narcisse and | land and the following individuals: Celestin; Auguste; Daniel; Pierre; Major; |
| Gerade | George; Christophe; Petion; Colces; Jacques; Edward; Celestin; Gilbert; |
|  | Alexander; Bouli; Robin; Scott; Honore; Charles; Jack; Sam; Cupiclou; Pail; Bill; |
|  | Frank; Jean Louis; Ned; Jean; Artheuse; Picep or Bob; Michil or Mitchel; Valentin; |
|  | Michael; Lubin; Auguste; Gertrude and her child Andre; Marion and her child |
|  | Suzanne; Julie and her two children Raphael and Felicite; Celeste and her eight |
|  | children Honore, Catiche, Jeanette, Laura, Julien, Magdelaine, Celestine, and |
|  | Gilbert; Venus and her two children Durosin and Jean Louis; Marianne and her |
|  | two children Frosine and Priscilla; Marie and her three children Drausin, Rosetta, |
|  | and Celeste; Katey and her three children Micotand, Susan, and Reuben; Fanny |
|  | and her four children Noel, Betecie, Antoine, and Valcour; Madilain; Kitty and her |
| four children Medare, Susan, Kitty, and Silvie; Jenny; Fanchanette and her two |  |
|  | children Opoline and Julie; Mary; Rosalie; Victore; Babitte; Zoe and her child |

## Mortgaged Collateral

land and the following individuals: Celestin; Auguste; Daniel; Pierre; Major; Alexander; Bouli; Robin; Scott; Honore; Charles; Jack; Sam; Cupiclou; Pail; Bill; Frank; Jean Louis; Ned; Jean; Artheuse; Picep or Bob; Michil or Mitchel; Valentin; Michael; Lubin; Auguste; Gertrude and her child Andre; Marion and her child uzanne; Julie and her two children Raphael and Felicite; Celeste and her eigh children Honore, Catiche, Jeanette, Laura, Julien, Magdelaine, Celestine, and Gilbert; Venus and her two children Durosin and Jean Louis; Marianne and her and Celeste• Katey and her three children Micotand, Susan, and Reuben; Fanny and her four children Noel, Betecie, Antoine, and Valcour; Madilain; Kitty and her four children Medare, Susan, Kitty, and Silvie; Jenny; Fanchanette and her two Catherine; Nore; Jacques;
Paula; Alexander; Bill; Julie and her two children Manetti and Sophie; George; Jean Louis; Bob; Frank; Raphael; Felicite; Francois; Pierre; Jacques; Gertrude er three children Henri, Eduard, and Adeline, Scott, Jane, Baptiste; Auguste; Jane; Celestine; Petion; Michaelle; Jimmy; Medin; Mary and her child Joseph; Dio; Rosette; Valentine
land and the following individuals: Gilbert; Sam Dawson; Ben Short; William; Joe

Ascension Parish, Mortgage Book 7, p. 67 1839/01/24 Ascension Parish, Mortgage Book 6, p. 322, 1837/03/31

1832-1839 Ascension Parish, Mortgage Book 5, p. 295, 1832/06/04; Mortgage Book 7, p. 118, 1839/06/14

Ascension Parish, Mortgage Book 9, 139, 1848/8/22

## Dates Source

1833-1842 Ascension Parish, Mortgage Book 5, p. 331, 1833/03/31; Mortgage Book 7, p. 434, 1842/05/03

| Owner | Mortgaged Collateral | Dates | Source |
| :---: | :---: | :---: | :---: |
| Leblanc, Dermand | land and the following individuals: William; Janey; Ciran; Joe; Frank; Julien; Martin; Honore; Nelson; Birundy; Zoe; Pilagie; Fanchanetta; Nancy; Gabriel; Lucy; Rosalie; Marguerite; Balut | 1836 | Ascension Parish, Mortgage Book 6, p. 288, 1836/09/12 |
| Leblanc, Marcelis | land and the following individuals: Mari Jeanne and her two children Cadet and Benjamin | 1833 | Ascension Parish, Mortgage Book 5, p. 341, 1833/03/21 |
| Marchand, Victor | land and the following individuals: Jacque; Jean Pierre; Jacob; Toussaint; Lessin; Jaque; Isidore; Olrille and her three children Francois, Joseph, and Narcisse; Bazile and her two children Eve and Edmond | 1832 | Ascension Parish, Mortgage Book 5, 1832/08/18 |
| Poursine, Joseph | land and the following individuals: Joseph; St. Cloud; Paul; Frank and his wife Justine; Augustine, his wife Sanchette and their four children Adele, Gustave, Gertrude, and Derausin; Louise and her children Agathe and Sohpy; Rhoda and her children Hagar, Lucy, and Blaise | 1833 | Ascension Parish, Mortgage Book 5, p. 341, 1833/03/21 |
| Prevost, F. M. | plantation and the following individuals: Abraham; Billy; London; Dick; John; Elias; Andre; Warnur ; Maria; Rachel | 1833 | Ascension Parish, Mortgage Book, 1833/03/23 |
| Randall, David A. | land and the following individuals: Brown, his wife Eliza, and their four children Maria, Charles, Nathan, and Aimee; Lewis, his wife Becky, and their three children Agnes, Virginia, and Reuben; Caeser, his wife Lizzy, with their son Frank; Hannah, her three children Squire, Abraham, and Martha, and her grandchild Hanover; Fanny, her son Dick, and her grandchild Jack; Jack; Bill; Jacques; Elijah; Julie; Marianne; Martha; Joe; Elijah; Lewis and his two children Richard and William; Randal, his wife Sarah, and her children Louisa and Harry; Agnes and her child Susa; Caser and his two children Caroline and Aglaee; Martha and her child Latitia; Hannah and her grandchild Hanover; Joe; Jake; Lewis; Beckey and their three unnamed children; Drackter; Eliza and her three unnamed children; Randall; Sarah and her unnamed child; two unnamed children of Letty; Squire; Dick; Elijah; <br> Fanny; Mary Ann; Julie; Ceasar; Brown; Eliza and her four children Maria, Charles, Nathan, and Aimee; Lewis; Beckey and her two children Richard and William; Randall; Sarah and her three children Agnes, Virginia, and Reuben | 1839-1845 | Ascension Parish, Mortgage Book 6, p. 5, 1839/04/10; Conveyance Book 19, p. 387, 1845 |

## Owner Mortgaged Collatera <br> Assumption Parish

$\left.\begin{array}{lll}\hline \text { Boatner, Daniel and } & \begin{array}{l}\text { land and the following individuals: Isaac; Peter; Jerry; Little Isaac; Big Hannah; } \\ \text { Lucy; Jim; Elisha; Ned; Jack; Mary; Winney; Alfred; Little Hannah; Mansfield; } \\ \text { Handy; Nancy; Cinda; Daniel }\end{array} & 1833 \\ \text { Dalfreres, Antonio } & \begin{array}{l}\text { plantation and the following individuals: Narcissa; Augustine; Philippa; } \\ \text { Margueritta; Juliana; Andre } \\ \text { plantation and the following individual: Margueritte }\end{array} & 1834 \\ \begin{array}{ll}\text { Dominguez, Manual } \\ \text { and Maria }\end{array} & \begin{array}{ll}\text { Fernandez, Manuel and land and the following individuals: Grand Francois; Telie (alias Lydie); Pauline; } \\ \text { Aimee; Jacob; Lawrence; Juliette; Mannette; Fifi; Auguste; Thomas; Victoire; } \\ \text { Julie }\end{array} & 1833 \\ \text { Severin; Nancy (alias Marie Quace); Susanne; Madeline; Mernaut; Peter }\end{array}\right] 1832$

## Avoyelles

Coco, Lucien D
land and the following individuals: Isaac; Henry; Julian; Dick; Clarisa and her child 1840 Ameline; Susanne and her three children Reuben, Jalienne (alias Gustte), and Elizabeth; Warran; Nancy and her three children Louise, Llyod, and Melinda; Cary Carter; Hannah Carter and her three children Gabriel, Daniel, and William

Irion, George A. land and the following individuals: Prince; Amos; Paul; Phil; Joshua; William;
Henry; Bill; Abram; Kity; Aggy; Bob; Thadius; Sally; Mary; Eliza
Miles, Lemuel land and the following individuals: Ben; Fanny; Matilda; Jordan; Elsueda

## Dates Source

Assumption Parish, Mortgages 1831-1835, p. 141, 1833/03/26

Assumption Parish, Mortgages 1831-1835, p. 187, 1834/03/01

Assumption Parish, Mortgages 1831-1835, p. 107, 1832/07/02

Assumption Parish, Mortgages 1831-1835, p. 142, 1833/04/01

Assumption Parish, Mortgage Book 1834-41, p. 263,1839/07/25

Assumption Parish, Mortgages Book 11B, p. 229 1839/03/11, Mortgage Book 1834-41, p. 233 1839/03/14

Assumption Parish, Mortgage Book 1834-41, p 286, 1840/04/14

Assumption Parish, Mortgages 1831-1835, p. 144, 1833/04/10

Avoyelles Parish, Conveyance Book O, p. 373 1840/03/30

[^5]
## Owner

Mills, Thomas

Ogden, Edward
Robert, E. G.

## Mortgaged Collateral

land and the following individuals: Hester ; George; Rachel; Cherry; Maria; David; Moses; Aaron; Sylva
land and the following individuals: Andrew; Billy; Caroline; Henry;Barbara
land and the following individuals: John; Jinny and her son Andrew; Sarah Ann
land and the following individuals: James; Acy; Margaret and her unnamed child
land and the following individuals: John; Henry; Armistor ; Lucy; Dolly; George; Belinda; Washington; Mark; Julie ; Arreta; Nancy; Phillis; Polly Molley; Hannah
Tanner, Lodowick land and the following individuals: Ben; Jerry; Harry; Yates; Robert; Frank; Betsy; Lucy Ann and her child Amy; Abby and her child Margaret
Voorhies, Bennett F. land and the following individuals: John; Major; Joe; Julie; Maria

Voohies, William
land and the following individuals: Coleman; Ned; Lewis

## Concordia Parish Parish

Routh, Stephen M. plantation and the following individuals: Stephen; Perry ; Luis ; Susan; Hannah; Lucy; Rachel; Rachel Henry; Avy; Mary

## East Baton Rouge Parish

Boyle, William
plantation and the following individuals: Harry; Isaac; Preston and his wife Mille

## Dates Source

1832-1833 Avoyelles Parish, Conveyance Book I, p. 272, 1832/04/30; Conveyance Book J, p. 202, 1833/06/29
Avoyelles Parish, Conveyance Book M, p. 198, 1836/05/30

Avoyelles Parish, Conveyance Book J, p. 155, 1833/05/23

Avoyelles Parish, Conveyance Book I, p. 260, 1832/04/28

Avoyelles Parish, Conveyance Book O, p. 65, 1839/06/03

Avoyelles Parish, Conveyance Book O, p. 367, 1840/03/10

Avoyelles Parish, Conveyance Book I, p. 300, 1832/05/28

1832-1833 Avoyelles Parish, Conveyance Book I, p. 298, 1832/05/28

Concordia Parish, Conveyance Book F, p. 415 1833/04/27

East Baton Rouge Parish, Mortgage Book K, p. 86, 1839/05/23; West Feliciana Parish, Mortgage Book K, p. 408, 1839/05/27

| Owner | Mortgaged Collateral |
| :---: | :---: |
| East Carroll Parish Parish |  |
| Goza, George Washington | the following individuals: Violet; Moccrise; Meiles; Willis; Nauce; Jim; Charles; Jesse; Elza; Eloy; Balaam; Phebe; Rachel; Pompey; Wiley; Will; Edward; Jinny; Arena; Pluenza; Raney; Joe; Bob; Little Jesse; Delila; Ben; Reuben; Rozetta; Nathan; Harry; Ishmael; Washington; Betsey; Chesney; Dennis; Bill; Willis; Margaret; Jane; Lucinda; Judah; Rosina; Eliza; Harriet; Easter; Edward; Richard |
| Morgan, Oliver and Jonathan | the following individuals: Peter; Bob; Jack; George; Enos; Susan; John, his wife Henny, and their 3 children, Jane, Oscar, and Joe; Arthur, his wife Matilda, and her unnamed child; Comfort and her 4 children Giles, Jim, Thadius, and Patsy; Sam; Lige; Allen; Little David; Cooper; Eliza; Charlotte; Delia; Ephraim; Armstead; Daniel |

## Owner Mortgaged Collateral

## East Feliciana Parish

| Boatner, William and Sarah | the following individuals: Sam; Joe; Issac; Dick; Abram; Neubin; Alfrue; Isaac; Shields; Ellis; Ben; Limere; Tom; Burrel; Minur; Sandy; Polly; Hannah; Winney; Dianna; Lucinda; Amy; Dinah; Letty; Matelda; Judy; Rachel; Harriet; Jane; Noie; Leanoree; Leah; Deley; Nais; Nelly; Veirter; Mariah; Mary W; Martha; Sniersmiea | 1832 |
| :---: | :---: | :---: |
| Carter, William D. and Elizabeth | the following individuals: Melinda; Laucinia; Thomas; Ned; Mary; Clifton; Boatsroain; Alley; Diana; Cyprus; Louisia | 1839 |
| Chapman, James | land and the following individuals: Jacob; Cornelius; Harry; Eliot; Alfred; Ben; Laud; Henry; John; Bill; Pelina; Eliza; Fillis; Rebecca; Cary Ann; Margarite; Mary; Eveline; Nancy; Clarisa. | 1833 |
| Clemons, Nancy | the following individuals: Isabell; Liner; Will; Abram; Burrel; John; Big John; Magul; Elick; Boy Ben; Boy London; Stephen; Ephram; Veirtu; Isabela | 832 |
| Delie, John L. | land and the following individuals: Jim; Chusterzi; Sam; Prince; Jack; Austin; Maria; Mary; Cynthia; George; Harvey; Joe; Austin; Luck; Hannah; Polly; Adam; Margaret; Dorcas | 1835 |

## Dates Source

1840-1841 East Carroll Parish, Mortgage Book B, p. 105, 1840/05/22; Mortgage Book B, p. 95, 1841/10/04

1832-1835 East Carroll Parish, Conveyance Book A, p. 2, 1832/04/30; Mortgage Book A, p. 164, 1835/09/19

East Feliciana Parish, Mortgage Book B, p. 339, 1832/04/24

East Feliciana Parish, Mortgage Book H, p. 298, 1839/12/05

East Feliciana Parish, Mortgage Book C, p. 164, 1833/04/15

East Feliciana Parish, Mortgage Book B, p. 324, 1832/04/23

East Feliciana Parish, Mortgage Book D, p. 81, 1835/05/18

## Owner

Dolch, Elizabeth D

Gayle, John L. and Martha

## Gilden, Stephen and

Mary
Hary, James
Kendrick, Benjamin

McRae, Colin C.
Mune, Daniel and
Pamela
Myers, Burrel

Nettlez, John and
Ferorbes
Norwood, Noel

## Mortgaged Collateral

plantation and the following individuals: Peter; Jim; Moses; Rachel; Ann; Sophy; George; Francis; William; Tony; Bob; Aaron; Maria; Bob; Agnes; Isabel; Henry
the following individuals: Tom; Nellie; Cuffe; Lucy

## Dates

1833
land and the following individuals: Isabell; Linn; Will; Abram; Burnell; John; John Mogul; Elick; Ben; Iandon; Stephen; Ephraim; Hester; Isabel.
plantation and the following individuals: Abram; Beverley; Jim; Jinny; Delia; Fanny; 1833
Sophia; Patty; Fanny; Liar; Suda; George; Wiliam; Allin; Isaac; Green; Alfred; Dave; Adam; Rachel; Morgan; Susan; Winny; Malinda; Betsy; Mahala; Harriet; Eliza
land and the following individuals: John; Charles; Sam; Luke; Rose
the following individuals: Becka; Permelia; Monroe; Rachel; Lenah; Nelson; Lya (alias Lydia); Leanard
land and the following individuals: Sookey; Rachel; Betty; Lydia; Caty; Hannah;
Lot; Lilly; Silla; Simon; Polly; Isaac; Henny; Sarah; Little Isaac; Bob; Milly; Sampson
Pain, John C. and Mary the following individuals: Nenolde; Henry; Elegn; Phillis; Mary
Louise
Perry, Robert land and the following individuals: Isaac; Crawford; John; Ben; Fred; Liman; Harry; 1833 Clary; Jonas; Emelie; Malvina; Milly; Nancy

Powers, John B. and the following individuals: Jerry; Katy and her child Fountain

## Source

East Feliciana Parish, Mortgage Book C, p. 401, 1833/07/22

East Feliciana Parish, Mortgage Book B, p. 329, 1832/04/24; West Felicians Parish, Mortgage Book H, p. 409, 1832/04/24
East Feliciana Parish, Mortgage Book B, p. 349, 1832/05/09

East Feliciana Parish, Mortgage Book C, p. 160, 1833/04/10

East Feliciana Parish, Mortgage Book C, p. 183, 1833/05/06

East Feliciana Parish, Mortgage Book C p. 5, 1832/06/05

East Feliciana Parish, Mortgage Book B, p. 333, 1832/04/23

East Feliciana Parish, Mortgage Book B, p. 314, 1832/04/23; West Feliciana Parish, Book H, p. 416, 1832/04/25
East Feliciana Parish, Mortgage Book B, p. 342, 1832/05/01

East Feliciana Parish, Mortgage Book C, p. 171, 1833/04/15

East Feliciana Parish, Mortgage Book B, p. 326, 1832/04/03

East Feliciana Parish, Mortgage Book C, p. 140, 1833/04/06; West Feliciana, Mortgage Book J, p. 87, 1833/04/16; Tulane University, Citizens Bank Minute Book No. 5: 1846/02/26; Citizens Bank Minute Book No. 7: 1851/12/30

East Feliciana Parish, Mortgage Book H, p. 198, 1838/05/05

| Owner | Mortgaged Collateral | Dates | Source |
| :---: | :---: | :---: | :---: |
| Purnell, George W. and | the following individuals: Robin or Bob; Nancy; Bill Button; Lewis; Jenny; Louisa or | 1847-1849 | East Feliciana Parish, Mortgage Book H, p. |
| Mary Ann Lunetto | Laura; Bill Bladen; Jane; Caroline and her children Norman and an unnamed child; Riley; Bill Dale; Phaso; Bob Amis; Leah; Frances; Isabella |  | 1847/04/28; East Feliciana Parish, Mortgage Book H, p. 402, 1849/04/23 |
| Rest, John and Mary | the following individuals: Frank; Charles; Lucy; Harriet; Milly; Jerry | 1832 | East Feliciana Parish, Mortgage Book B, p. 344, 1832/04/27 |
| Scott, Thomas W. | land and the following individuals: Hannah; Rachel; Sony; Bob; Venus; Brian; Betsy; Harry; Joyo; Tiffany; Duke; Pat; Doll; Viny; Ann; Binah; Jam; Mary; Joyo; Jinny; Mingo; Juno | 1833 | East Feliciana Parish, Mortgage Book C, p. 174, 1833/04/24 |
| Seals, James | the following individuals: Jim; Christie; Sam; Jack; Austin; Maria; Mary; Cynthia; George; Harold; Joe; Austin; Jack; Hannah; Polly; Adam; Margaret; Dorcas; Prince | 1832-1835 | East Feliciana Parish, Mortgage Book B, p. 331, 1832/04/24; East Feliciana Parish, Mortgage Book G, p. 467, 1835/05/18; West Felciana Parish, Book H, p. 402, 1832/04/24 |
| Waddell, Zachariah and Narcissa | the following individuals: Charles; Rachel; Anthony; Louisa; Polyabie; Louviey; George | 1832 | East Feliciana Parish, Mortgage Book B, p. 337, 1832/04/13 |
| Waddill, David | land and the following individuals: Joalib; Fran; Jacob; David; Hester; Matilda; Caroline; Hildah; Nan | 1833 | East Feliciana Parish, Mortgage Book C, p. 162, 1833/04/13 |
| Iberville Parish |  |  |  |
| Butler, Edward G. W. | land and the following individuals; including: Parrick; Alix; Albert; Joe; Joshua; Polly; Nancy; Miles; Stephney; Jordon; Celia; Sylvia; Billy; Lucy; Addison; Nelly; Harriet; Nelson; Bennet | 1833-1843 | Iberville Parish, Conveyance N, p. 557, No. 472, 1833/04/15; Conveyance Book V, p. 338, No. 215, 1843/03/27 |
| Honore, Francise Belly | plantation on the right bank of the Mississippi River with the following individuals: September, his wife Francoise, and their five children Marie, Aimee, Marguerite, Francois, and Edmond; Iberville, his wife Poignon, and their child Jacques; Nicolle and her two children Honore and Commineau | 1832 | Iberville Parish, Conveyance Book N, No 148, 1832/07/06 |
| Landry, Anne B. | plantation on the right bank of Mississippi with the following individuals: Baptiste; Anna; Melite and her child Gustin | 1832 | Iberville Parish, Conveyance Book N, No. 155, 1832/07/13 |
| Ricard, Genevieve B. land | land on the right bank of the Mississippi and the following individuals: Cayro, his wife Jabo, and their three children Aimee, Louis, and Vincent; Lalie and her five children Antoine, Francois, Voltaire, Elizabeth, and Lalie; Ospasie and her child Homer; Amus; Abraham; Julien; Elie; Zelie; Luke; Balaam; Jerry; Cader; Willis; Margaret; Kitty; Peter; Abraham Juke; Tom; Sophy; Agathe; Joe; Esther; Marie Mart; Theodore; John; Frank | 1843 | Iberville Parish, Conveyance Book N, p. 592, No. 507, 1843/03/24 |

## Owner

## Mortgaged Collateral

Walker, Duncan S. and land and the following individuals; including: Solomon; Frederick; Glenn; Polly Robert J.

Jim; Ben; Spencer; Gabe; Cela; Ephraim; Levin; George; Serina; Josephine;

Robert; Mary; Charlotte; Taylor; Lewis; Travis; Owen; Isaac; Jesse; Mark; Mathilda; Nancy; Biddy; George; Maria; Jim Crow; Patrick; Peter

## Lafayette Parish

Arceneaux, Emille plantation and the following individuals: Celestine; Josephine; Constance; Eugenia; Pierre; Joseph; Celestin; Valirien;Olivia; Pierre; Ellen; Alcinder

McCaskill, Daniel and land and the following individuals: Moses; Rose; Ellick; Samuel; Mary Ann;
Caroline; Robert Nibbilt Gabriel; Charity; Gabriel; Marilla; Daniel; Bill; Henry; Rhoda; Lewis; Wisdom; William; Collin; Sally; Willoughby; Rosanna; Henry; Liz
Rice, Samuel B. and land and the following individuals: Tom; John; John; Jim; William; Arthur; Ned;
Martha Campbell
Thrall, John B.

Wilcoxon, Floyd Will; Sevesitia; Mary; Maria; Anne; Reason; Richmond; Wilkins; Henry; Nana the following individuals: Belco; Milly; William; Eveline; Thom; John; Charlotte; Betsy; Teny; Mary; Billy; Dorcas; Jane; Jeff; Michael; Maria; Jeff; Sally; Patsy; Katey; Fielding; Dick; Thomas
plantation and the following individuals: Moses; Jack; Daniel; Harry; Tom; John;

Alexander; William; Charles; George; Lucy; Nancy; Becky; Abby; Cassy; Little John; Betsy; Leathy; Nelly

## Lafourche Parish

Bigg, Thomas land and the following individuals: Jacques; Nago; Charles; Big William; Nelson; Jean; Sam; Alexander; Guylson; Alexander; Polite; Tom; Raisine; Henry; Davis; Gary; Faniel; Joseph; Little William; Tabor; Jack; Robert; Justin; Isaac; Antoine; Laurent; Michel; Lizette; John Robert; Casimir; Aaron; Lucien; Ellick; Gaisy; Richard; Appolon; Jeme; Constance and her unnamed child; Anne and her unnamed child; Maria and her unnamed child; Nanette; Lake; Mararite and her unnamed child; Artemise; Froizine; Esther; Esther; Tabe; Mary and her unnamed child; Laurine; Lisa and her unnamed child; Roddyand her two unnamed children; Fistte; Louise and six unnamed children; Caroline and her unnamed child; Susane; Marianne; Little John

## Dates

1833

Lafeyette Parish, Copies of Notarial Acts, 1774, 1832/05/25, no. 1775, 1832/05/25, no. 1781, 1832/05/22

1832-1833 Lafeyette Parish, Copies of Notarial Acts, entry 1769,1832/05/3, entry 1965, 1833/05/20

1833-1837 Lafayette Parish, Copies of Notarial Acts, entry 1977, 1833/05/29

1832 Lafeyette Parish, Copies of Notarial Acts, entry 1769,1832/05/22

Lafayette Parish, Copies of Notarial Acts, entry 2503, 1836/06/15

Lafourche Parish, Conveyance Book R, p. 304 1841/06/24

## Owner

Bourg, Mathurin
Labiche, Firmin

## Mortgaged Collateral

land and the following individuals: Malando; Haley; Joseph; Peter
plantation and the following individuals: John; Zenon; Lucy

## Dates Source

1833

1832 1833/03/28

Lafourche Parish, Conveyance Book J, p. 123,

Lafourche Parish, Mortgage Book I , p. 228, 1832/06/06

## Ouchita Parish

| illegible, Jean | the folowing individuals: Battiste; Solomon; Mattild and her two children Henry <br> and Susan; Nancy and her 4 children Ceil, Thercale, Margaret, and Lewis; Cherry <br> Louisa; America |
| :--- | :--- |
| Downs, Solomon | plantation and 56 unnamed individuals |
| Weatherbee |  |

Ouchita Parish, Mortgage Book A, p. 196, 1833/05/14

Weatherbee

## Pointe Coupee Parish

Bouis, Francouis and
Helen
Bourgeaux, Augustin
and Jane and Jane

Cooley Jr., Ebenezer and Mary Collins
plantation, land, and the following individuals: Charlotte and her 6 children Rosene, Rene, Leocadie, Josephene, Rosalie, and Elvi; Pompey and his wife Jeanne, and her 8 children Gustine, Gustane, Hilairi, Nunea, Zerine, Lindor, Iris, and Sethene
plantation and the following individuals: Big Sally; Maria; John Baptiste; Caroline; Big Allan; Bill; Rose; Little Allen; Little Sally; Seleste; Louis; Zavier; Fanny; Marie; John; Phebes; Henry; James
land and the following individuals: Richmond; Katy; Oliver; Benjamine; Robin; Henry; Hannah and her child Maria; Jim; Jack; Bill; Mary-Ann; Sally; Isaac; George

Dewey, Benedick and plantation, land, and the following individuals: Robbin; John; Charity; Eliza Sarah

1832-1849 Pointe Coupee Parish, Legal and Conventional Mortgage Book B, p. 400, 1832/05/08; Legal and Conventional Mortgage Book D, p. 873; Legal and Conventional Mortgage Book C, no. 1109, 1839/02/25

Pointe Coupee Parish, Legal and Conventional Mortgage Book C, no. 1465, 1842/01/20

1832-1834 Pointe Coupee Parish, Legal and Conventional Mortgage Book B, p. 419, 1832/06/28; Legal and Conventional Mortgage Book C, p. 1, 1834/02/18

## Owner

## Mortgaged Collateral

Ferrier, Jules and Julie land and the following individuals: Armstead; Nancy; Similin

| Jewell, Sarah Isaacs | plantation and the following individuals: Jim; Joe; Bristen; Garland; Liverpool; Bolin; Daniel; Claiborne; Yellow Bob; Black Bob; Martin; Solomon; Little Sam; Congo Sam; Ellick; Jaik; John; Jacob; York; Hercules; Colsy; Nilson; Frank; Bob; Phoebe; Clarkey; Nancy; Big Mary Ann; Chancy; Winny; Sarah; Lucinda; Charlotte; Mary; Jenny; Rachael; Mary Ann; William; Dick; Bristen; Isaac; Nancy; Hannah; Rosalie; Rose; Betzy |
| :---: | :---: |
| Major, Norbert | plantation, land, and the following individuals: Cesaire; Andre; Lincoln; Antoine; Francois; Augustin; Lucas; Zenon; Hypolite; August; Jean Baptiste; Francois; Gregoire; Joachin; Venus; Mary; Agathe; Valerine; Susine; Deby; Marie; Julie; Pauline; Victoire; Francine; Madeline; Zaire; Laurette |
| Ratliff, Louricy and Adam Bingaman | land and the following individuals: Georges; Landy; Richard; Billy; Milford; Moses; George; Abe; Alfred; Bob; Milford; Frank; Rod; Rachel; Dina; Mulatto Mary; Mary; Matilda; Short Rachel; Alice; Celia; Fanny; Maria; Cleany; Alice; Christine; Henrietta; Ann; Priscilla; Dick |
| Robertson, Malinda | land and the following individuals: Sylvia and her children Sophia, Harriet, Ned, and Alfred; Ephraim; Robert |
| Sholar, Ann and Asa Brown | land and the following individuals: Peter; George; Bob; Lucy; Dorcas and her son Charles; Eliza and her son Joe |
| Taylor, William | the following individuals: Salomin; Baptiste; Mary; Audre; Daniel; Jesse or Dias; Francur; Adelle; Baptiste; Bernard; Flora; Fadonas; Areline; Little Jenny; Lubin; Nancy; Tom; Harry; Betzy; Harry; Martin; unnamed individual; Jean; Phil and his wife, Fine (alias Fanny); Levy (alias Duval); Little Nancy; Lindon; Louis; Hanniah or Amia; Luckey; Suzanne; Fanny; Chisbe; Charles; Paul; Jeannette; Mary Jeanne; Pauline |

## Dates Source

1837-1846 Pointe Coupee Parish, Legal and Conventional Mortgage Book C, 592, 1837; Legal and conventional Mortgage Book D, p. 576, 1846/01/01

1840-1845 Pointe Coupee Parish, Legal and Conventiona Mortgage Book C, no. 1327, 1840/12/30; Legal and Conventional Mortgage Book D, no. 440 1845/11/06

Pointe Coupee Parish, Legal and Conventiona Mortgage Book B, 544, 1833/05/09OwnerTrumbull, Mathilda A.

## Mortgaged Collateral

land and the following individuals: Big Tom (alias John), his wife Peggy, and their three children Beck, Patience, and Dick; Jack Collins, his wife Alssee (alias Alfa), and their children Paris, Amy, Adam, Dafney, Mathilda, and Patsy; Jacob and his wife Patty (alias Polly), and their children Boney, Rachel, Judy, and Daniel; Yellow Tom, his wife Jenny and their children Sam, William, and ian unnamed boy; William, his wife Hannah and their children Judy and Lucinda; Old John; Isaac; Charles; Prince; Solomon; Anthony, his wife Hannah Sip, and their children Polly, Harry, John, Eveline; Old Ann; Mary; Jack; Joel; Thomas; Dan; Patsey; Mary; Green; James; Edmond; Prince; Tomas; Big John; Peggy; Robert; Louisa; Liss; Stephen

## St. James Parish

| Champagne, Evariste | sugar planation and the following individuals: Louis; Francois; Jean Pierre; Valsin; | 1833 |
| :--- | :--- | :--- |
| Justin; Marianne; and Charlotte |  |  |
| Huguet, Esteve | land and the following individuals: Pierre; Aristide | 1841 |

Huguet, Esteve land and the following individuals: Pierre; Aristide

Roche, Pierre Felix plantation and the following indivuals: Louisa and her three children Alfred, 1840
plantation and the following indivuals: Louisa and her three children Alfred,
Celestine, and Richard; Cicero; Jean Louis; Zabelle; Valery; Ophelia; John1841

## Dates Source

1835-1845 Pointe Coupee Parish, Legal and Conventiona Mortgage Book C, p. 66 (No. 217); No. 428, 1835/03/30; Pointe Coupee Parish, Legal and Conventional Mortgage Book D, p. 335, 1845/03/29 Pointe Coupee Parish, Legal and Conventional Mortgage Book D, p. 348, 1845/04/09

[^6]| Owner | Mortgaged Collateral |
| :---: | :---: |
| St. Landry Parish |  |
| Brownson, John | land and the following individuals: York; Kitty; Pat; Jim, his wife Harriet and her five children Elsy, Anthony, Phillis, Gilbert, and Delphine; Bill; Big Charles and his wife Sapho; William, his wife Sucky, and their three children Andrew, Elizabeth, and Polly; Harry, his wife Ester, and their five children Anna, Harry, Nancy, Eliza Jane, and Denis; Humphrey, his wife Maria, and their four children Betty, Hanna, Abigail, and Frank; John, his wife Mary Ann, and their four children Mary, Custers, Fanny, and unnamed individual; Antoine; Patrick, his wife Delphine, and their four children Alexander, Grace, Manuel, and Sarah; Providence; Demba and his wife Delia; Stephen, his wife Nancy, and their three children Stephen, Jane, and unnamed individual; Romeo; Pool; Euphrosine; Mises; Robert; Sam |
| Campbell, Marsden | land and the following individuals: Andrew; Ben; Bookey; Daniel; Joe; John H. Frank; Mirrgo; Ned; Scipio; Abram; Abbe; Charlotte; Fanny; Judy; Minerva; Nanny Tom; Dick; William; James; Betty; Laura; Membo; Nancy; Dorinda; Resin; Silla; Hannah; Sally; Sida |
| St. Martin Parish |  |
| Breaux, Alexandre | plantation and the following individuals: Louis; Jacques; Magdelaine; Marianne; Baptiste; Moise; Cresfort; Milly; Gre; John; Fae; unnamed infant |
| Davis, Robert J. and Caroline J. | plantation and the following individuals: Bolen; Esam; George; Paresh; Nancy; <br> Tabitha; Centha; Emilie; Fanny |
| Guidry, Marguerite | plantation and the following individuals: Bajile; Andre; Guillaume; Francesque; <br> Euken; Bill; James; Anna; Martin; Jose; Bun-aime; Caiton |
| LeBlanc, Edward | plantation and the following individuals: Charles; Ransom; Schill; Marie Lauide; Ursin; Cary; Jane; Charles; Paul; John; Peter; Nally; Robert; Cilstin; Martin; Basil; Anne; Silvie; Harden |
| LeBlanc, Norbert | plantation and the following individuals: Wally; Martin; Celestin; Robert; Silvy |
| Marsh, Jonas | land and the following individuals: Peter; Becky; Cyrus; Gilbert; Kert; Adam; Abraham; Delphe; Isaac; Abraham; Pack; Sophy; Nancy; Nelson; illegible |

St. Landry Parish

five children Elsy, Anthony, Phillis, Gilbert, and Delphine; Bill; Big Charles and his wife Sapho; William, his wife Sucky, and their three children Andrew, Elizabeth, and Polly; Harry, his wife Ester, and their five children Anna, Harry, Nancy, Eliza Jane, and Denis; Humphrey, his wife Maria, and their four children Betty, Hanna, Abigail, and Frank; John, his wife Mary Ann, and their four children Mary, Custers, children Alexander, Grace Manuel, and Sarah; Providence; Demba and his wife Delia; Stephen, his wife Nancy, and their three children Stephen, Jane, and unnamed individual; Romeo; Pool; Euphrosine; Mises; Robert; Sam
$\begin{array}{ll}\text { Campbell, Marsden } & \begin{array}{l}\text { land and the following individuals: Andrew; Ben; Bookey; Daniel; Joe; John H. } \\ \\ \text { Frank; Mirrgo; Ned; Scipio; Abram; Abbe; Charlotte; Fanny; Judy; Minerva; Nanny; }\end{array},\end{array}$ Tom; Dick; William; James; Betty; Laura; Membo; Nancy; Dorinda; Resin; Silla; Hannah; Sally; Sida

## St. Martin Parish

## Dates Source

St. Martin Parish, Conveyance Records vol 8, p 165, no 7383, 1833/06/20 274, no 7135, 1832/05/04; Conveyance Records vo 8, p. 120, no 7337, 1833/04/25
t. Martin Parish, Conveyance Records vol 8, p. 129, no 7348, 1833/06/06

St. Martin Parish, Conveyance Records vol 7, p 325, no 7188, 1832/07/16

St. Martin Parish, Conveyance Records vol 13, p 328, no 10030, 1842/04/26

St. Martin Parish, Conveyance Records vol 9, p 83, no 7604, 1834/06/07

| Owner | Mortgaged Collateral | Dates | Source |
| :---: | :---: | :---: | :---: |
| Miguez, Bernard | plantation and the following individuals: Oswald; Cilule; Betsey; Kily; Suzan | 1832 | St. Martin Parish, Conveyance Records vol 7, p. 264, no 7125, 1832/04/25 |
| Rousseau, Jean Julien | plantation and the following individuals: David; Job; Elias; Peter; Adam; Charles; Phill; Henry; Auston; Samson; Eliman; Elee; Nancy and her unnamed daughter; Ceuya; Julie; Caroline and her unnamed daugher; Silvia and her unnamed son; Sally-Anne and her unnamed son; Gwen-Ann; Caroline | 1833 | St. Martin Parish, Conveyance Records vol 8, p. 117, no 7335, 1833/04/24 |
| Vincent, Charles | plantation and the following individuals: Victor; Julie; Jacob; Jacques; Jean Pierre; Fran; Victorie; Sabel | 1832 | St. Martin Parish, Conveyance Records vol 7, p. 335, no 7196, 1832/07/19 |
| St. Mary Parish |  |  |  |
| Baker, Joshua | the following individuals: John; Hetty; Cudgo; Irwvin; Susan; Willis; Anne; Jim; Jacob; Letty; Nancy; Lijah; unnamed individual; Shedrick; Lucy; Martha; Little Shederick; Johnson; unnamed infant; Buttle; Eveline; Jared; Charles; Nancy; Lucky; Sampson; Flore; Shederick; Lewis; Sally; Little Jack; Liddy; Lavinia; Little Steven; Ritta; Linna; George Diar; Lea; Ellen; George; Marguerite; Sam; Sarah; Elizabeth; Mathilda; Jim Pratt; Sally Pratt; Edmund; unnamed individual; Jeff; Frank; Rena; Charlotte; Rena; Joshua; Claiborne; Rhubin; Ceily; Milly; Louisa; unnamed individual | 1842 | St. Mary Parish, Mortgage Book 11, p. 50, 1842/06/04 |
| Barabino, Stephen | land and the following individuals: Thomas; Elix; Isaac; Christopher; Robbins; Mansnitta; Maria; Clara; Henry; Felicity; Joseph; Coleman; Curdin; Jackson; Thomas; Philip; Fanchenetta | 1832 | St. Mary Parish, Mortgage Book 5 p. 323,1832/05/01 |
| Bernard, Raymond | land and the following individuals: James; Dick; Joe; Joe; Bartlet; Daniel; Edward; Sophie | 1835 | St. Mary Parish, Mortgage Book 7, p. 476, 1835/05/02 |
| Bodin, Simon | plantation and the following individuals: Vilgence; Adeline | 1838 | St. Mary Parish, Mortgage Book 9, p. 200, 1838/06/09 |
| Bowles, Thomas E. | land and the following individuals: Bill; Kaye; John; Isaac; Jack; William; Rob; Jackson; Clifford; Lucy; Henson; Philles; Ephraim; Jane; Kesiah; Mary; Pherody; Polly; Lucy | 1841 | St. Mary Parish, Mortgage Book 10, p. 293, 1841/04/13 |
| Brashear | land and the following individuals: Matilda; Queeney; Augustus; Flora; Courtney; Harry Todd; Hannah; Clarissa; Sinclair; Ellen; Ben; Patrick; Milly; Jinny; Ann; Saunders; Horace; Maria; Eliza Johnson; Sabina; Camilla | 1833-1843 | St. Mary Parish, Mortgage Book 6, p. 332, 1833/06/24; Mortgage Book 11, p. 198, 1843/06/01 |

## Owner

Carlin, Celestin

Carlin, Helaire
Charpantier, Joseph
Cook, John A.

## Mortgaged Collateral

plantation and the following individuals: Polly; Voltaire; Julien; Christine; Adelaide; 1838 Victor; Hassin; unnamed invidual; Jane; Feliciane; Washington; Clarissa; Ann; Henry; Moor
plantation and the following individuals: William; Claiborne; Dick; Henry; David;

1833-1841 St. Mary Parish, Mortgage Book 7, p. 36 1833/07/29; Mortgage Book 10, 380,1841/07/29

1832-1836 St. Mary Parish, Mortgage Book 6, 1832/07/14 Mortgage Book 8, p. 290, 1836/06/29

## Dates Source

St. Mary Parish, Mortgage Book 9, p. 227, 1838/07/06

St. Mary Parish, Mortgage Book 1837, Vol. 9, p 390, 1839/04/13

St. Mary Parish, Mortgage Book 7, p 420,1835/03/21

St. Mary Parish, Mortgage Book 1832, vol. 6, p. 22, 1833/04/30; Mortgage Book 8, p. 476, 1837/06/09

St. Mary Parish, Mortgage Book 7, p 300,1834/09/19

St. Mary Parish, Mortgage Book 9, p. 474,1839/07/03

St. Mary Parish, Mortgage Book 9, p. 272, 1838/08/27

St. Mary Parish, Mortgage Book 7, p. 40 1833/07/30

St. Mary Parish, Mortgage Book 9, p. 462, 1839/06/11

St. Mary Parish, Mortgage Book 11, p. 269 1843/08/12 Charles; Butler; Philippe; Hubert; Auguste; Andre; Victor; Zenon; Big George; Littl George; William; Jacques; James; Francis; Martha; Thirezes; Manette; Marine; Marionnette; Flore; Achilles; Sophy; Nancy; Rachel; Sense; Charlotte; Virginia; Charles; Betsey; Cecile Shedrick; Lucinda; Emilie; Celeste; Edmond; Clemence

| Owner | Mortgaged Collateral | Dates | Source |
| :---: | :---: | :---: | :---: |
| Fuselier, Gabriel L. | land and the following individuals: Sam; Vinah; Moses; Samuel; Benjamin; Lewis; Hanna and her unnamed child; Joe; Nancy; Caroline; Joseph; Josephine; Nelson; Peggy; Tony; Christine; Nelson; Emilia; John; Janny; Johnson; Esop; Marius and Mary; Jim; Aline; Felix; Rhody; Dave; Guy; Henry; Bartlet; Reuben; Billy; Edward; Jim; Dick; Daniel; Zenon; Gary; Jenny; Old Mary | 1843 | St. Mary Parish, Mortgage Book 11, p. 248,1843/06/24 |
| Garret, Catherine | plantation and the following individuals: Bosor; Charles; Eliza; Martin; George; Louisa; Isam; Isaac; Gilbert; Mary; Ephriam; Betsey; Morris; Callin; Susan; Allan | 1836 | St. Mary Parish, Mortgage Book 8, p. 215, 1836/04/23 |
| Garret, John | plantation and the following individuals: Lewis; Cage; Nelson; Bill; Peter; Harry; Lane; Nat; Sam; Joe; Littia; Loucas; Lavinia; Lucy; Betsey; Letitia; Caye; Sally; Bill; Lucinae; Laura; Charles; Henry; Lucy; Washington; Saul;Tamer; Natt; Nelson; Peter; Dave; Lucy; Jeff; Eliza; George; Hannah; Sam; Joe; Betsey; Gilbert | 1832-1838 | St. Mary Parish, Mortgage Book 5, p. 306, 1832/04/24; Mortgage Book 9, p. 186, 1838/05/23 |
| Gerbeau, James | planation and the following individuals: Jim, Edmund, Joseph, George, Henriette, Rosette, Cilestin, Sam or Philip, Adelaide, Margaret, Francoise, Sukey, Phil | 1833 | St. Mary Parish, Mortgage Book 6, p. 289, 1833/06/10 |
| Gerbeau, Joseph | land and the following: Charles; Jean; Peggy; Julie | 1842 | St. Mary Parish, Mortgage Book 10, p. 349, 1841/06/05 |
| Grevenberg, Charles | plantation and the following individuals: Grand Sam; Gros Sam; Billy; Little Jim; Jackson; Willis; Jim; Arthur; Joseph; Lewis; Frank; Reuben; Jordan; Ben; Alexis | 1833 | St. Mary Parish, Mortgage Book 6, p. 250, 1833/05/18 |
| Harding, Winthrop S. | land and the following individuals: Simon; Stephen; Wilks; Caleb; Major; <br> Solomon; Carey; Captain; Toney; Emeline; Maria; Betsey; Violet; Mary; Peggy; <br> Tony; Captain; Dick; Bob; Carry; Eliza; Abraham; Eleonora; Mahala; Mary; <br> William; Anna; Annette; Washington; Doctor; Harriett; Simon; Emiline; Sally; <br> Rhoda; Memory; Abigail; Franky; Delia; Sam; Reason; Penny; Anthony; Mary; <br> Tom Major; Jack; Fanny; Yama; Jacob; Lidia; Margarett; Maria; Prescilla; Almira; <br> Elvy; Viney; Violet; Betzy; Soloman; Manuel; Charity; Hannah; Joe; Daniel; John; Ismail; Leah; Nathan; Julius | 1836-1841 | St. Mary Parish, Mortgage Book 8, p. 187, 1836/04/07; Mortgage Book 10, p. 337,1841/05/15 |


|  | Mortgaged Collateral |  | Source |
| :---: | :---: | :---: | :---: |
| Haydel, George | plantation and the following individuals: Fanny and her unnamed child; William; Charles; Jordan; Pepe; Asan; George; Alexander; George; Aleck; David; Jim; Suzan and unnamed child; Bill; Sally; Washington; Perry; Henvre; Martin; Maria; John Louis; Rachel; Zenon; Bill; Joe; Baptiste; Augustin; Jim; Betty; Frank; Jesse; Linan; Jesmire; Billy; Gustave; Baptiste | 1832-1834 | St. Mary Parish, Mortgage Book 6, p. 59, 1832/07/11; Mortgage Book 7, p. 230,1834/05/24 |
| Heydell, Francoise | plantation and the following individuals: Marciss; Cilistrin; Vincent; Augustin; Laurel; Austin; Tenon; Marie Louisa and her unnamed children; Francois and her child Rosalie | 1833 | St. Mary Parish, Mortgage Book 6, p. 291, 1833/06/10 |
| Jeanerett, John W. and Constant E. Gradless | plantation and the following individuals: Jacob; Jim; Ephrom; John; Jack; Vinia; Celia and her unnamed child | 1832 | St. Mary Parish, Mortgage Book 6, p. 78, 1832/08/07 |
| Lacy, John O. and P. A. Vandorn | plantation and the following individuals: Jefferson; Isaac; Hiram; Sidner; Bill; Dennis; King; Thomas; Oscar; Maria; Susan; Emeline; Maria; Jeanett; Harry; John; Saul; Betsy; Bisis; Jane | 1833 | St. Mary Parish, Mortgage Book 6, p. 217, 1833/04/30 |
| Lacy, Susan | plantation and the following individuals: Elliot; John; Cuffy; Murray; George; Silvesha; Maria; Eliza | 1833 | St. Mary Parish, Mortgage Book 6, p. 260,1833/05/24; Mortgage Book 7, p. 1,1833/07/03 |
| Louviere, Louis | land and the following individuals: Kesiah; Mary; unnamed individua | 1840 | St. Mary Parish, Mortgage Book 10, p. 170, 1840/08/15 |
| Marsh, John C. | plantation and unnamed individuals | 1832 | St. Mary Parish, Mortgage Book 5, p. 318, 1832/05/16 |
| Murphy, John B | plantation and the following individuals: Jim; Soloman; Charles; Hlip; Charles; Stephen; Harry; Abraham; Little Sol; Washington; Jenny; Little Polly; Louise; Anny | 1836-1837 | St. Mary Parish, Mortgage Book 8, p. 210, 1836/04/16, p. 444, 1837/04/22 |
| Nash, William J. | plantation and the following individuals: Nathan; Will; Burrel; Phil; Washington; Norris; Maria; Harriet; Nancy | 1836 | St. Mary Parish, Mortgage Book 8, p. 282, 1836/06/14 |
| Parkerson, John | plantation and the following individuals: Betsey; Grace; George; Jackson; Sam; Mary | 1832 | St. Mary Parish, Mortgage Book 6, p. 53,1832/07/11 |
| Pecot, Charles | plantation and the following individuals: Bastien; George; Edmund; Celestin; Henry; Louisa; Eugene; Alsurdos; Aime; Raphael; Antonio; Suzanne and children Daniel; Meathilda; Sophy; Augustine; Clasico; Liso; Pasino and her children John, Flora, and Isabelle; Helen; Erbasy and her son Prosper; Telesse with her child Adreinne; Adeline; Adelle; Philamisi; Marie; Francaise; Eliza; Irenne; Laurett; Climeice | 1838 | St. Mary Parish, Mortgage Book 9, p. 202, 1838/06/08 |


| Owner | Mortgaged Collateral | Dates | Source |
| :---: | :---: | :---: | :---: |
| Pecot, Marie Rose | land and the following individuals: Henry; Pierre; Achilles; Jim; Charles; Ariane; Abram; Betsey; Dick; Joe; Jim; Sarah; Narcisses; Clementine; Caroline; Charlotte; Gabriel; Lanuile; Pierre; Adeline; Charlotte; Polidore; Victorin; Victorin; Victor | 1843 | St. Mary Parish, Mortgage Book 11, p. 266, 1843/08/11 |
| Porter, James | land and the following individuals: Washington; Violet; Guilford; Judy; Steamboat; Big Ben; London; Elias; Milas; Patsey; Cheney; Willis; Osborne | 1844 | St. Mary Parish, Mortgage Book 11, p. 503, 1844/12/21 |
| Robert, Peter H | plantation and the following individuals Mary; Lige; George; Maria; Tom; Allen; Nancy; Rose; Mary; Jon; Milly,Tom; Horace; Allen; Frank; Issach; Nancy; Little Mary; Maria; Milly | 1832-1833 | St. Mary Parish, Mortgage Book 5, p. 314,1832/05/03; Mortgage Book 6, p. 224,1833/04/24; p. 225; 1833/05/01 |
| Rome, Nicolas | plantation and the following individuals: Louis; Charles; Betsey; Maria | 1832 | St. Mary Parish, Mortgage Book 5 p. 331, 1832/05/07 |
| Royster, George | plantation and the following individuals: Bob; Mike; Collin; Lucy; Robin; Charlotte; Milly; Wilson; Mary; Rebecca | 1833 | St. Mary Parish, Mortgage Book 11, p. 199, 1833/07/12 |
| Sanders, Jarrad Y. | plantation and the following individuals: York; Sarah; Mathilda; Charles; Momra; Willy; Roselly; Amr; Posephinie | 1832 | St. Mary Parish, Mortgage Book 6, p. 65, 1832/07/23 |
| Shewing, George | land and the following individuals: Reuben; Sarah; Cressey; Sam | 1835 | St. Mary Parish, Mortgage Book 7, p. 432, 1835/04/03 |
| Smith, Boyd | the following individuals: Adam; Albert; Ned; Dick; James; Anderson; Abraham; Henry; Dick; Dinah; Harriet; Eliza; unnamed infant; Libella | 1833-1845 | St. Mary Parish, Mortgage Book 6, p. 298,1833/06/14; Mortgage Book 10 p. 322, 1841/05/05 |
| Smith, James | plantation and the following individuals: David; William; Isaac; Hector; Washington; Larry; Charlotte; Rachel; Porz; Cynthia; Jane; Betty; Phoebe; Henry; Ida; Jupiter; Frank; Romeo; Daniel; Michel; David; Lydia; Sarah; Bill; Mary; Sidney; Nanny; Massy; Lenis; Richard; Louis; Little Betty; Molly; Sam; Maria; Jerry; Milly; Jackson; Ellen; Jack; Joe; Jim | 1833-1840 | St. Mary Parish, Mortgage Book 6, p. 236,1833/05/03; Mortgage Book 10 p. 118, 1840/05/15 |
| Sparks, Daniel P. | plantation and the following individuals: Jack; Willam; Weston; Soloman; Ceasar; Simon; Sam; Adam; Molly; Rachel; Lucinda; Rhinah and her child Fanny; Mahrulia; Westerne; David; George; Solomon; Isaac; Jack; Molly; Rachel; Since | 1839 | St. Mary Parish, Mortgage Book 9, p. 396, 1839/04/19, p. 397, 1839/04/19 |
| Sterling, William | plantation and the following individuals: Jacob; Tom; Ned; Peter; Frank; <br> Washington; Little Tom; Jim; Rawley; Sarah; Hannah; Nancy; Fanny; Lucinda and three children Richard; Alex; and John; Maria and her children Elijah, Bob, and Effy; Augustin; Levin; Milly; Lucy | 1853 | St. Mary Parish, Mortgage Book 8, p. 229, 1853/5/13 |

## Owner

Theall, James F.

Vinson, Carroll

Wilcoxon, Thomas

## Mortgaged Collateral

land and the following individuals: Evans; Dick; Miles; Susan; Lincey; Jesse; Elsy; Ellen; Jo
plantation and the following individuals: Lewis; Lydia; Larisa; Hosey
plantation and the following individuals: Prinius; Ned; Andrew

## Dates

183218381835

## Source

St. Mary Parish, Mortgage Book 5 p. 329, 1832/05/03

St. Mary Parish, Mortgage Book 9, p. 168, 1838/04/18

St. Mary Parish, Mortgage Book 8, p. 64, 1835/08/26

## Terrebonne Parish

Boutelou de St. Aubin, the following individuals: Sam; Lenor; Davis; Rosette; Aggy and her two children 18
Terrebonne Parish, Convenance Record Jan 8, 1841 - Apr. 2, 1845, p. 582, 1841/12/16

## West Feliciana Parish

Atkins, James D. and land and the following individuals: Lucy; Maria; Caroline; Charlotte; Harriet; Florann Patsey; John; Henry; Luke; Lewis; Jim; Moses; Mills; Mary; Eveline; Milly; Sam; Bill; Dan; John; Miles; Margaret; Louis; Milley

Austin, William A. and land and the following individuals: Dave; Rachael; Silence; Milly and her unnamed daughter
Barrow, Albert G. land and the following individuals: Winney; Mary; Nancy; Jane; Ben; Elizabeth; Delphine; Thom Coleman; Henry; Sylvia; Elizabeth; Nancy
Barrow, Alexander plantation and the following individuals: Edmund, his wife Ginney, and children Lilina, Alexander, Hinderson, and Aronlien; George Hoat; Jane; Charles; Toby formerly Anthony; Susan and two children Rufus and Peter; Mary Jane and her three children Anaka, Nat, and Phillis; Richard; Gilbert; Henry; George; Harry Nearu; Harry Turpin; Bob Madry; Ephraim; Isaac Matthew; Little Bob; Rose; Sal; Abram; Charlotte; Lewis; John; Sarah; Abraham; Ritty; Mary; Ann; Julia; Amy; Mary; Rufus; Ben; Frank

Barrow, Bennet H. and tract of land and the following individuals: Eliza; Celia; Dorcas; Edney; Grace; Phil; 1834-1844 West Feliciana Parish, Mortgage Book J, p. 209, Emily

Hannah; Lizzy; Kiah; Lucy; Atean; Lewis; Levina; Ceutne; Hetty; Israel; Ralph; Lindy; Alfred; Betsey; Willey; Milley; Jack; Dennis; Cato; Esset; Nat; Sarah; Easter; Phill; Lucy; Candy; Margaret; Leah and her child Littleton; Levi; Easter; Adah; Jacob; Hannah; Jenny; Bartley; Jerry; Jim1840

1835-1841 West Feliciana Parish, Mortgage Book L, p. 257259, 1841/03/02; West Feliciana Parish, Mortgage Book J, p. 402, 1835/07/09

West Feliciana Parish, Mortgage Book J, p. 412, 1835/08/14

West Feliciana Parish, Mortgage Book L, p. 58, 1840/02/07

West Feliciana Parish, Mortgage Book H, p. 393, 1832/04/21; West Feliciana Parish, Mortgage Book H, p. 527, 1832/12/29

## Owner

Barrow, Robert James and Mary E. Craff

## Mortgaged Collateral

land and the following individuals: Tom; Elsey; Adeline; Isac; Mary Hall; Amy; Lizzy; Charity; Elizabeth; Jenny; Lucinda; Patience; Yellow John; Henry; Harriet; Matilda; Peter; Andrew; Drud; Wilson; Maria; July; Mary; Tilla; Milly; Kate; Nimrod; John; Juba; Willy
Barrow, William Ruffin the following individuals: Island Harry; Soloman;Tempa and hertwo unnamed children; Hampton Stokes; Carter Hampton; Bill O'Connor; Ned Carter; Sam O'Connor; Giles; Joshua; Aaron; Roden; Edd Long; Peter; Overton; Ben; Walter; Bill; Nat; Solomon; Booker; Dan, chlid of Adeline; Lot; Joe; Joshua; Island Ben; Harry; Sophia; Kathy; Biddy; Stella and her child Rumsey; Nancy; Annette and her child Eveline; Rachael; Ellen; Lettie; Darcus and her child Rachael; Jane; Sally Carey; Patty; Beckey; Adeline; Harriett and her child Elizabeth; Lucy; Susan; Anny: David; Fanny; Nelson; Luckey;Nanny; Frank; Sall; Lancaster; Fubal; Jephsa; Archer; Jim; Easter; Mahala; Nathan; Princess; Manerva; Rachel; Hasty; Kittey; Little Pleasant; Lewis; Harry; Temple; Cloe; Aggy; John; Charlotte; Jackson;

William;Ted; Brister; Ely; Yellow Dick; Arthur; Daniel; Jim; Joshua; Sandy; Big George; Anderson; Arthur; Little Henry; John; Amos; Littleton; Bill; Jake; Jubiter; Simon; Hampson; Big Henry; Big Jackson; Big Kitty; Big Hannah; Hannah; Ann; Little Kitty; Eliza; July; Dorcas; Sarah; Susannah; Maria; Creary; Cloze; Jenny; Penny; Adeline; Little Mary; Minta; Nan; Lemee; Nancy Lee; Charity; Patsy; Dinah Lane; Judy
Barton, Edward H. and land and the following individuals: Charles; Frank; Josias; Harriet Eveline
$\begin{array}{ll}\text { Bergess, William and } & \text { land and the following individuals: Prosper and his wife Susan, and their child } \\ \text { Elizabeth } & \text { Eliza; Tempe; Ellen and her child Fanny; Tempe's child Matilda }\end{array}$
Binghaman, Ms. Lorig
land and the following individuals: George Graves; Sandy; Richmond; Bill; Melford; 1832-1833 Moses; Dick; George; Abe; Alfred; Bob; Milford; Frank; Rod; Rachel; Dianah; Matilda; Mary; Mulatto Mary; Short Rachel; Alice; Celia; Fanny; Mariah; Chany; Alice; Christeen; Henrietta; Ann; Priscilla
Blount, Levi
land, plantation on Bayou Sarah, and the following individuals: Tom; Harry; Jacob; 1833 Bill; Lewis; Tempy; Lucinda; Daine; Ann; Adeline; Reuben; Henry; Abner; Daniel; Anderson; Emily; Sarah; Matilda
Boyle, William D. and land and the following individuals: Henry; Isaac; Preston; Milly

## Dates Source

1841

West Feliciana Parish, Conveyance Record K, p. 299, 1851/08/26; West Feliciana Parish, Conveyance Record K, p. 297, 1857/08/28; West Feliciana Parish, Mortgage Book M. 134, 1842/05/18; West Feliciana Parish, Mortgage Book L, p. 216, 1840/11/12

West Feliciana Parish, Mortgage Book H. p. 419, 1832/04/27

West Feliciana Parish, Mortgage Book J, p. 147, 1833/07/08

West Feliciana Parish, Mortgage Book H, p. 390, 1832/04/14; West Feliciana Parish, Mortgage Book J, p. 84, 1833/04/06

West Feliciana Parish, Mortgage Book J, p. 96, 1833/04/13

West Feliciana Parish, Mortgage Book K, p. 408, 1839/05/27

## Owner

Bradford, David and
Amanda

Brown, Asa

## Mortgaged Collateral

land and the following individuals: Bison; Elisha, his wife Nancy, and their children, 1837 Charity, Lubela, and Johan; Queen and her son John; Emma and her two children Harriet and Sampson plantation, land, and the following individuals: Jim; George; Harry; Charles; Adam; 1833-1843 Little George; Henny; Dorcus; Caroline; Lucy; Bill; Eliza; L. Charles

Burgess, William
land and the following individuals: Jack; Carolin; Harriet; Tom; Malvina; Lucy;
Amy; Ellen; Fanny; Julie; Susan; Eliza; Ann; Louisa; Tempee; Matilda; Henderson; unnamed individual

Canfield, Zackariah and land and the following individuals: Mary; David; Sarah
Julia
Clark, Maria
land and the following individuals: Jim; Frank
Cobb, Stephen C. land and the following individuals: Roman; Lethy; Ann; Sally; Lethy Amis; George 1841 Washington; Allin; Henry; Frank; Peter; Adeline
Croft, John and Susan the following individuals: January; Cuase; Peter; April; Cuase; Sithe; Sithe;
George; Isaac; Andrew; Jinny and her child Caroline; Rose; Lucy; Hester and her children Jerry, Edmund, illegible, and William; Winny and her children Joe and Hester; Young Rose; Mary; Anthony; Jim
Davis, Charles H. and land and the following individuals: Isaac; Sal or Sarah; Alice; Alex or Alexander;
Ann M.
Davis, Jesse
Davis, Lewis F. J. land and the following individuals: Eve and her two children Mincey and Jim; Fanny and unnamed child; Cato Virgil; Flora and her unnamed child
Dawes, Salloman M. land and the following individuals: William; Nelly; John; Clara; Victor; Sylvia; Caroline; Prince; Betty
land, plantation, and the following individuals: Sam; Ishmael; Arch; William; Cato; 1833 Jane; Vine; Milley; Phillis; Charlotte; Adeline; Len; Lydia; Filler; Harriette; Charlotte; Allen; Cornelius; Virginia; Caroline; Martha; Eliza; Arch183718391832

## Dates Source

West Feliciana Parish, Mortgage Book J, p. 584, 1837/02/08

West Feliciana Parish, Mortgage Book, p. 89, 1833/04/09; Pointe Coupee Parish, Legal and Conventional Mortgage Book C, 1711, 1839/03/11; West Feliciana Parish, conveyance Record H, p. 458, 1843/09/12

West Feliciana Parish, Mortgage Book J, p. 583, 1837/02/07

West Feliciana Parish, Mortgage Book N, p. 296, 1839/02/27

West Feliciana Parish, Mortgage Book H, p. 414, 1832/04/24

West Feliciana Parish, Mortgage Book L, p. 299, 1841/05/18

West Feliciana Parish Mortgage Book H, p. 406, 1832/04/23

West Feliciana Parish, Mortgage Book L, p. 113; 1840/05/04

West Feliciana Parish, Mortgage Book J, p. 40, 1833/02/27

West Feliciana Parish, Mortgage Book K, p. 275, 1839/01/16

West Feliciana Parish, Mortgage Book J, p. 121, 1833/05/11

West Feliciana Parish, Mortgage Book J, p. 82, 1833/04/03

| Owner | Mortgaged Collateral |  | Source |
| :---: | :---: | :---: | :---: |
| Doherty, Anthony and Marsa | plantation, land, and the following individuals: William; Dick or Yellow Dick; Jack; Milley; Ida; Long George; Abraham; Charles; Isaac; Robbin; Harry; Vine; Henry; Rose; Ginney; Easter; Hannah; Lewis; Christmas; Henry; Anthony; Samuel; Peter; Charles; Lean; Ann; Margaret; unnamed individuals; Levin; Margaret; Celia; Welloughty; Jan; Aurr; Margaret; Jack Goin; Dannis; Jack; Sophia; Adeline; Leah; Rachel; Ann; Kate; Stephen; Alfred; illegible; Couilla; Coth; Dicey; Neacy | 1833 | West Feliciana Parish, Mortgage Book J, p. 107, 1833/04/27; West Feliciana Parish, Mortgage Book, p. 156, 1833/07/26 |
| Doherty, Charlotte | land and the following individuals: Anthony; Peggy; Delphe; Aaron; Margaret; Maria; Sylvia; Renold; Tell | 1839 | West Feliciana Parish, Mortgage Book K, p. 325, 1839/02/15 |
| Doherty, Peter | the following individuals: Peter and his wife Adaline; Sam; Short George; Mike; Maria; Bet; Stephen; Willis; Ollive; Dice; Maria; Ellen; Phil; Long George; Thornton; Levin | 1841 | West Feliciana Parish, Conveyance Record G, p. 208, 1841/04/27; West Feliciana Parish, Mortgage Book K, p. 387, 1839/04/27; |
| Duir, Robert | land and the following individuals: Matt; Vine; Peter; Kitty; Nancy; Tom; Milley | 1832-1842 | West Feliciana Parish, Mortgage Book H, p. 386, 1832/04/19; West Feliciana Parish, Mortgage Book J.. P. 125, 1833/05/18; West Feliciana Parish, Mortgage Book M, 111, 1842/04/11 |
| Dupre, James R. | land and the following individuals: Isaac; Otis; Anrster; Bob; Bob Oliver; Helen; Judy; Danferey; Sarah and her child Margaret; Rena; Nancy; Charlotte; Ellis; Jim; Ann | 1834 | West Feliciana Parish, Mortgage Book J, p. 259, 1834/04/12 |
| Edie, Charles M. | plantation and the following individuals: Sharper; Betsey and her son; Isaac; Jim; Mary Ann; Emmeline; Tom; Bill; Lucy and her son Peggy; Louden; Lucy; Eliza; Patsey; Sarah; George; Reuben; George; Polly; Ann; Anderson; Hannah | 1848 | West Feliciana Parish, Mortgage Book N, p. 453, 1848/05/25 |
| Fair, James and Mary | plantation and the following individuals: Phileum and his wife Mary; Maria; Charlotte; Mary; Watty; Dick; Henry; Charles and his wife Mary; Eady; Grace and her child Martha; Abraham and his wife Sylvia and Abraham's children Stephen and Esther; Roderick and his wife Milly; Trilly and her child; Ginney; Tom; Dave; Rachael; Abraham; Jacob; Nancy; Jack; Billy; Phillis; Fountain; Jake; Sam | 1835 | West Feliciana Parish, Mortgage Book J, p. 310, 1835/01/22; |
| Farrar, Mary Ann | land and the following individuals: Esther and her children, Nace and Margaret; John; Manuel; Bob and his wife Sabra and their children, Tenp and Jince; Sam and his wife Betty and their children, Patience and Cato; Sylvia and her daughter Ann; Caroline; Martha; Maria; Little Bob; Sarah; Moses; William alias Banks | 1836 | West Feliciana Parish, Mortgage Book J, p. 492, 1836/03/12 |


| Owner | Mortgaged Collateral | Dates | Source |
| :---: | :---: | :---: | :---: |
| Fort, Ann | land and individuals: Nace; John; Manure; Bob; Jane; Cato; Esther; Margaret; Sabra; Betsy; Sylvia; Jane (alias Fanur); Tempe; Jinny; Patience; Ann; Carolin; Martha; Simon; Dennis; Daniel; Bob; Sam; Siddy; Mary; Esther; Fanny; Sisy; Ann; Ben; Washington; Pharaly; Eiha; Judy; Dilsey; Josephine; Clever; Judy; Isaac; Sarah; Essex; Jim; Harry; Rhody; John; Chloe; Tuolage; Mournany; Nelson; Lucy; Andrew; Sylvia; infant; Josephine | 1832 | West Feliciana Parish, Mortgage Book H, p. 425427, 1832/05/01 |
| Fort, William | land and the following individuals: Edmond; Dick; Hank; Jake; Anthony; George; Moses; Jim; Tom; Lorenzo; Little Anthony; Beck; Nance; Charlotte; Rose; Susan; Ellen; Chancy; Anthony; Arthur; Jerry; Jacob; Edmond; Hackless; James; Andrew; Little George; Henry Dou; Little Harry; Kitty; Jane; Lucey; Silvey; Josephine; Julia; Nancy; Lacey; Betsey; Valentine; Phil; Charity; Tennessee; Jerry; Lady and her child Joe; Allen; Lucky; Thomas; Gran; Sally; Jackson; Halifax; Lucinda; Varny; Isaac; Monroe; Henry; Sam; Patty; Washington; Bytha; Jane Fisher; Josiah; Cesar; Jenny; and three unnamed | 1832-1841 | West Feliciana Parish, Mortgage Book H, p. 388, 1832/04/20; West Feliciana Parish, Mortgage Book J, p. 420, 1835/10/31; West Feliciana Parish, Mortgage Book L, p. 267-269, 1841/03/29 |
| Gray, Josias | land and the following individuals: Hannah; Dave; John; Ned; Clara; Toby; William; Sophia and her child Delia; Sarah; Julia; Lodoiski; Flora; Miles | 1834-1847 | West Feliciana Parish, Mortgage Book J, p. 249, 1834/04/09; West Feliciana Parish, Mortgage Book, p. 517, 1836/05/07; West Baton Rouge Parish, Mortgage Book Q, p. 504,1831/05/07, Mortgage Book S, p. 480,1847/06/10 |
| Guibert, Corelie B. | land and the following individuals: Stephen; David or Daniel; Theodore; Registe; Ned; Adelaide; Rosaline and her son Edmund; Louisa; Amy; Harriet; William; Fanny; Mary Ann and two children Annette and Celia | 1842 | West Feliciana Parish, Mortgage Book M, p. 78, 1842/01/18; West Feliciana Parish, Mortgage Book O, p. 116, 1851/06/26 |
| Haile, Robert | land and individuals: Charles; George; Rouna; Matt; Harry; illeg. and her two children Tom and Jim; Hannah and her son Phillip; Priss and her unnamed child; Dice and her unnamed child | 1836 | West Feliciana Parish, Mortgage Book J, p. 448, 1836/01/01 |
| Harbour, John A. | land and the following individuals: Aaron; Nicey and her child Rose; Sarah; Easter; Esthma; Jesse; Frederick; Anthony; Caff; Ann; Adeline; Sam; Arch, his wife Phillis, and their children Martha, Caroline, Eliza, Little Arch, Henry, Robert and an unnamed infant; Ishmael, his wife Jane and their children Len, Lydia, Matilda, Harriet, Little Charlotte, Ellen, Little Ishmael, and Rachael; Abner; Big Charlotte and her unnamed infant child; Vine and her children Allen; Cornelius; Virginia; Clara; and orphan Mary Jane | ; 1834-1844 | West Feliciana Parish, Mortgage Book J, p. 297, 1834/10/24; West Feliciana Parish, Mortgage Book L, p. 255, 1841/02/23; West Feliciana Parish, Mortgage Book M, p. 524, 1844/10/21 |


| Owner |  | Dates | Source |
| :---: | :---: | :---: | :---: |
| Hargadine, William | land and the following individuals: Charles; Isaac; Sam; Wellington; Delia; Judy and her child Oscar; Milley; Victore; Rinos; Aggy; Caroline and her two children Betsey and Lafayette; Rosetta; Julett | 1834 | West Feliciana Parish, Mortgage Book J, p. 258, 1834/04/12 |
| Harvey, M. A. | land and the following individuals: Julia; Jack; Arey; Dancy; Nancey and her unnamed daughter; Ritta and her son Jim; Daniel | 1839 | West Feliciana Parish, Conveyance Record I, p. 144, 1839/03/25 |
| Holmes, John | the following individuals: Albert; Edmond; Wilson; Robin; Harriet | 1843-1853 | West Feliciana Parish, Mortgage Book M, p. 409, 1843/09/20; West Feliciana Parish, Mortgage Book O, p. 358, 1853/06/29 |
| Hosia, Thomas N. | land and the following individuals: Hammond; Bill; Andrews; Betsey; Kittey; Joe; Alfred; America; Lucy; Ned; Maria; Lucinda | 1834 | West Feliciana Parish, Mortgage Book J, p. 265, 1834/04/12 |
| Howell, Ebenezer | land and the following individuals: George; Harry Nearn; Harry Turpire; Ephraim; Isaac Matthews; Guinea Bob; Elijah; Esther; Rose and her two children Nullifier and Union; Sarah; Abraham; Charlotte; Lewis; Milley; Harriet and her two children Ann and Joe; Grace and her three children Anny and two unnamed children; Paul; Little Bob; John | 1835 | West Feliciana Parish, Mortgage Book J, p. 326, 1835/03/03 |
| Jackson, Jesse K. | plantation and the following individuals: Sam; Carey; Eliza; Matilda; Mariah; Mary; Tom; John; Henry; Emily; Sally; Bob; Ben; Sandy; Bill; Bridget; Rhody; Sarah; Jane; James; Elijah | 1834-1837 | West Feliciana Parish, Mortgage Book J, p. 238, 1834/03/20; West Feliciana Parish, Mortgage Book J, p. 593, 1837/03/01 |
| Jenkins, Sylvester B. | land and the following individuals: Louisa and Elvey | 1844 | West Feliciana Parish, Mortgage Book M, p. 428, 1844/02/03 |
| Johnson, Charles G. | land and the following individuals: Henry; Bartlette; Tom; Charles; Jim; Peter; Joe; Nelson; Sam; Edmond; Ned; Tempe; Harriette; Jane; Lenese; Lucy; Old Lucy; Frank; Lucy; Gunny; Rayney; Susan; Clia; Francis; Betsey; Ellen; Rose; Maria; Lucinda; Nancy | 1833 | West Feliciana Parish, Mortgage Book J, p. 91, 1833/04/10 |
| Joor, Emily | land and the following individuals: Rose; Charles; Ruthy; Fever; Nance; Elic; Tom; Buddy; Sally; Daniel; Peggy; Gabriel; Mary; Anthony; Linden; Rosette; Lucy; Selina; Ann; August; Lavinia; Lucky; Beck; Joe; Alex; Amy; Brister | 1840 | West Feliciana Parish, Mortgage Book L, p. 98, 1840/04/07 |
| Leake, James and Mary; James and Ann C. Rucker | land and the following individuals: Dick; Tom; Kitty; George; Edward; Madeline; Casey; Jane; Elizabeth and infant Tom; Susey or Surry; Boston; Kitty; Charlotte; Isaac; Simon; Philip; Stephen; Sally and her two unnamed children; Rosan; Kelly | 1839-1844 | West Feliciana Parish, Mortgage Record K 398, 1839/05/07; West Feliciana Parish, Conveyance Record H, p. 515, 1844/02/03 |
| Leet, George H. | land and the following individuals: Mary; David; Sarah | 1846 | West Feliciana Parish, Mortgage Book N, p. 296, 1846/05/12 |

## Owner

Marks, Francis and
Mariah
Marshall, Brisbaine

## Mortgaged Collateral

land and the following individuals: Jilsey; Patsey; Marieh; Philip; unnamed
land and the following individuals: Abraham; Harriett; Jane

## Dates Source

1835
West Feliciana Parish, Mortgage Book J, p. 404, 1835/07/10

1833-1834 West Feliciana Parish, Mortgage Book J, p. 141, 1833/07/02; West Feliciana Parish, Mortgage Book J, p. 251, 1834/04/10

McCaleb, Samuel and
Sarah
plantation, land, and the following individuals: Richard; John; Cagen; Sam; Sylvia; 1833-184 Lewis; Betsey; Washington; Reason; Susan; Margaret; Joshua and his wife Celia and her two children Nancy and Simon; Phillis; Nena and her child Grace; Lidia; Abel , Matilda; Hards; infant; Tom; Century and his wife Lavinia; Tilla; Harriet; Kitten and her son Lewis

McDermott, Charles C. land and the following individuals: George; Mary Books; Joe; Bofonto; Franky; Davy; Elizabeth; Daniel; Henry; Edmond; John; Joe; Big Mary; Flora; Abel; Stephen; Eliza; Joe; Isaac; Violet; Louisa; Viney; Troy; Charles; Livia; Gabriel; Shadrock
Muse, Daniel
Paine, John

Percy, Robert D.

Perkins, John and Julietta; Henry and
Mary Perkins

Perry, Hardy

Phillips, Uriah B. and
Edward
land and the following individuals: Alick; Judah; Minerva; Margaret; illegible
land and the following individuals: Randal; Henry; Eliza; Eliza (alias Phillis); Mary
plantation, land, and the following individuals: Toby; Heba; George; David; Charles; Nancy; Jane; Parker; Lewis; Millis; Ephram; Katy; George; Nancy Bell; Jim; Esther; Henry; Rachael; Frank; Joe; Rose; Jenny
plantation, land, and the following individuals: Harry; Priscilla; Will; Hetty; Ann; Harriett; Jim; Morris; Hiram; Burrell; Spencer; Jordan; John Brown; John Wilson; Joe; Ester and her child Aggy; Eliza; Judy; Anna; Judy; Alsey and her child Alvira; Amy; Hivau; Lanford; John Gray; Samuel; Josiah; Stephen; Martha; Sophia; Lucinda; Miley
plantation, land, and the following individuals: Henry; Edinborough; Lemmon; Caroline Cartwright; Jenny; Lucinda; Henry; Mary; Olivia; John; Clark; Amanda; Solomon; Hannah; Big Joe; Jim; Little Joe; Milly and her two children West and Lucretia; Melissa; Hillary; Jacob; Martha; George
Catherine

West Feliciana Parish, Mortgage Book J, p. 88 1833/04/08; West Feliciana Parish, Mortgage Book J, p. 302, 1834/11/27; West Feliciana Parish, Mortgage Book M, p. 72, 1841/12/27

1833-1834 West Feliciana Parish, Mortgage Book J, p. 144, 1833/07/05; West Feliciana Parish, Mortgage Book

West Feliciana Parish, Mortgage Book L, p. 31, 1840/01/03

West Feliciana Parish, Mortgage Book H, p. 404, 1832/04/23

West Feliciana Parish, Mortgage Book H, p. 400, 1832/04/23

West Feliciana Parish, Mortgage Book J p. 467, 1836/01/27

J, p. 254, 1834/04/10

1833-1842 West Feliciana Parish, Mortgage Book J, p. 104, 1833/04/25; West Feliciana Parish, Mortgage Book K, p. 256, 1838/12/14; West Feliciana Parish, Mortgage Book M, p. 179, 1842/06/10

West Feliciana Parish, Conveyance Record I, p. 559, 1849/03/21

|  | Mortgaged Collateral |  |  |
| :---: | :---: | :---: | :---: |
| Pope, Martha | plantation and individuals: Goin; Mike; Mark; Stephen; Wellington; Sally; Harriet; Sally; George; Marie Goeu; Bob; Thornton; Phillis; Jacob; Molly | 1832-1834 | West Feliciana Parish, Mortgage Book H, p. 396, 1832/04/21; West Feliciana Parish, Mortgage Book J, p. 306, 1834/12/31 |
| Randolph, Peter | land and the following individuals: Brutus; Nimrod; Robert; Hiram; Moses; Alfred; Frank; Katey; Harriet and her son John; Laura and her children Jesse and Belinda; Betsey and her child Rodolphus; Nancy and her child Nimrod; Little Harriet and her child Sarah; Tabby; Hannah; Eliza; Little Kattey, child of Hannah | 1852 | West Feliciana Parish, Mortgage Book O, p. 260, 1852/12/17 |
| Ratliff, Ann | plantation and the following individuals: Glacous; York; Barret; Dick; Jim; Reuben; Milford; Ben; Phebe; Nan; Tina; Ginny; Nelly; Chancy; Brackston; Jackson; Carral; Burr; Hule; Matilda; Milly; Amy; Rosetta; Patsy; Eliza; Gertrude; Henrietta; Hetty; Rosathe; Susanna or Luretha; Josiah | 1832 | West Feliciana Parish, Mortagage Book H., p. 440, 1832/05/02 |
| Ratliff, Cyrus | land and the following individuals: Henry; Ningo; Harriet | 1836 | West Feliciana Parish, Mortgage Book J, p. 516, 1836/05/05 |
| Richardson, Wade and Charlotte | plantation, land, and the following individuals: Piere; Tener and her child; Sarah; Mott; Pegge; Dave; Edmond; Washington; Frank; Mary; Hosea; Bob; Henny; Jennette; Richard; Lucy; Jim; Nat; Elcey | 1833-1841 | West Feliciana Parish, Mortgage Book J, p. 111, 1833/04/30; West Feliciana Parish, Mortgage Book L, p. 244, 1841/02/07 |
| Routh, Francis and Mary | land and the following individuals: Luckey; Ellen and her unnamed child; Mary Harbor; Nelson; Jane Harbor; Eveline; Richard; Polly; Cotton; Jane Ferry; Harry Johnson; Caroline; Jenny Odum and her unnamed child; Penine; Lydia; Alfred; Louisia; Beckey Binch and her unnamed child; Matilda; Lissia; Jenny Bich and her unnamed child; Stephen; Harry Cotton; Beckey Mils; Yom; Alfred; unnamed infant; Jenny Liddy; Lydia | 1835 | West Feliciana Parish, Mortgage Book J, p. 369, 1835/04/28 |
| Simmons Anthony J. and Agnes | land and the following individuals: Malinda; Silas; Mordecai and his wife Fanny; Caroline; Eliza and her two daughters: Maria and Elizabeth; Jim | 1836 | West Feliciana Parish, Mortgage Book J, p. 464, 1836/01/29 |
| Smith, Ira and Mary Ann | sugar plantation the following individuals: Rose; Wilson; Lyida; Causemell; Amos; Milley; Sylvia; Isaac; Sinah; Lewis; Purnel; Jinney; Priscilla; William; Marsha; Daniel; Jinney Tiddy; Lynda; Henry; Lyttleton; Harry; Prince; Pleasant; Sally; Mary Grace | 1833 | West Feliciana Parish, Mortgage Book J, p. 109, 1833/04/30 |
| Spencer, Jace and Mary | land and the following individuals: Munday; Henry; Isaac; Dick; Bob; Tom; Jack; Elenor; Charlotte; Lydia; Sealey; Leah; Phillis; Violet; Issabella; Mariah; Silvey; Lucinda; Lucy; Beck; Bedy; Annis; Charles | 1833 | West Feliciana Parish, Mortgage Book J, p. 86, 1833/04/06; East Feliciana Parish, Mortgage Book C, p. 141, 1833/04/06 |

## Owner

Stirling, Lewis

Swift, Margaret

Tenney, Henry

Turnbull, John

## Mortgaged Collateral

land and the following individuals: Sambo, his wife Ellin and her children: Black Dublin, Thomas, Susan, and Perry; Billey, his wife Silvia and their children: Dally, Harry, Nann, Martin, Magdalien, Celest, Billey, Walley, his wife Pender, and their children: Fortune, Nan, Patsey and Caroline; Penny and her children: Clarissa, Samson, Rachal, Munday; Clarissa's children Celia and Levi; Big Ben, his wife Delia, and their children Little Ben, Sam, and Hester; Sidney and her son Julius; Allin and his wife Miranda; Lige; Old Sam; Surry; Jim; Nan and her children Amy and Abia Philips; Prince; Jacob; Frank; Bartlett and his wife Charlotte; Anderson; Jancy; Sampson; Monday; John, his wife Clarisse, and their children Celia and Ginney; Dublin; his wife Rachel, and their children Polly, Clarisse, and Ellen; Big Ben, his wife Deliba, and her children Jack, Joe, and Wiley; Little Ben, his wife Nan, and her child Thisanna; Sam Brown; Little Charles and his wife Hester; Charles; Sambo; Ellen; Chester; Thomas; Susan; Jenny; Squire; Mike; Isaac; Josiah, his wife Fontaine
and her children Charlotte and Rose; Waley; Cinda; Caroline; Old Charles; Julia Ann and her children Rosetta and Charles Boles; Necis; Old Nelly; Sam Jackson; Chamy; Muriata; Suckey and her children Eliza and Liddy; Liddy's children Joshua, Hannah, Charles, and Suckey; Nan and her child Robert; Sambo; Harry; Catey; Little George; Sophy; Alfred; Lucinda; Louisa; Barica; Sarah; Fanny; Adam; Rose; Nelly and her children Isabel, Barica, and Lucy; Wiley; Winson; Tennessee; Little Tennessee; Fortunore; Big Judy; Long George; Linder; Cecile; Primus; George; Lewis; Rosalle; Luk; Wilson; Eveline; Mariah; Sarah; Sarella; Baptiste; Joe; Mary; Clara; Liven; Maretta; Judy; Henrietta; Erven; Leven; Nelson; Clarinda; Spencer; Affy; Amanda; Jane; Beck; Rinah; Fortune; Yanco; Little Judy; Hannah; Rosabel; Josephine; Washington; Jack; Liddy; Franswaise; L. Charlotte; L. Hannah; Celia; Tempo; Wisley; Catherine; Frozene; Rimus; L. Joe
land and the following individuals: Dave; Tom; Henry; Milly; Hetty; Clara; Elsey;

## Dates Source

1833-1844 West Feliciana Parish, Mortgage Book J, p. 79 1833/04/03; West Feliciana Parish, Mortgage Book M, p. 552,1844/12/24, p. 558, 1844/12/30

[^7]
## Owner

Wade, William C. and

## Olivia

Williams, James

Woods, Ezer E.
Young, Sarah

## Mortgaged Collateral

land and the following individuals: Alexander; Lucy; Lenord; Wilson; James; Thomas; Austin; Louisa; Emily; Samuel; Martha; Jerry; Milly; Bob; Viney; Becky; Nelly; Evelina; William; Thomas; William; Hester; illegible ; Henry; Kitty; Bazel; Caroline; Clarissa; Nance; Nick; Henry; Henson; Jane; David; Ben; Kmbi; and two unnamed children
plantation and the following individuals: Jim; John; August; Jim; Black Bill; Yellow Bill; Simon; Randal; Napoleon; Warner; Celia; Hannah; Frances; Winny; Hannah mother of other Hannah; Emeline
land and the following individuals: Sucky; George; Charlotte; Eliza; Wayne; Axis; Joe; Susan; Frank; Polly and her child John
land and the following individuals: Gabriel; Joe; Luke; Simon; Sam; Dan; Henry; Frank; Alexander; illegible ; Charles; Nancy and her three children Judy, Matila, and Julian; Jinney; Ellen; Aggy; Mary; Fally; Rebecca; Sophy; Lucinda; Clary; Daphny; Betty; Dinah; Lydia; Anny and her two children Isaac and David; Lelina and her three children Julian; Rhym and Susan; Maria and her three children Peter, Louisa, and Hariette; Dann; Ryan; Lucy; Malissa; Maria; Celest; Old Rym; Sally

## Bank of Kentucky (Lexington Branch)

## Fayette County <br> \section*{Benton, Lloyd and}

Warren
Clay, J.B.
Harrison, J. O.
Morrison, R.
property and the following individuals: John; Kitty
property and the following individuals: Alfred; Levi; Lewis; Oliver property and the following individuals: Sam; Isham; Henry; Fanny; Mary and her unnamed child; Mathilda and her unnamed child; Sarah Jane property and the following individuals: Peter; Harry; Peter; Jim; Aaron; Edmund; Reuben

## Dates

1840

## Source

West Feliciana Parish, Mortgage Book L, p. 70, 1840/02/28

West Feliciana Parish, Mortgage Book H., p. 411, 1832/04/20

West Feliciana Parish, Mortgage Book J, p. 360, 1835/04/07

1832-1833 West Feliciana Parish, Mortgage Book H, p. 422, 1832/04/03; Mortgage Book J, p. 103, 1833/04/20

Fayette County, Deed Book 17, p. 325

Fayette County, Deed Book 22, p. 162; Deed Book 23, p. 558

Fayette County, Deed Book 18, p. 5
Fayette County, Deed Book 14, p. 61; Deed Book 15, p. 212

## Owner

## Mortgaged Collateral

property and the following individuals: Doctor; Dan; Sandford; Ned; John Lewis; Ellis; Edmund; Henry; George; Buck; Charles; William; Sally; Emily; Lucy; Polly;
Payne, Orlando F.
Vance, William

Susan; Winney; Pliney; Sarah; Julia Ann; Mary; Mary Ann; Jeff; Sidney; Jane
property and the following individuals: Henry; Alfred; Ben; Ben; Harrison; John

## Dates Source

Fayette County, Deed Book 20, p. 252
Fayette County, Deed Book 19, p. 141

## Anti-Predatory Lending Pledge* for Municipal Depositories

We pledge that we are not and will not become a predatory lender as defined in Chapter 2-32 of the Municipal Code of Chicago. We further pledge that none of our affiliates is, and none of them will become, a predatory lender as defined in Chapter 2-32 of the Municipal Code of Chicago. We understand that becoming a predatory lender or becoming an affiliate of a predatory lender may result in the loss of our designation as a municipal depository.


Name of Financial Institution


Sean Grzebin
Name of Authorized Officer (Print or Type)


Title
$\qquad$ $\frac{904-462-4379}{\text { Business Telephone Number }}$

[^8]
## Loan Policy Pledge for Municipal Depositories

We pledge not to arbitrarily reject mortgage loans for residential properties within a specific geographic area in Chicago because of the location and/or age of the property, or in the case of proposed borrower to arbitrarily vary the terms of those loans or the application procedures for those loans on the basis of race, color, religion, national origin, age, sex, marital status, ancestry, sexual orientation, parental status, source of income, disability or military discharge status. In addition, we pledge to make loans available to low- and moderate-income residential property in the neighborhoods of the City of Chicago within the limits of our legal restriction and prudent financial practices.

We understand that arbitrarily rejecting or varying the terms and/or application procedures of mortgage loans on the basis of the factors listed above may result in the lost of our designation as a municipal depository.
If Morgan Chose +Lc
Name of Financial Institution

Signature of Authorized Officer
SEAN Grzebin
Name of Authorized Officer (Print or Type)


Business Telephone Number

## FIRMWIDE

PLEASE POPULATE THE HIGHLIGHTED PORTIONS ONLY

| Firm Name: | JPMorgan Chase Bank, N.A. |
| :--- | :---: |
| Primary Representative: | Joanne Baer |
| Primary Representative Email and Telephone: | ¡oanne.baer@jpmorgan.com; 312-732-6988 |
| Headquarters Address: | 1111 Polaris Parkway, Columbus, OH 43240 |
| Chicago Public Finance Office Address: | 10 South Dearborn, Chicago, IL 60603 |
| Total Number of Employees: |  |
| Number of Employees in Illinois: |  |
| Number of Employees in Chicago: |  |
| Capital Position: |  |
| Minority Designation: |  |



Job Categories
Officials and Managers

| Overall <br> Totals | White <br> (Not <br> Hispanic) | Black <br> (Not <br> Hispanic) | Hispanic | Asian | Native <br> American | Two or More <br> Races |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |



FIRMWIDE
PLEASE POPULATE THE HIGHLIGHTED PORTIONS ONLY

| Firm Name: | JPMorgan Chase \& Co. |
| :--- | :---: |
| Primary Representative: | Joanne Baer |
| Primary Representative Email and Telephone: | joanne.baer@ipmorgan.com; 312-732-6988 |
| Headquarters Address: | 383 Madison Avenue, New York, NY 10179 |
| Chicago Public Finance Office Address: | 10 South Dearborn, Chicago, IL 60603 |
| Total Number of Employees: | 174,172 |
| Number of Employees in Illinois: | 14,791 |
| Number of Employees in Chicago: | 9,187 |
| Capital Position: |  |
| Minority Designation: | N/A |


|  |  | 83,747 |  |  |  |  |  | 90,425 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Male |  |  |  |  |  | Female |  |  |  |  |  |
| Job Categories | Overall <br> Totals | $\qquad$ | Black <br> (Not <br> Hispanic) | Hispanic | Asian | Native <br> American | Two or More Races | $\qquad$ | Black (Not Hispanic) | Hispanic | Asian | Native American | Two or More Races |
| Officials and Managers | 42,989 | 14,019 | 1,780 | 2,361 | 4,822 | 34 | 400 | 10,622 | 2,475 | 2,524 | 3,473 | 36 | 443 |
| Professionals | 55,786 | 14,373 | 2,890 | 3,632 | 10096 | 40 | 660 | 9,875 | 3,496 | 3,149 | 6922 | 49 | 604 |
| Technicians | 194 | 81 | 28 | 22 | 24 | 0 | 5 | 17 | 4 | 5 | 6 | 0 | 2 |
| Sales Workers | 24,458 | 7,675 | 1,213 | 3,472 | 1828 | 33 | 331 | 4,343 | 914 | 2,581 | 1810 | 22 | 236 |
| Office and Clerical | 50,596 | 4,312 | 2,495 | 5,243 | 1257 | 70 | 439 | 11,136 | 8,425 | 13,138 | 2902 | 163 | 1,016 |
| Craft Workers (Skilled) | 5 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Operatives (Semi-Skilled) | 0 |  |  |  |  |  |  |  |  |  |  |  |  |
| Laborers | 0 |  |  |  |  |  |  |  |  |  |  |  |  |
| Service Workers | 144 | 23 | 37 | 33 | 11 | 0 | 3 | 5 | 19 | 10 | 2 | 0 | 1 |
| Total | 174,172 | 40,487 | 8,443 | 14,764 | 18,038 | 177 | 1,838 | 35,998 | 15,333 | 21,407 | 15,115 | 270 | 2,302 |


| Job Categories | Overall Totals | White <br> (Not <br> Hispanic) | Black <br> (Not Hispanic) | Hispanic | Asian | Native American | Two or More Races |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Officials and Managers | 25\% | 14\% | 2\% | 3\% | 5\% | 0\% | 0\% |
| Professionals | 32\% | 14\% | 4\% | 4\% | 10\% | 0\% | 1\% |
| Technicians | 0\% | 0\% | 0\% | 0\% | 0\% | 0\% | 0\% |
| Sales Workers | 14\% | 7\% | 1\% | 3\% | 2\% | 0\% | 0\% |
| Office and Clerical | 29\% | 9\% | 6\% | 11\% | 2\% | 0\% | 1\% |
| Craft Workers (Skilled) | 0\% | 0\% | 0\% | 0\% | 0\% | 0\% | 0\% |
| Operatives (Semi-Skilled) | 0\% | 0\% | 0\% | 0\% | 0\% | 0\% | 0\% |
| Laborers | 0\% | 0\% | 0\% | 0\% | 0\% | 0\% | 0\% |
| Service Workers | 0\% | 0\% | 0\% | 0\% | 0\% | 0\% | 0\% |
| Total | 100\% | 44\% | 14\% | 21\% | 19\% | 0\% | 2\% |


|  |  |  |
| ---: | ---: | ---: |
| Male | Female | Total |
| $48 \%$ | $52 \%$ | $100 \%$ |

# AFFIDAVIT OF COMMITMENT TO COMMUNITY REINVESTMENT, RESPONSIBILITY AND TRANSPARENCY CITY OF CHICAGO OFFICE OF THE COMPTROLLER 

I, Nicole Holsopple a duly authorized representative of JPMorgan Chase Bank, N.A. represent and say as follows:

That for the purpose of becoming an eligible depository for active deposits of the City of Chicago, the undersigned Affiant states that it will use reasonable efforts to provide lending, financing, and banking opportunities as a commitment of community reinvestment to Chicago's low and moderate income (LMI) communities; Affiant states that such reasonable efforts shall include, but are not limited to:
A. Assignment of identifiable personnel to answer and respond to questions, concerns and inquiries by the citizens of Chicago, City Treasurer, City Comptroller, and the City Council regarding financial services, investment and lending products, services and related issues, including the Community Reinvestment Act (CRA) of 1977;
B. Cooperate with non-profit neighborhood development/redevelopment organizations in the implementation of "neighborhood economic development" strategies that focus on revitalization of communities that are more locally focused where an institution has a branch or market presence;
C. Commit to use reasonable effort to market and make available banking services throughout Chicago's low and moderate income communities;
D. Prepare an annual report of CRA activities, presented to the Comptroller, the Treasurer, and the City Council, that is made publicly available, demonstrating investment in all Chicago Communities, as well as reinvestment in LMI communities of Chicago, by community area that includes the number of loans and amount of loans in the following (6) categories:

1. Home Purchase within LMI communities;
2. Refinancing within LMI communities;
3. Home Improvement;
4. Small Business Loans (to companies with revenues under \$1 Million);
5. Community Development Loans including multi-family lending; and
6. Community Development Investments to eligible Community Development Financial Institutions (CDFI) and other community intermediaries to further the goals of an institution to meet its obligations to the Community Reinvestment Act of 1977 and this Affidavit.

Such a Municipal Depository annual CRA report will include, by community area, the number of mortgage loans originated and other strategies to minimize the impact of foreclosure and neighborhood instability.
E. An institution acknowledges that failure to comply with this Affidavit may result in discontinued status as a municipal depository.

Signed: $\qquad$


Dated: __11/06/2023
Print Name: _Nicole L Holsopple
Title: _CRA Officer, JPMorgan Chase Bank

# J.P.Morgan 

Joanne Beer
Relationship Executive
JPMorgan Chase Bank, N.A. - Government Banking

November 14, 2023
Mr. Chasse Rehwinkel, City Comptroller
Ms. Melissa Conyears-Ervin, City Treasurer
City of Chicago
121 North LaSalle Street
Chicago, Illinois 60602

## RE: 2023 RFP for Designation as a 2024 Municipal Depository for City of Chicago and Chicago Board of Education Funds

## Dear Comptroller Rehwinkel and Treasurer Conyears-Ervin:

On behalf of JPMorgan Chase Bank, N.A. ("J.P. Morgan") we respectfully submit the requested documents and information ("Information") in response to the above referenced Request for Proposal, including addendums one and two. J.P. Morgan is honored to be one of the City of Chicago's primary banking service providers for many years. It would be our privilege to continue to serve in this role and we are committed to your continued success.

Because of the confidential and sensitive nature of the Information, we respectfully request that the City maintain the Information and any memoranda, notes or other writings of any kind made by an employee or agent of the City in confidence and not make the Information and documents including writings of the Information available for copying or inspection.

The Information contains detailed lending, savings and account data of residents and businesses of the City which has been compiled and submitted in a unique format for the City and, if compromised, could constitute an unwarranted invasion of privacy. We trust the City will follow its policies regarding security of personal and confidential information.

In addition, the Information and document including the Information contain commercial and financial Information of J.P. Morgan which constitute trade secrets and are exempt from public disclosure under the federal Freedom of Information Act and the Illinois Freedom of Information Act. As such, the information is privileged and confidential. Enclosed we have provided a REDACTED version.

We appreciate your consideration of our submittal. Please contact me, Joanne Beer, for any items concerning this RFP. I can be reached at 312-732-6988 or joanne.baer@jpmorgan.com.

Sincerely,
Joanne Boer

## EXECUTIVE SUMMARY

J.P. Morgan deeply values its relationship and history with the City of Chicago and Board of Education of the City of Chicago. It is a privilege to be a depository bank for the City of Chicago and Board of Education and look forward to continuing our relationship, providing depository services, backed by the balance sheet of J.P. Morgan.

| Objective | Solutions and Considerations |
| :--- | :--- |
|  | J.P. Morgan has developed and maintained strong financial discipline throughout <br> fluctuating market conditions. We have the financial stability to provide our clients <br> with a broad, complete and high-quality set of products and services- while <br> leveraging the benefits and efficiencies that come with economies of scale. <br> - Strong long-term issuer ratings of Aa2/A+/AA <br> - Total deposits of more than $\$ 2.4$ trillion and total assets of more than $\$ 3.6$ <br> trillion |
|  | - Large reserve levels across all of our wholesale and consumer businesses <br> JPMorgan Chase Bank, N.A., is a national banking association with qualified public <br>  |
| Co., a financial holding company. The firm is a leader in investment banking, |  |
| financial services for consumers, small businesses, and commercial banking, |  |
| financial transaction processing and asset management. Commercial Banking |  |
| provides comprehensive financial solutions, including lending, treasury and cash |  |
| management services to meet our clients' domestic and international financial |  |
| needs. J.P. Morgan's Commercial Banking Government segment has maintained |  |
| Reputational Stability |  |
| an unwavering commitment to empower more than1900 governmen clients for over |  |
| 70 years. Our government banking team is a distinct group of relationship |  |
| managers, product, technology and service experts who are solely focused on |  |
| serving the public sector. |  |

# Consolidated Reports of Condition and Income for A Bank With Domestic and Foreign Offices - FFIEC 031 

Institution Name
City
State
Zip Code
Call Report Report Date
Report Type
RSSD-ID
FDIC Certificate Number
OCC Charter Number
ABA Routing Number
Last updated on

JPMORGAN CHASE BANK, NATIONAL ASSOCIATION COLUMBUS
OH
43240
3/31/2023
031
852218
628
8
21000021
7/20/2023


# Consolidated Reports of Condition and Income for A Bank With Domestic and Foreign Offices - FFIEC 031 

## Report at the close of business March 31, 2023

This report is required by law: 12 U.S.C. $\S 324$ (State member banks); 12 U.S.C. §1817 (State non member banks); 12 U.S.C. §161 (National banks); and 12 U.S.C. §1464 (Savings associations).

NOTE: Each bank's board of directors and senior management are responsible for establishing and maintaining an effective system of internal control, including controls over the Reports of Condition and Income. The Reports of Condition and Income are to be prepared in accordance with federal regulatory authority instructions. The Reports of Condition and Income must be signed by the Chief Financial Officer (CFO) of the reporting bank (or by the individual performing an equivalent function) and attested to by not less than two directors (trustees) for state non member banks and three directors for state member banks, national banks, and savings associations.

I, the undersigned CFO (or equivalent) of the named bank, attest that the Reports of Condition and Income (including the supporting

Signature of Chief Financial Officer (or Equivalent)

Date of Signature
$\frac{(20230331)}{(\text { RCON 9999) }}$
Unless the context indicates otherwise, the term "bank" in this report form refers to both banks and savings associations.
schedules) for this report date have been prepared in conformance with the instructions issued by the appropriate Federal regulatory authority and are true and correct to the best of my knowledge and belief.

We, the undersigned directors (trustees), attest to the correctness of the Reports of Condition and Income (including the supporting schedules) for this report date and declare that the Reports of Condition and Income have been examined by us and to the best of our knowledge and belief have been prepared in conformance with the instructions issued by the appropriate Federal regulatory authority and are true and correct.

## $\overline{\text { Director (Trustee) }}$

Director (Trustee)

Director (Trustee)

## FDIC Certificate Number 628 (RSSD 9050)

To fulfill the signature and attestation requirement for the Reports of Condition and Income for this report date, attach your bank's completed signature page (or a photocopy or a computer generated version of this page) to the hard-copy record of the data file submitted to the CDR that your bank must place in its files.
The appearance of your bank's hard-copy record of the submitted data file need not match exactly the appearance of the FFIEC's sample report forms, but should show at least the caption of each Call Report item and the reported amount.

## JPMORGAN CHASE BANK, NATIONAL ASSOCIATION

Legal Title of Bank (RSSD 9017)

## COLUMBUS

City (RSSD 9130)
OH
State Abbreviation (RSSD 9200)
Zip Code (RSSD 9220)

[^9]
## Consolidated Reports of Condition and Income for A Bank With Domestic and Foreign Offices - FFIEC 031

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For information or assistance, national banks, state nonmember banks, and savings associations should contact the FDIC's DataCollection and Analysis Section, 550 17th Street, NW, Washington, DC 20429, toll free on (800) 688-FDIC(3342), Monday throughFriday between 8:00 a.m. and 5:00 p.m., Eastern Time. State member banks should contact their Federal Reserve District Bank.

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## Contact Information for the Reports of Condition and Income

To facilitate communication between the Agencies and the bank concerning the Reports of Condition and Income, please provide contact information for (1) the Chief Financial Officer (or equivalent) of the bank signing the reports for this quarter, and (2) the person at the bank-other than the Chief Financial Officer (or equivalent)-to whom questions about the reports should be directed. If the Chief Financial Officer (or equivalent) is the primary contact for questions about the reports, please provide contact information for another person at the bank who will serve as a secondary contact for communications between the Agencies and the bank concerning the Reports of Condition and Income. Enter "none" for the contact's e-mail address or fax number if not available. Contact information for the Reports of Condition and Income is for the confidential use of the Agencies and will not be released to the public.

## Chief Financial Officer (or Equivalent) Signing the Reports

| CONF |
| :--- |
| Name (TEXT C490) |
| CONF |
| Title (TEXT C491) |
| CONF |
| E-mail Address (TEXT C492) |
| CONF |
| Area Code / Phone Number / Extension (TEXT C493) |
| CONF |
| Area Code / FAX Number (TEXT C494) |

Other Person to Whom Questions about the Reports Should be Directed

| CONF |
| :--- |
| Name (TEXT C495) |
| CONF |
| Title (TEXT C496) |
| CONF |
| E-mail Address (TEXT 4086) |
| CONF |
| Area Code / Phone Number / Extension (TEXT 8902) |
| CONF |
| Area Code / FAX Number (TEXT 9116) |

## Emergency Contact Information

This information is being requested so the Agencies can distribute critical, time-sensitive information to emergency contacts at banks. Please provide primary contact information for a senior official of the bank who has decision-making authority. Also provide information for a secondary contact if available. Enter "none" for the contact's e-mail address or fax number if not available. Emergency contact information is for the confidential use of the Agencies and will not be released to the public.

## Primary Contact

| CONF |
| :--- |
| Name (TEXT C366) |
| CONF |
| Title (TEXT C367) |
| CONF |
| E-mail Address (TEXT C368) |
| $\frac{\text { CONF }}{\text { Area Code / Phone Number / Extension (TEXT C369) }}$ |
| $\frac{\text { CONF }}{\text { Area Code / FAX Number (TEXT C370) }}$ |

Secondary Contact

| CONF |
| :--- |
| Name (TEXT C371) |
| CONF |
| Title (TEXT C372) |
| CONF |
| E-mail Address (TEXT C373) |
| CONF |
| Area Code / Phone Number / Extension (TEXT C374) |
| $\frac{\text { CONF }}{\text { Area Code / FAX Number (TEXT C375) }}$ |

## USA PATRIOT Act Section 314(a) Anti-Money Laundering Contact Information

This information is being requested to identify points-of-contact who are in charge of your bank's USA PATRIOT Act Section 314(a) information requests. Bank personnel listed could be contacted by law enforcement officers or the Financial Crimes Enforcement Network (FinCEN) for additional information related to specific Section 314(a) search requests or other anti-terrorist financing and anti- money laundering matters. Communications sent by FinCEN to the bank for purposes other than Section 314(a) notifications will state the intended purpose and should be directed to the appropriate bank personnel for review. Any disclosure of customer records to law enforcement officers or FinCEN must be done in compliance with applicable law, including the Right to Financial Privacy Act (12 U.S.C. 3401 et seq.).

Please provide information for a primary and secondary contact. Information for a third and fourth contact may be provided at the bank's option. Enter "none" for the contact's e-mail address if not available. This contact information is for the confidential use of the Agencies, FinCEN, and law enforcement officers and will not be released to the public.

## Primary Contact

| CONF |
| :--- |
| Name (TEXT C437) |
| CONF |
| Title (TEXT C438) |
| CONF |
| E-mail Address (TEXT C439) |
| CONF |
| Area Code / Phone Number / Extension (TEXT C440) |

## Secondary Contact

| CONF |
| :--- |
| Name (TEXT C442) |
| CONF |
| Title (TEXT C443) |
| CONF |
| $\frac{\text { E-mail Address (TEXT C444) }}{\text { CONF }}$ |
| $\frac{\text { Area Code / Phone Number / Extension (TEXT 8902) }}{}$ |

Third Contact

| CONF |
| :--- |
| Name (TEXT C870) |
| CONF |
| Title (TEXT C871) |
| CONF |
| E-mail Address (TEXT C368) |
| CONF |
| Area Code / Phone Number / Extension (TEXT C873) |

## Fourth Contact

| CONF |
| :--- |
| Name (TEXT C875) |
| CONF |
| Title (TEXT C876) |
| CONF |
| E-mail Address (TEXT C877) |
| CONF |
| Area Code / Phone Number / Extension (TEXT C878) |

## Bank Demographic Information(Form Type - 031)

| Dollar amounts in thousands |  |  |
| :---: | :---: | :---: |
| 1. Reporting date. | RCON9999 | 20230331 |
| 2. FDIC certificate number. | RSSD9050 | 628 |
| 3. Legal title of bank..................................................................................................................................... | RSSD9017 | Click here for value |
| 4. City... | RSSD9130 | Columbus |
| 5. State abbreviation.. | RSSD9200 | OH |
| 6. Zip code.................................................................................................................................................. | RSSD9220 | 43240 |
| 7. Legal Entity Identifier (LEI) (Report only if your institution already has an LEI.).................................................. | RCON9224 | Click here for value |

(RCON9224) 7H6GLXDRUGQFU57RNE97
(RSSD9017) JPMorgan Chase Bank National Association
Contact Information(Form Type - 031)

| Dollar amounts in thousands |  |  | 1. |
| :---: | :---: | :---: | :---: |
| 1. Contact Information for the Reports of Condition and Income |  |  |  |
| a. Chief Financial Officer (or Equivalent) Signing the Reports |  |  | 1.a. |
| 1. Name..................................................................................................................................... | TEXTC490 | CONF | 1.a.1. |
| 2. Title.. | TEXTC491 | CONF | 1.a.2. |
| 3. E-mail Address... | TEXTC492 | CONF | 1.a.3. |
| 4. Telephone. | TEXTC493 | CONF | 1.a.4. |
| 5. FAX...................................................................................................................................... | TEXTC494 | CONF | 1.a.5 |
| b. Other Person to Whom Questions about the Reports Should be Directed |  |  | 1.b. |
| 1. Name........................................................................................................................................ | TEXTC495 | CONF | 1.b.1. |
| 2. Title....................................................................................................................................... | TEXTC496 | CONF | 1.b.2. |
| 3. E-mail Address........................................................................................................................... | TEXT4086 | CONF | 1.b.3. |
| 4. Telephone................................................................................................................................... | TEXT8902 | CONF | 1.b.4. |
| 5. FAX | TEXT9116 | CONF | 1.b.5. |
| 2. Person to whom questions about Schedule RC-T - Fiduciary and Related Services should be directed |  |  | 2. |
| a. Name and Title............................................................................................................................... | TEXTB962 | CONF | 2.a. |
| b. E-mail Address... | TEXTB926 | CONF | 2.b. |
| c. Telephone... | TEXTB963 | CONF | 2.c. |
| d. FAX.................................................................................................................................................... | TEXTB964 | CONF | 2.d. |
| 3. Emergency Contact Information |  |  | 3. |
| a. Primary Contact |  |  | 3.a. |
| 1. Name......................................................................................................................................... | TEXTC366 | CONF | 3.a.1. |
| 2. Title....................................................................................................................................... | TEXTC367 | CONF | 3.a.2. |
| 3. E-mail Address.............................................................................................................................. | TEXTC368 | CONF | 3.a.3. |
| 4. Telephone..................................................................................................................................... | TEXTC369 | CONF | 3.a.4. |
| 5. FAX............................................................................................................................................ | TEXTC370 | CONF | 3.a.5. |
| b. Secondary Contact |  |  | 3.b. |
| 1. Name.......................................................................................................................................... | TEXTC371 | CONF | 3.b.1. |
| 2. Title........................................................................................................................................ | TEXTC372 | CONF | 3.b.2. |
| 3. E-mail Address............................................................................................................................ | TEXTC373 | CONF | 3.b.3. |
| 4. Telephone.............................................................................................................................. | TEXTC374 | CONF | 3.b.4. |
| 5. FAX........................................................................................................................................... | TEXTC375 | CONF | 3.b.5. |
| 4. USA PATRIOT Act Section 314(a) Anti-Money Laundering Contact Information |  |  | 4. |
| a. Primary Contact |  |  | 4.a. |


| Dollar amounts in thousands |  |  | 4.a.1. |
| :---: | :---: | :---: | :---: |
| 1. Name. | TEXTC437 | CONF |  |
| 2. Title.. | TEXTC438 | CONF | 4.a.2. |
| 3. E-mail Address... | TEXTC439 | CONF | 4.a.3. |
| 4. Telephone... | TEXTC440 | CONF | 4.a.4. |
| b. Secondary Contact |  |  | 4.b. |
| 1. Name.. | TEXTC442 | CONF | 4.b.1. |
| 2. Title.. | TEXTC443 | CONF | 4.b.2. |
| 3. E-mail Address.. | TEXTC444 | CONF | 4.b.3. |
| 4. Telephone.. | TEXTC445 | CONF | 4.b.4. |
| c. Third Contact |  |  | 4.c. |
| 1. Name... | TEXTC870 | CONF | 4.c.1. |
| 2. Title.. | TEXTC871 | CONF | 4.c.2. |
| 3. E-mail Address. | TEXTC872 | CONF | 4.c.3. |
| 4. Telephone. | TEXTC873 | CONF | 4.c.4. |
| d. Fourth Contact |  |  | 4.d. |
| 1. Name. | TEXTC875 | CONF | 4.d.1. |
| 2. Title... | TEXTC876 | CONF | 4.d.2. |
| 3. E-mail Address. | TEXTC877 | CONF | 4.d.3. |
| 4. Telephone... | TEXTC878 | CONF | 4.d.4. |
| 5. Chief Executive Officer Contact Information |  |  | 5. |
| a. Chief Executive Officer |  |  | 5.a. |
| 1. Name... | TEXTFT42 | CONF | 5.a.1. |
| 2. E-mail Address.. | TEXTFT44 | CONF | 5.a.2. |
| 3. Telephone........ | TEXTFT43 | CONF | 5.a.3. |
| 4. FAX...... | TEXTFT45 | CONF | 5.a.4. |

## Schedule RI - Income Statement(Form Type - 031)

All Report of Income schedules are to be reported on a calendar year-to-date basis in thousands of dollars.

## Dollar amounts in thousands



[^10]Dollar amounts in thousands

| c. Trading revenue ${ }^{3}$. | RIADA220 | 8,321,000 | 5.c. |
| :---: | :---: | :---: | :---: |
| d. Income from securities-related and insurance activities: |  |  | 5.d. |
| 1. Fees and commissions from securities brokerage. | RIADC886 | 360,000 | 5.d. 1 |
| 2. Investment banking, advisory, and underwriting fees and commissions. | RIADC888 | 456,000 | 5.d. 2 |
| 3. Fees and commissions from annuity sales. | RIADC887 | 0 | 5.d.3 |
| 4. Underwriting income from insurance and reinsurance activities. | RIADC386 | 0 | 5.d. 4 |
| 5. Income from other insurance activities. | RIADC387 | 0 | 5.d.5 |
| e. Venture capital revenue.. | RIADB491 | 0 | 5.e. |
| f. Net servicing fees. | RIADB492 | 143,000 | 5.f. |
| g. Net securitization income. | RIADB493 | 0 | 5.g. |
| h. Not applicable |  |  | 5.h. |
| i. Net gains (losses) on sales of loans and leases. | RIAD5416 | 23,000 | 5.i. |
| j. Net gains (losses) on sales of other real estate owned. | RIAD5415 | -1,000 | 5.j. |
| k. Net gains (losses) on sales of other assets ${ }^{4}$. | RIADB496 | 24,000 | 5.k. |
| I. Other noninterest income*. | RIADB497 | 2,885,000 | 5.1. |
| m . Total noninterest income (sum of items 5.a through 5.l) | RIAD4079 | 14,450,000 | 5.m. |
| 6. Not available |  |  | 6. |
| a. Realized gains (losses) on held-to-maturity securities. | RIAD3521 | 0 | 6.a. |
| b. Realized gains (losses) on available-for-sale debt securities | RIAD3196 | -868,000 | 6.b. |
| 7. Noninterest expense: |  |  | 7. |
| a. Salaries and employee benefits.. | RIAD4135 | 9,587,000 | 7.a. |
| b. Expenses of premises and fixed assets (net of rental income) (excluding salaries and employee benefits and mortgage interest) | RIAD4217 | 1,510,000 | 7.b. |
| c. Not available |  |  | 7.c. |
| 1. Goodwill impairment losses. | RIADC216 | 0 | 7.c. 1 |
| 2. Amortization expense and impairment losses for other intangible assets. | RIADC232 | 13,000 | 7.c. 2 |
| d. Other noninterest expense* | RIAD4092 | 6,998,000 | 7.d. |
| e. Total noninterest expense (sum of items 7.a through 7.d). | RIAD4093 | 18,108,000 | 7.e. |
| 8. Not available |  |  | 8. |
| a. Income (loss) before change in net unrealized holding gains (losses) on equity securities not held for trading, applicable income taxes, and discontinued operations (item 3 plus or minus items 4, 5.m, 6.a, 6.b, and 7.e)........ | RIADHT69 | 15,062,000 | 8.a. |
| b. Change in net unrealized holding gains (losses) on equity securities not held for trading ${ }^{5}$. | RIADHT70 | 6,000 | 8.b. |
| c. Income (loss) before applicable income taxes and discontinued operations (sum of items 8.a and 8.b)............ | RIAD4301 | 15,068,000 | 8.c. |
| 9. Applicable income taxes (on item 8.c) | RIAD4302 | 3,356,000 | 9. |
| 0. Income (loss) before discontinued operations (item 8.c minus item 9).............................................................. | RIAD4300 | 11,712,000 | 10. |
| 1. Discontinued operations, net of applicable income taxes (Describe on Schedule RI-E - Explanations)* | RIADFT28 | 0 | 11. |
| 2. Net income (loss) attributable to bank and noncontrolling (minority) interests (sum of items 10 and 11)............... | RIADG104 | 11,712,000 | 12. |
| 3. LESS: Net income (loss) attributable to noncontrolling (minority) interests (if net income, report as a positive value; net loss, report as a negative value). | RIADG103 | -2,000 | 13. |
| 4. Net income (loss) attributable to bank (item 12 minus item 13).. | RIAD4340 | 11,714,000 | 14. |
| 1. Interest expense incurred to carry tax-exempt securities, loans, and leases acquired after August 7, 1986, that is not deductible for federal income tax purposes. | RIAD4513 | 116,000 | M.1. |
| Memorandum item 2 is to be completed by banks with \$1 billion or more in total assets Income from the sale and servicing of mutual funds and annuities in domestic offices (included in Schedule RI, item ). $\qquad$ | RIAD8431 | 14,000 | M. 2. |
| Income on tax-exempt loans and leases to states and political subdivisions in the U.S. (included in Schedule RI, tems 1.a and 1.b). | RIAD4313 | 168,000 | M.3. |
| Income on tax-exempt securities issued by states and political subdivisions in the U.S. (included in Schedule RI, tem 1.d.(3)) | RIAD4507 | 247,000 | M. 4 |
| 5. Number of full-time equivalent employees at end of current period (round to nearest whole number)..................... | RIAD4150 | 221852 | M. |
| 6. Not applicable |  |  | M.6. |

[^11]Dollar amounts in thousands
7. If the reporting institution has applied pushdown accounting this calendar year, report the date of the institution's acquisition (see instructions) ${ }^{2}$
8. Trading revenue (from cash instruments and derivative instruments) (sum of Memorandum items 8.a through 8.e must equal Schedule RI, item 5.c):

Memorandum items 8.a through 8.e are to be completed by banks that reported average trading assets (Schedule RC-K, item 7) of $\$ 2$ million or more for any quarter of the preceding calendar year.
a. Interest rate exposures.
...........
b. Foreign exchange exposures.............
c. Equity security and index exposures
d. Commodity and other exposures.
e. Credit exposures.

Memorandum items $8 . f$ through $8 . h$ are to be completed by banks with $\$ 100$ billion or more in total assets that are required to complete Schedule RI, Memorandum items 8.a through 8.e, above.
f. Impact on trading revenue of changes in the creditworthiness of the bank's derivatives counterparties on the bank's derivative assets (year-to-date changes) (included in Memorandum items 8.a through 8.e above):

1. Gross credit valuation adjustment (CVA).
2. CVA hedge
g. Impact on trading revenue of changes in the creditworthiness of the bank on the bank's derivative liabilities (year-to-date changes) (included in Memorandum items 8.a through 8.e above):
3. Gross debit valuation adjustment (DVA).
4. DVA hedge.
h. Gross trading revenue, before including positive or negative net CVA and net DVA
5. Net gains (losses) recognized in earnings on credit derivatives that economically hedge credit exposures held outside the trading account:
a. Net gains (losses) on credit derivatives held for trading.
b. Net gains (losses) on credit derivatives held for purposes other than trading.
6. Credit losses on derivatives (see instructions)
7. Does the reporting bank have a Subchapter $S$ election in effect for federal income tax purposes for the current tax year?.
Memorandum item 12 is to be completed by banks that are required to complete Schedule RC-C, Part I, Memorandum items 8.b and 8.c and is to be completed semiannually in the June and December reports only.
8. Noncash income from negative amortization on closed-end loans secured by 1-4 family residential properties (included in Schedule RI, item 1.a.(1)(a)(1)).
Memorandum item 13 is to be completed by banks that have elected to account for assets and liabilities under a fair value option. 13. Net gains (losses) recognized in earnings on assets and liabilities that are reported at fair value under a fair value option:
a. Net gains (losses) on assets.
9. Estimated net gains (losses) on loans attributable to changes in instrument-specific credit risk.
b. Net gains (losses) on liabilities
10. Estimated net gains (losses) on liabilities attributable to changes in instrument-specific credit risk
11. Other-than-temporary impairment losses on held-to-maturity and available-for-sale debt securities ${ }^{2}$.

Memorandum item 15 is to be completed by institutions with $\$ 1$ billion or more in total assets that answered "Yes" to Schedule RC-E, Part I, Memorandum item 5.
15. Components of service charges on deposit accounts in domestic offices (sum of Memorandum items 15.a through 15.d must equal Schedule RI, item 5.b):
a. Consumer overdraft-related service charges levied on those transaction account and nontransaction savings account deposit products intended primarily for individuals for personal, household, or family use. b. Consumer account periodic maintenance charges levied on those transaction account and nontransaction savings account deposit products intended primarily for individuals for personal, household, or family use.
c. Consumer customer automated teller machine (ATM) fees levied on those transaction account and nontransaction savings account deposit products intended primarily for individuals for personal, household, or family use.
d. All other service charges on deposit accounts.

| RIAD9106 | 0 | M.7. |
| :---: | :---: | :---: |
|  |  | M.8. |
| RIAD8757 | 1,840,000 | M.8.a. |
| RIAD8758 | 1,638,000 | M.8.b. |
| RIAD8759 | 3,663,000 | M.8.c. |
| RIAD8760 | 819,000 | M.8.d. |
| RIADF186 | 361,000 | M.8.e. |
|  |  | M.8.f. |
| RIADFT36 | 55,000 | M.8.f. 1 |
| RIADFT37 | -78,000 | M.8.f.2. |
|  |  | M.8.g. |
| RIADFT38 | -54,000 | M.8.g.1. |
| RIADFT39 | 0 | M.8.g.2. |
| RIADFT40 | 8,398,000 | M.8.h. |
|  |  | M.9. |
| RIADC889 | 0 | M.9.a. |
| RIADC890 | -98,000 | M.9.b. |
| RIADA251 | -9,000 | M. 10. |
| RIADA530 | No | M.11. |
| RIADF228 | 0 | M. 12. |
|  |  | M. 13. |
| RIADF551 | 4,770,000 | M.13.a. |
| RIADF552 | 183,000 | M.13.a. 1 |
| RIADF553 | -3,314,000 | M.13.b. |
| RIADF554 | 0 | M.13.b. 1 |
| RIADJ321 | NR | M. 14. |
|  |  | M.15. |
| RIADH032 | 297,000 | M.15.a. |
| RIADH033 | 197,000 | M.15.b. |
| RIADH034 | 76,000 | M.15.c. |
| RIADH035 | 585,000 | M.15.d. |

[^12]
## Schedule RI-A - Changes in Bank Equity Capital(Form Type - 031)



[^13]
## Schedule RI-B Part I - Charge-offs and Recoveries on Loans and Leases(Form Type 031)

Part I includes charge-offs and recoveries through the allocated transfer risk reserve.

| Dollar amounts in thousands | (Column A) Charge-offs Calendar year-to-date |  | (Column B) Recoveries Calendar year-to-date |  | 1. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1. Loans secured by real estate: |  |  |  |  |  |
| a. Construction, land development, and other land loans in domestic offices: |  |  |  |  | 1.a. |
| 1. 1-4 family residential construction loans.. | RIADC891 | 0 | RIADC892 | 0 | 1.a.1. |
| 2. Other construction loans and all land development and other land loans.............. | RIADC893 | 0 | RIADC894 | 0 | 1.a.2. |
| b. Secured by farmland in domestic offices............................................................... | RIAD3584 | 0 | RIAD3585 | 0 | 1.b. |
| c. Secured by 1-4 family residential properties in domestic offices: |  |  |  |  | 1.c. |
| 1. Revolving, open-end loans secured by 1-4 family residential properties and extended under lines of credit. | RIAD5411 | 8,000 | RIAD5412 | 22,000 | 1.c.1. |
| 2. Closed-end loans secured by 1-4 family residential properties: |  |  |  |  | 1.c.2. |
| a. Secured by first liens... | RIADC234 | 7,000 | RIADC217 | 13,000 | 1.c. |
| b. Secured by junior liens.. | RIADC235 | 2,000 | RIADC218 | 3,000 | 1.c.2.b |
| d. Secured by multifamily (5 or more) residential properties in domestic offices. | RIAD3588 | 0 | RIAD3589 | 0 | 1.d. |
| e. Secured by nonfarm nonresidential properties in domestic offices: |  |  |  |  | 1.e. |
| 1. Loans secured by owner-occupied nonfarm nonresidential properties.. | RIADC895 | 0 | RIADC896 | 4,000 | 1.e.1. |
| 2. Loans secured by other nonfarm nonresidential properties.............. | RIADC897 | 9,000 | RIADC898 | 0 | 1.e.2. |
| f. In foreign offices... | RIADB512 | 0 | RIADB513 | 0 | 1.f. |
| 2. Not applicable |  |  |  |  | 2. |
| 3. Loans to finance agricultural production and other loans to farmers................................. | RIAD4655 | 1,000 | RIAD4665 | 0 | 3. |
| 4. Commercial and industrial loans: |  |  |  |  | 4. |
| a. To U.S. addressees (domicile). | RIAD4645 | 172,000 | RIAD4617 | 30,000 | 4.a. |
| b. To non-U.S. addressees (domicile) | RIAD4646 | 6,000 | RIAD4618 | 3,000 | 4.b. |
| 5. Loans to individuals for household, family, and other personal expenditures: |  |  |  |  | 5. |
| a. Credit cards. | RIADB514 | 995,000 | RIADB515 | 180,000 | 5.a. |
| b. Automobile loans.. | RIADK129 | 110,000 | RIADK133 | 44,000 | 5.b. |
| c. Other (includes revolving credit plans other than credit cards and other consumer loans). | RIADK205 | 1,000 | RIADK206 | 0 | 5.c. |
| 6. Loans to foreign governments and official institutions.. | RIAD4643 | 0 | RIAD4627 | 0 | 6. |
| 7. All other loans. | RIAD4644 | 105,000 | RIAD4628 | 15,000 | 7. |
| 8. Lease financing receivables: |  |  |  |  | 8. |
| a. Leases to individuals for household, family, and other personal expenditures.............. | RIADF185 | 0 | RIADF187 | 0 | 8.a. |
| b. All other leases. | RIADC880 | 0 | RIADF188 | 0 | 8.b. |
| 9. Total (sum of items 1 through 8)... | RIAD4635 | 1,416,000 | RIAD4605 | 314,000 | 9. |
| 1. Loans to finance commercial real estate, construction, and land development activities (not secured by real estate) included in Schedule RI-B, part I, items 4 and 7, above. | RIAD5409 | 0 | RIAD5410 | 0 | M.1. |
| 2. Loans secured by real estate to non-U.S. addressees (domicile) (included in Schedule RI-B, part I, item 1, above). $\qquad$ | RIAD4652 | 0 | RIAD4662 | 0 | M.2. |
| 3. Not applicable |  |  |  |  | M. 3. |

## Dollar amounts in thousands

Memorandum item 4 is to be completed by banks that (1) together with affiliated institutions, have outstanding credit card receivables (as defined in the instructions) that exceed $\$ 500$ million as of the report date, or (2) are credit card specialty banks as defined for Uniform Bank Performance Report purposes.
4. Uncollectible retail credit card fees and finance charges reversed against income (i.e., not included in charge-offs against the allowance for loan and lease losses) ${ }^{2}$

| RIADC388 |  |
| :--- | ---: |
|  | 192,000 |

[^14]
## Schedule RI-B Part II - Changes in Allowances for Credit Losses(Form Type - 031)

| Dollar amounts in thousands | (Column A) Loans and Leases Held for Investment |  | (Column B)Held-to-maturity DebtSecurities |  | (Column C) Available-for-sale Debt Securities |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. Balance most recently reported for the December 31, 2022, Reports of Condition and Income (i.e., after adjustments from amended Reports of Income). | RIADB522 | 19,714,000 | RIADJH88 | 67,000 | RIADJH94 | 0 |
| 2. Recoveries (column A must equal Part I, item 9, column B, abov | RIAD4605 | 314,000 | RIADJH89 | 0 | RIADJH95 | 0 |
| 3. LESS: Charge-offs (column A must equal Part I, item 9, column A, above less Schedule RI-B, Part II, item 4, column A). | RIADC079 | 1,416,000 | RIADJH92 | 0 | RIADJH98 | 0 |
| 4. LESS: Write-downs arising from transfers of financial assets ${ }^{3}$ | RIAD5523 | 0 | RIADJJ00 | 0 | RIADJJ01 | 0 |
| 5. Provisions for credit losses ${ }^{4}$. | RIAD4230 | 1,987,000 | RIADJH90 | 1,000 | RIADJH96 | 0 |
| 6. Adjustments* (see instructions for this schedule)* | RIADC233 | -580,000 | RIADJH91 | -7,000 | RIADJH97 | 0 |
| 7. Balance end of current period (sum of items 1,2,5, and 6, less items 3 and <br> 4) (column A must equal Schedule RC, item 4.c). | RIAD3123 | 20,019,000 | RIADJH93 | 61,000 | RIADJH99 | 0 |


| Dollar amounts in thousands |  |  | M.1. |
| :---: | :---: | :---: | :---: |
| 1. Allocated transfer risk reserve included in Schedule RI-B, Part II, item 7, column A, above. | RIADC435 | 41,000 |  |
| Memorandum items 2 and 3 are to be completed by banks that (1) together with affiliated institutions, have outstanding credit card receivables (as defined in the instructions) that exceed $\$ 500$ million as of the report date, or (2) are credit card specialty banks as defined for Uniform Bank Performance Report purposes. <br> 2. Separate valuation allowance for uncollectible retail credit card fees and finance charges. | RIADC389 | 0 | M.2. |
| 3. Amount of allowance for loan and lease losses attributable to retail credit card fees and finance charges ${ }^{1}$. | RIADC390 | 364,000 | M.3. |
| 4. Amount of allowance for post-acquisition credit losses on purchased credit-impaired loans accounted for in accordance with FASB ASC 310-30 (former AICPA Statement of Position 03-3) (included in Schedule RI-B, Part II, item 7, column <br> A, above) ${ }^{2}$. $\qquad$ | RIADC781 | NR | M.4. |
| 5. Provisions for credit losses on other financial assets measured at amortized cost (not included in item 5, above) ${ }^{3}$... | RIADJJ02 | 241,000 | M. 5. |
| 6. Allowance for credit losses on other financial assets measured at amortized cost (not included in item 7, above) ${ }^{3} \ldots$ | RCFDJJ03 | 261,000 | M.6. |
| 7. Provisions for credit losses on off-balance-sheet credit exposures ${ }^{3}$. | RIADMG93 | 3,000 | M.7. |
| 8. Estimated amount of expected recoveries of amounts previously written off included within the allowance for credit losses on loans and leases held for investment (included in item 7, column A, "Balance end of current period," above) ${ }^{3}$. | RIADMG94 | 1,709,000 | M.8. |

[^15]
## Schedule RI-C Part I - Disaggregated Data on the Allowance for Loan and Lease Losses(Form Type - 031)

Schedule RI-C is to be completed by institutions with $\$ 1$ billion or more in total assets.

| Dollar amounts in thousands | (Column A) Recorded Investment: Individually Evaluated for Impairment and Determined to be Impaired (ASC 310-10-35) | (Column B) <br> Allowance Balance: Individually Evaluated for Impairment and Determined to be Impaired (ASC 310-10-35) | (Column C) Recorded Investment: Collectively Evaluated for Impairment (ASC $450-20)$ | (Column D) Allowance Balance: Collectively Evaluated for Impairment (ASC 450-20) | (Column E) <br> Recorded <br> Investment: <br> Purchased <br> Credit-Impaired <br> Loans (ASC 310-30) | (Column F) Allowance Balance: Purchased Credit-Impaired Loans (ASC 310-30) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. Real estate loans: |  |  |  |  |  |  |
| a. Construction loans. | RCFDM708 ${ }^{\text {NR }}$ | RCFDM709 <br> NR | RCFDM710 <br> NR | RCFDM711 ${ }^{\text {NR }}$ | RCFDM712 NR | RCFDM713 NR |
|  | RCFDM714 | RCFDM715 | RCFDM716 | RCFDM717 | RCFDM719 | RCFDM720 |
| b. Commercial real estate loans.. | NR | NR | NR | NR | NR | NR |
|  | RCFDM721 | RCFDM722 | RCFDM723 | RCFDM724 | RCFDM725 | RCFDM726 |
| c. Residential real estate loans... | NR | NR | NR | NR | NR | NR |
| 2. Commercial loans ${ }^{3}$. | RCFDM727 NR | RCFDM728 ${ }^{\text {NR }}$ | RCFDM729 ${ }^{\text {NR }}$ | RCFDM730 ${ }^{\text {NR }}$ | RCFDM731 ${ }^{\text {NR }}$ | RCFDM732 $\quad$ NR |
|  | RCFDM733 | RCFDM734 | RCFDM735 | RCFDM736 | RCFDM737 | RCFDM738 |
| 3. Credit cards............................................................................................. | NR | NR | NR | NR | NR | NR |
|  | RCFDM739 | RCFDM740 | RCFDM741 | RCFDM742 | RCFDM743 | RCFDM744 |
| 4. Other consumer loans.. | NR | NR | NR | NR | NR | NR |
|  |  |  |  | RCFDM745 ${ }^{\text {NR }}$ |  |  |
|  | RCFDM746 | RCFDM747 | RCFDM748 | RCFDM749 | RCFDM750 | RCFDM751 |
| 6. Total (for each column, sum of items 1.a through 5) ........................................ | NR | NR | NR | NR | NR | NR |

[^16]
## Schedule RI-C Part II - Disaggregated Data on the Allowances for Credit Losses(Form Type-031)

| Dollar amounts in thousands | (Column A) Amortized Cost |  | (Column B) Allowance Balance |  |
| :---: | :---: | :---: | :---: | :---: |
| 1. Real estate loans: |  |  |  |  |
| a. Construction loans.. | RCFDJJ04 | 6,725,000 | RCFDJJ12 | 132,000 |
| b. Commercial real estate loans. | RCFDJJ05 | 100,606,000 | RCFDJJ13 | 1,454,000 |
| c. Residential real estate loans. | RCFDJJ06 | 236,118,000 | RCFDJJ14 | 674,000 |
| 2. Commercial loans ${ }^{3}$ | RCFDJJ07 | 534,810,000 | RCFDJJ15 | 6,687,000 |
| 3. Credit cards. | RCFDJJ08 | 158,151,000 | RCFDJJ16 | 10,394,000 |
| 4. Other consumer loans. | RCFDJJ09 | 58,556,000 | RCFDJJ17 | 678,000 |
| 5. Unallocated, if any.............................................................................................. |  |  | RCFDJJ18 | 0 |
| 6. Total (sum of items 1.a. through 5) ${ }^{4}$............................................................................ | RCFDJJ11 | 1,094,966,000 | RCFDJJ19 | 20,019,000 |

## Dollar amounts in thousands

| 7. Securities issued by states and political subdivisions in the U.S.. | RCFDJJ20 | 34,000 | 7. |
| :---: | :---: | :---: | :---: |
| 8. Mortgage-backed securities (MBS) (including CMOs, REMICs, and stripped MBS)............................................ | RCFDJJ21 | 27,000 | 8 |
| 9. Asset-backed securities and structured financial products............................................................................... | RCFDJJ23 | 0 | 9 |
| 10. Other debt securities. | RCFDJJ24 | 0 | 10 |
| 11. Total (sum of items 7 through 10) ${ }^{5}$. | RCFDJJ25 | 61,000 |  |

## Schedule RI-D - Income from Foreign Offices(Form Type - 031)

For all banks with foreign offices (including Edge or Agreement subsidiaries and IBFs) and total foreign office assets of $\$ 10$ billion or more where foreign office revenues, assets, or net income exceed 10 percent of consolidated total revenues, total assets, or net income.

| Dollar amounts in thousands |  |  |  |
| :---: | :---: | :---: | :---: |
| 1. Total interest income in foreign offices.. | RIADC899 | 9,410,000 |  |
| 2. Total interest expense in foreign offices. | RIADC900 | 8,189,000 |  |
| 3. Provision for loan and lease losses in foreign offices ${ }^{1}$. | RIADKW02 | 185,000 |  |
| 4. Noninterest income in foreign offices: |  |  |  |
| a. Trading revenue. | RIADC902 | 6,315,000 |  |
| b. Investment banking, advisory, brokerage, and underwriting fees and commissions. | RIADC903 | 717,000 |  |
| c. Net securitization income | RIADC904 | 0 |  |
| d. Other noninterest income. | RIADC905 | 388,000 |  |
| 5. Realized gains (losses) on held-to-maturity and available-for-sale debt securities and change in net unrealized holding gains (losses) on equity securities not held for trading in foreign offices. | RIADJA28 | -10,000 |  |
| 6. Total noninterest expense in foreign offices. | RIADC907 | 5,342,000 |  |
| 7. Adjustments to pretax income in foreign offices for internal allocations to foreign offices to reflect the effects of equity capital on overall bank funding costs.. | RIADC908 | 0 |  |
| 8. Applicable income taxes (on items 1 through 7). | RIADC909 | 844,000 |  |
| 9. Discontinued operations, net of applicable income taxes, in foreign offices.. | RIADGW64 | 0 |  |
| 10. Net income attributable to foreign offices before internal allocations of income and expense (item 1 plus or minus items 2 through 9). | RIADC911 | 2,260,000 |  |
| 11. Not applicable |  |  |  |
| 12. Eliminations arising from the consolidation of foreign offices with domestic offices............................................. | RIADC913 | 1,026,000 |  |
| 13. Consolidated net income attributable to foreign offices (sum of items 10 and 12).............................................. | RIADC914 | 3,286,000 |  |

[^17]
## Schedule RI-E - Explanations (Form Type - 031)

Schedule RI-E is to be completed each quarter on a calendar year-to-date basis.
Detail all adjustments in Schedule RI-A and RI-B, all extraordinary items and other adjustments in Schedule RI, and all significant items of other noninterest income and other noninterest expense in Schedule RI. (See instructions for details.)

Dollar amounts in thousands

1. Other noninterest income (from Schedule RI, item 5.I) Itemize and describe amounts greater than \$100,000 that exceed 7 percent of Schedule RI, item 5.I:
a. Income and fees from the printing and sale of checks.
b. Earnings on/increase in value of cash surrender value of life insurance.
c. Income and fees from automated teller machines (ATMs).
d. Rent and other income from other real estate owned.
e. Safe deposit box rent.
f. Bank card and credit card interchange fees.
g. Income and fees from wire transfers.
h. Disclose component and the dollar amount of that component:
2. Describe component..
3. Amount of component
i. Disclose component and the dollar amount of that component:
4. Describe component.
5. Amount of component.
j. Disclose component and the dollar amount of that component:
6. Describe component.
7. Amount of component.
8. Other noninterest expense (from Schedule RI, item 7.d) Itemize and describe amounts greater than $\$ 100,000$ that exceed 7 percent of Schedule RI, item 7.d:
a. Data processing expenses.
b. Advertising and marketing expenses.
c. Directors' fees.
d. Printing, stationery, and supplies.
e. Postage
f. Legal fees and expenses.
g. FDIC deposit insurance assessments.
h. Accounting and auditing expenses.
i. Consulting and advisory expenses.
j. Automated teller machine (ATM) and interchange expenses
k. Telecommunications expenses.
I. Other real estate owned expenses.
m . Insurance expenses (not included in employee expenses, premises and fixed asset expenses, and other real estate owned expenses)
n . Disclose component and the dollar amount of that component:
9. Describe component.
10. Amount of component
o. Disclose component and the dollar amount of that component:
11. Describe component..
12. Amount of component
p. Disclose component and the dollar amount of that component:
13. Describe component.
14. Amount of component
15. Discontinued operations and applicable income tax effect (from Schedule RI, item 11) (itemize and describe each discontinued operation):
a. Disclose component, the gross dollar amount of that component, and its related income tax:
16. Describe component.
17. Amount of component


| Dollar amounts in thousands |  |  |  |
| :---: | :---: | :---: | :---: |
| 3. Applicable income tax effect. | RIADFT30 | 0 |  |
| b. Disclose component, the gross dollar amount of that component, and its related income tax: |  |  | 3.b. |
| 1. Describe component............................................................................................. | TEXTFT31 | NR | 3.b.1. |
| 2. Amount of component... | RIADFT31 | 0 | 3.b.2. |
| 3. Applicable income tax effect. | RIADFT32 | 0 | 3.b.3. |
| 4. Cumulative effect of changes in accounting principles and corrections of material accounting errors (from Schedule RI-A, item 2) (itemize and describe all such effects): |  |  | 4. |
| a. Effect of adoption of Current Expected Credit Losses Methodology - ASU 2016-131. | RIADJJ26 | NR | 4.a. |
| b. Not applicable |  |  | 4.b. |
| c. Disclose component and the dollar amount of that component: |  |  | $4 . c$ |
| 1. Describe component. | TEXTB526 | Click here for value | 4.c.1. |
| 2. Amount of component.. | RIADB526 | 450,000 | 4.c.2. |
| d. Disclose component and the dollar amount of that component: |  |  | 4.d. |
| 1. Describe component.. | TEXTB527 | NR | 4.d.1. |
| 2. Amount of component.. | RIADB527 | 0 | 4.d.2. |
| 5. Other transactions with stockholders (including a parent holding company) (from Schedule RI-A, item 11) (itemize and describe all such transactions): |  |  | 5. |
| a. Disclose component and the dollar amount of that component: |  |  | 5.a. |
| 1. Describe component... | TEXT4498 | NR | 5.a.1. |
| 2. Amount of component.. | RIAD4498 | 0 | 5.a.2. |
| b. Disclose component and the dollar amount of that component: |  |  | 5.b. |
| 1. Describe component. | TEXT4499 | NR | 5.b.1. |
| 2. Amount of component.. | RIAD4499 | 0 | 5.b.2. |
| 6. Adjustments to allowances for credit losses (from Schedule RI-B, part II, item 6) (itemize and describe all adjustments): ${ }^{3}$ |  |  | 6. |
| a. Initial allowances for credit losses recognized upon the acquisition of purchased credit-deteriorated assets on or after the effective date of ASU 2016-13 ${ }^{1}$ $\qquad$ | RIADJJ27 | NR | 6.a. |
| b. Effect of adoption of current expected credit losses methodology on allowances for credit losses ${ }^{1}$.................. | RIADJJ28 | NR | 6.b. |
| c. Disclose component and the dollar amount of that component: |  |  | 6.c. |
| 1. Describe component | TEXT4521 | Click here for value | 6.c.1. |
| 2. Amount of component... | RIAD4521 | -587,000 | 6.c.2. |
| d. Disclose component and the dollar amount of that component: |  |  | 6.d. |
| 1. Describe component................................................................................................................. | TEXT4522 | NR | 6.d.1. |
| 2. Amount of component.................................................................................................................. | RIAD4522 | 0 | 6.d.2. |
| 7. Other explanations (the space below is provided for the bank to briefly describe, at its option, any other significant items affecting the Report of Income): |  |  | 7. |
| a. Comments?..................................................................................................................................... | RIAD4769 | Yes | 7.a. |
| b. Other explanations............................................................................................................................ | TEXT4769 | Click here for value | 7.b. |

(TEXT4461) Net change in fair values of nontrading financial instruments accounted for under a fair value option

## (TEXT4462) Other Credit Card Related Fees

## (TEXT4463) Operating and Financing Leases

## (TEXT4464) Brokerage and Clearing Expenses

(TEXT4521) Effect of adopting ASU 2022-02 reported in Schedule RI-B

[^18](TEXT4769) a. Loan Commitment Fees - 258,000 b. Loan Syndication Fees - 253,000
(TEXTB526) Effect of adopting ASU2022-02 reported in Schedule RI-A

## Schedule RC - Balance Sheet(Form Type - 031)

All schedules are to be reported in thousands of dollars. Unless otherwise indicated, report the amount outstanding as of the last business day of the quarter.

| Dollar amounts in thousands |  |  | 1. |
| :---: | :---: | :---: | :---: |
| 1. Cash and balances due from depository institutions (from Schedule RC-A): |  |  |  |
| a. Noninterest-bearing balances and currency and coin ${ }^{1}$. | RCFD0081 | 24,828,000 | 1.a. |
| b. Interest-bearing balances ${ }^{2}$. | RCFD0071 | 526,190,000 | 1.b. |
| 2. Securities: |  |  | 2. |
| a. Held-to-maturity securities (from Schedule RC-B, column A) ${ }^{3}$. | RCFDJJ34 | 412,827,000 | 2.a. |
| b. Available-for-sale debt securities (from Schedule RC-B, column D).. | RCFD1773 | 197,186,000 | 2.b. |
| c. Equity securities with readily determinable fair values not held for trading ${ }^{4}$. | RCFDJA22 | 28,000 | 2.c. |
| 3. Federal funds sold and securities purchased under agreements to resell: |  |  | 3. |
| a. Federal funds sold in domestic offices. | RCONB987 | 64,000 | 3.a. |
| b. Securities purchased under agreements to resell ${ }^{5}$. | RCFDB989 | 364,072,000 | 3.b. |
| 4. Loans and lease financing receivables (from Schedule RC-C): |  |  | 4. |
| a. Loans and leases held for sale. | RCFD5369 | 20,413,000 | 4.a. |
| b. Loans and leases held for investment. | RCFDB528 | 1,118,219,000 | 4.b. |
| c. LESS: Allowance for loan and lease losses ${ }^{7}$. | RCFD3123 | 20,019,000 | 4.c. |
| d. Loans and leases held for investment, net of allowance (item 4.b minus 4.c). | RCFDB529 | 1,098,200,000 | 4.d. |
| 5. Trading assets (from Schedule RC-D).. | RCFD3545 | 355,166,000 | 5. |
| 6. Premises and fixed assets (including capitalized leases) | RCFD2145 | 23,451,000 | 6. |
| 7. Other real estate owned (from Schedule RC-M)... | RCFD2150 | 206,000 | 7. |
| 8. Investments in unconsolidated subsidiaries and associated companies. | RCFD2130 | 11,222,000 | 8. |
| 9. Direct and indirect investments in real estate ventures | RCFD3656 | 13,727,000 | 9. |
| 10. Intangible assets (from Schedule RC-M).... | RCFD2143 | 48,371,000 | 10. |
| 11. Other assets (from Schedule RC-F) ${ }^{6}$................................................................................................... | RCFD2160 | 172,012,000 | 11. |
| 12. Total assets (sum of items 1 through 11).. | RCFD2170 | 3,267,963,000 | 12. |
| 13. Deposits: |  |  | 13. |
| a. In domestic offices (sum of totals of columns A and C from Schedule RC-E, part I). | RCON2200 | 2,043,646,000 | 13.a. |
| 1. Noninterest-bearing ${ }^{8}$. | RCON6631 | 667,827,000 | 13.a.1. |
| 2. Interest-bearing. | RCON6636 | 1,375,819,000 | 13.a.2. |
| b. In foreign offices, Edge and Agreement subsidiaries, and IBFs (from Schedule RC-E, part II). | RCFN2200 | 429,267,000 | 13.b. |
| 1. Noninterest-bearing. | RCFN6631 | 26,623,000 | 13.b.1. |
| 2. Interest-bearing... | RCFN6636 | 402,644,000 | 13.b.2. |
| 14. Federal funds purchased and securities sold under agreements to repurchase: |  |  | 14. |
| a. Federal funds purchased in domestic offices ${ }^{9}$........................................ | RCONB993 | 1,732,000 | 14.a. |
| b. Securities sold under agreements to repurchase ${ }^{10}$................................................................................. | RCFDB995 | 109,259,000 | 14.b. |
| 15. Trading liabilities (from Schedule RC-D)... | RCFD3548 | 126,220,000 | 15. |
| 16. Other borrowed money (includes mortgage indebtedness and obligations under capitalized leases) (from Schedule RC-M). | RCFD3190 | 101,065,000 | 16. |
| 17. Not applicable |  |  | 17. |
| 18. Not applicable |  |  | 18. |
| 19. Subordinated notes and debentures ${ }^{1}$.................................................................................................... | RCFD3200 | 260,000 | 19. |

[^19]Dollar amounts in thousands

| 20. Other liabilities (from Schedule RC-G). | RCFD2930 | 147,462,000 | 20. |
| :---: | :---: | :---: | :---: |
| 21. Total liabilities (sum of items 13 through 20). | RCFD2948 | 2,958,911,000 | 21. |
| 22. Not applicable |  |  | 22. |
| 23. Perpetual preferred stock and related surplus.. | RCFD3838 | 0 | 23. |
| 24. Common stock. | RCFD3230 | 2,028,000 | 24. |
| 25. Surplus (exclude all surplus related to preferred stock). | RCFD3839 | 118,293,000 | 25. |
| 26. Not available |  |  | 26. |
| a. Retained earnings.. | RCFD3632 | 203,428,000 | 26.a. |
|  | RCFDB530 | -14,748,000 | 26.b. |
| c. Other equity capital components ${ }^{3}$...................................................................................................... | RCFDA130 | 0 | 26.c. |
| 27. Not available |  |  | 27. |
| a. Total bank equity capital (sum of items 23 through 26.c). | RCFD3210 | 309,001,000 | 27.a. |
| b. Noncontrolling (minority) interests in consolidated subsidiaries.. | RCFD3000 | 51,000 | 27.b. |
| 28. Total equity capital (sum of items 27.a and 27.b). | RCFDG105 | 309,052,000 | 28. |
| 29. Total liabilities and equity capital (sum of items 21 and 28). | RCFD3300 | 3,267,963,000 | 29. |
| 1. Indicate in the box at the right the number of the statement below that best describes the most comprehensive level of auditing work performed for the bank by independent external auditors as of any date during 2022. | RCFD6724 | 1b | M.1. |
| 2. Bank's fiscal year-end date (report the date in MMDD format)....................................................................... | RCON8678 | 1231 | M.2. |

## Schedule RC-A - Cash and Balances Due From Depository Institutions(Form Type 031)

Exclude assets held for trading.

| Dollar amounts in thousands | (Column A) Consolidated Bank |  | (Column B) Domestic Offices |  |
| :---: | :---: | :---: | :---: | :---: |
| 1. Cash items in process of collection, unposted debits, and currency and coin..................... | RCFD0022 | 18,189,000 |  |  |
| a. Cash items in process of collection and unposted debits |  |  | RCON0020 | 8,672,000 |
| b. Currency and coin. |  |  | RCON0080 | 9,461,000 |
| 2. Balances due from depository institutions in the U.S. | RCFD0082 | 5,107,000 | RCON0082 | 5,098,000 |
| 3. Balances due from banks in foreign countries and foreign central banks. | RCFD0070 | 231,145,000 | RCON0070 | 606,000 |
| 4. Balances due from Federal Reserve Banks. | RCFD0090 | 296,577,000 | RCON0090 | 296,577,000 |
| 5. Total. | RCFD0010 | 551,018,000 | RCON0010 | 320,414,000 |

[^20]
## Schedule RC-B - Securities(Form Type - 031)

Exclude assets held for trading.


Dollar amounts in thousands

| 1. Pledged securities ${ }^{1}$. | RCFD0416 | 113,340,000 | M.1. |
| :---: | :---: | :---: | :---: |
| 2. Maturity and repricing data for debt securities (excluding those in nonaccrual status): ${ }^{1}$ |  |  | M.2. |
| a. Securities issued by the U.S. Treasury, U.S. Government agencies, and states and political subdivisions in the U.S.; other non-mortgage debt securities; and mortgage pass-through securities other than those backed by closed-end first lien 1-4 family residential mortgages with a remaining maturity or next repricing date of: ${ }^{2}$ |  |  | M.2.a. |
| 1. Three months or less | RCFDA549 | 78,232,000 | M.2.a.1 |
| 2. Over three months through 12 months | RCFDA550 | 75,369,000 | M.2.a.2. |
| 3. Over one year through three years. | RCFDA551 | 84,066,000 | M.2.a.3. |
| 4. Over three years through five years. | RCFDA552 | 49,662,000 | M.2.a.4 |
| 5. Over five years through 15 years | RCFDA553 | 115,294,000 | M.2.a.5 |
| 6. Over 15 years.. | RCFDA554 | 23,055,000 | M.2.a.6. |
| b. Mortgage pass-through securities backed by closed-end first lien 1-4 family residential mortgages with a remaining maturity or next repricing date of: ${ }^{2}$ |  |  | M.2.b. |
| 1. Three months or less. | RCFDA555 | 163,000 | M.2.b.1 |
| 2. Over three months through 12 months | RCFDA556 | 2,236,000 | M.2.b.2 |
| 3. Over one year through three years | RCFDA557 | 477,000 | M.2.b.3 |
| 4. Over three years through five years................................................................................................. | RCFDA558 | 1,019,000 | M.2.b.4 |
| 5. Over five years through 15 years.. | RCFDA559 | 2,022,000 | M.2.b.5. |
| 6. Over 15 years.. | RCFDA560 | 149,982,000 | M.2.b.6 |
| c. Other mortgage-backed securities (include CMOs, REMICs, and stripped MBS; exclude mortgage pass-through securities) with an expected average life of: ${ }^{5}$ |  |  | M.2.c. |
| 1. Three years or less.. | RCFDA561 | 10,416,000 | M.2.c.1. |
| 2. Over three years. | RCFDA562 | 18,081,000 | M.2.c.2. |
| d. Debt securities with a REMAINING MATURITY of one year or less (included in Memorandum items 2.a through 2.c above) | RCFDA248 | 81,676,000 | M.2.d. |
| Memorandum item 3 is to be completed semiannually in the June and December reports only. |  |  |  |
| 3. Amortized cost of held-to-maturity securities sold or transferred to available-for-sale or trading securities during the calendar year-to-date (report the amortized cost at date of sale or transfer). | RCFD1778 | NR | M.3. |
| 4. Structured notes (included in the held-to-maturity and available-for-sale accounts in Schedule RC-B, items 2, 3, 5, and 6): |  |  | M.4. |
| a. Amortized cost.. | RCFD8782 | 0 | M.4.a. |
| b. Fair value..................................................................................................................................... | RCFD8783 | 0 | M.4.b. |

[^21]

[^22]
## Schedule RC-C Part I - Loans and Leases(Form Type - 031)

Do not deduct the allowance for loan and lease losses or the allocated transfer risk reserve from amounts reported in this schedule. Report (1) loans and leases held for sale at the lower of cost or fair value, (2) loans and leases held for investment, net of unearned income, and (3) loans and leases accounted for at fair value under a fair value option. Exclude assets held for trading and commercial paper.

1. Loans secured by real estate ${ }^{2}$.
a. Construction, land development, and other land loans:
2. 1-4 family residential construction loans.
3. Other construction loans and all land development and other land loans.
b. Secured by farmland (including farm residential and other improvements).
c. Secured by 1-4 family residential properties:
4. Revolving, open-end loans secured by 1-4 family residential properties and extended under lines of credit.
5. Closed-end loans secured by 1-4 family residential properties:
a. Secured by first liens.
b. Secured by junior liens.
d. Secured by multifamily (5 or more) residential properties.
e. Secured by nonfarm nonresidential properties:
6. Loans secured by owner-occupied nonfarm nonresidential properties.
7. Loans secured by other nonfarm nonresidential properties
8. Loans to depository institutions and acceptances of other banks:
a. To commercial banks in the U.S.
9. To U.S. branches and agencies of foreign banks.
10. To other commercial banks in the U.S.
b. To other depository institutions in the U.S.
c. To banks in foreign countries
11. To foreign branches of other U.S. banks.
12. To other banks in foreign countries.
13. Loans to finance agricultural production and other loans to farmers.
14. Commercial and industrial loans:
a. To U.S. addressees (domicile).
b. To non-U.S. addressees (domicile)
15. Not applicable
16. Loans to individuals for household, family, and other personal expenditures (i.e., consumer loans) (includes purchased paper):
a. Credit cards.
b. Other revolving credit plans.
c. Automobile loans.
d. Other consumer loans (includes single payment and installment loans other than automobile loans, and all student loans).
17. Loans to foreign governments and official institutions (including foreign central banks).
18. Obligations (other than securities and leases) of states and political subdivisions in the
U.S..
19. Loans to nondepository financial institutions and other loans.
a. Loans to nondepository financial institutions.
b. Other loans:
20. Loans for purchasing or carrying securities (secured and unsecured).
21. All other loans (exclude consumer loans)..
22. Lease financing receivables (net of unearned income)
a. Leases to individuals for household, family, and other personal expenditures (i.e.,
consumer leases).
b. All other leases.
23. LESS: Any unearned income on loans reflected in items 1-9 above
24. Total loans and leases held for investment and held for sale (item 12, column A must equal Schedule RC, sum of items 4.a and 4.b).

| (Column A) Consolidated Bank |  | (Column B) Domestic Offices |  | 1. |
| :---: | :---: | :---: | :---: | :---: |
| RCFD1410 | NR |  |  |  |
|  |  |  |  | 1.a. |
| RCFDF158 | 861,000 | RCONF158 | 807,000 | 1. |
| RCFDF159 | 9,193,000 | RCONF159 | 9,193,000 | 1.a.2. |
| RCFD1420 | 63,000 | RCON1420 | 60,000 | 1.b. |
|  |  |  |  | 1.c. |
| RCFD1797 | 15,305,000 | RCON1797 | 15,145,000 | 1.c.1. |
|  |  |  |  | 1.c.2. |
| RCFD5367 | 233,468,000 | RCON5367 | 230,425,000 | c.2.a |
| RCFD5368 | 880,000 | RCON5368 | 880,000 | 1.c.2.b |
| RCFD1460 | 79,931,000 | RCON1460 | 79,917,000 | d. |
|  |  |  |  |  |
| RCFDF160 | 15,577,000 | RCONF160 | 15,549,000 | 1.e.1. |
| RCFDF161 | 26,983,000 | RCONF161 | 26,818,000 | 1.e.2. |
|  |  |  |  | 2. |
|  |  | RCONB531 | 35,000 | 2.a. |
| RCFDB532 | 28,000 |  |  | 2.a.1. |
| RCFDB533 | 8,000 |  |  | 2.a.2. |
| RCFDB534 | 2,000 | RCONB534 | 2,000 | 2.b. |
|  |  | RCONB535 | 4,000,000 | c. |
| RCFDB536 | 18,000 |  |  | 2.c.1. |
| RCFDB537 | 9,139,000 |  |  | 2.c.2. |
| RCFD1590 | 546,000 | RCON1590 | 546,000 | 3. |
|  |  |  |  | 4. |
| RCFD1763 | 156,238,000 | RCON1763 | 153,543,000 | 4.a |
| RCFD1764 | 45,519,000 | RCON1764 | 10,405,000 | 4.b. |
|  |  |  |  | 5. |
|  |  |  |  | 6. |
| RCFDB538 | 158,151,000 | RCONB538 | 158,151,000 | 6.a. |
| RCFDB539 | 20,492,000 | RCONB539 | 18,470,000 | 6.b. |
| RCFDK137 | 58,489,000 | RCONK137 | 58,489,000 | 6.c. |
| RCFDK207 | 2,627,000 | RCONK207 | 2,037,000 | 6.d. |
| RCFD2081 | 2,697,000 | RCON2081 | 357,000 | 7. |
| RCFD2107 | 28,499,000 | RCON2107 | 28,499,000 | 8. |
| RCFD1563 | 273,878,000 |  |  | 9. |
|  |  | RCONJ454 | 93,436,000 | 9.a. |
|  |  |  |  | 9.b. |
|  |  | RCON1545 | 13,555,000 | 9.b.1. |
|  |  | RCONJ451 | 95,018,000 | 9.b.2. |
|  |  | RCON2165 | 40,000 | 10. |
| RCFDF162 | 0 |  |  | 10.a. |
| RCFDF163 | 40,000 |  |  | 10.b. |
| RCFD2123 | 0 | RCON2123 | 0 | 11. |
| RCFD2122 | 1,138,632,000 | RCON2122 | 1,015,377,000 | 12. |

Dollar amounts in thousands

1. Loans restructured in troubled debt restructurings that are in compliance with their modified terms (included in Schedule RC-C, part 1, and not reported as past due or nonaccrual in Schedule RC-N, Memorandum item 1):
a. Construction, land development, and other land loans in domestic offices:
2. 1-4 family residential construction loans.
3. Other construction loans and all land development and other land loans.
b. Loans secured by 1-4 family residential properties in domestic offices.
c. Secured by multifamily ( 5 or more) residential properties in domestic offices
d. Secured by nonfarm nonresidential properties in domestic offices:
4. Loans secured by owner-occupied nonfarm nonresidential properties.
5. Loans secured by other nonfarm nonresidential properties.
e. Commercial and industrial loans:
6. To U.S. addressees (domicile).
7. To non-U.S. addressees (domicile).
f. All other loans (include loans to individuals for household, family, and other personal expenditures).

Itemize loan categories included in Memorandum item 1.f, above that exceed 10 percent of total loans restructured in troubled debt restructurings that are in compliance with their modified terms (sum of Memorandum items 1.a through 1.f):

1. Loans secured by farmland in domestic offices.
2. Not applicable
3. Loans to finance agricultural production and other loans to farmers.
4. Loans to individuals for household, family, and other personal expenditures:
a. Credit cards.
b. Automobile loans
c. Other (includes revolving credit plans other than credit cards and other consumer loans).
g. Total loans restructured in troubled debt restructurings that are in compliance with their modified terms (sum of Memorandum items 1.a.(1) through 1.f)..
5. Maturity and repricing data for loans and leases (excluding those in nonaccrual status):
a. Closed-end loans secured by first liens on 1-4 family residential properties in domestic offices (reported in

Schedule RC-C, part I, item 1.c.(2)(a), column B) with a remaining maturity or next repricing date of:

1. Three months or less..
2. Over three months through 12 months.
3. Over one year through three years.
4. Over three years through five years.
5. Over five years through 15 years.
6. Over 15 years.
b. All loans and leases (reported in Schedule RC-C, part I, items 1 through 10, column A) EXCLUDING closed-end loans secured by first liens on 1-4 family residential properties in domestic offices (reported in Schedule RC-C, part I, item 1.c.(2)(a), column B) with a remaining maturity or next repricing date of:
7. Three months or less.
8. Over three months through 12 months.
9. Over one year through three years.
10. Over three years through five years.
11. Over five years through 15 years.
12. Over 15 years.
c. Loans and leases (reported in Schedule RC-C, part I, items 1 through 10, column A) with a REMAINING MATURITY of one year or less (excluding those in nonaccrual status).
13. Loans to finance commercial real estate, construction, and land development activities (not secured by real estate) included in Schedule RC-C, part I, items 4 and 9, column A ${ }^{4}$.
14. Adjustable rate closed-end loans secured by first liens on 1-4 family residential properties in domestic offices (included in Schedule RC-C, part I, item 1.c.(2)(a), column B)..
15. Loans secured by real estate to non-U.S. addressees (domicile) (included in Schedule RC-C, Part I, item 1, column A, or Schedule RC-C, Part I, items 1.a.(1) through 1.e.(2), column A, as appropriate).
Memorandum item 6 is to be completed by banks that (1) together with affiliated institutions, have outstanding credit card receivables (as defined in the instructions) that exceed $\$ 500$ million as of the report date, or (2) are credit card specialty banks as defined for Uniform Bank Performance Report purposes.
16. Outstanding credit card fees and finance charges included in Schedule RC-C, part I, item 6.a, column A.

|  |  | M.1. |
| :---: | :---: | :---: |
|  |  | M.1.a. |
| RCONK158 | 0 | M.1.a.1. |
| RCONK159 | 1,000 | M.1.a.2. |
| RCONF576 | 0 | M.1.b. |
| RCONK160 | 0 | M.1.c. |
|  |  | M.1.d. |
| RCONK161 | 0 | M.1.d.1. |
| RCONK162 | 0 | M.1.d.2 |
|  |  | M.1.e. |
| RCFDK163 | 192,000 | M.1.e.1. |
| RCFDK164 | 28,000 | M.1.e.2 |
| RCFDK165 | 105,000 | M.1.f. |
| RCONK166 | 0 | M.1.f.1. |
|  |  | M.1.f.2. |
| RCFDK168 | 0 | M.1.f.3. |
|  |  | M.1.f.4. |
| RCFDK098 | 105,000 | M.1.f.4.a |
| RCFDK203 | 0 | M.1.f.4.b |
| RCFDK204 | 0 | M.1.f.4.c. |
| RCFDHK25 | 326,000 | M.1.g. |
|  |  | M.2. |
|  |  | M.2.a. |
| RCONA564 | 1,646,000 | M.2.a.1 |
| RCONA565 | 5,964,000 | M.2.a.2. |
| RCONA566 | 7,109,000 | M.2.a.3 |
| RCONA567 | 15,001,000 | M.2.a.4 |
| RCONA568 | 49,384,000 | M.2.a.5 |
| RCONA569 | 147,950,000 | M.2.a.6 |
|  |  | M.2.b. |
| RCFDA570 | 648,494,000 | M.2.b.1 |
| RCFDA571 | 42,594,000 | M.2.b.2 |
| RCFDA572 | 55,233,000 | M.2.b.3 |
| RCFDA573 | 84,093,000 | M.2.b. 4 |
| RCFDA574 | 67,061,000 | M.2.b.5. |
| RCFDA575 | 6,956,000 | ( M.2.b.6. |
| RCFDA247 | 224,973,000 | м.2.c. |
| RCFD2746 | 17,855,000 | M.3. |
| RCON5370 | 74,524,000 | M. 4. |
| RCFDB837 | 4,292,000 | M. 5. |
| RCFDC391 | 2,111,000 | M. 6. |

[^23]
## Dollar amounts in thousands

Memorandum items 7.a and 7.b are to be completed by all banks semiannually in the June and December reports only.
7. Purchased credit-impaired loans held for investment accounted for in accordance with FASB ASC 310-30 (former
AICPA Statement of Position 03-3) (exclude loans held for sale): .

Dollar amounts in thousands
9. Loans secured by 1-4 family residential properties in domestic offices in process of foreclosure (included in Schedule RC-C, part I, items 1.c.(1), 1.c.(2)(a), and 1.c.(2)(b)).

| RCONF577 | 999,000 |
| :--- | ---: |

## Dollar amounts in thousands

| 10. Not applicable | M.10. <br> 11. Not applicable |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |


| Dollar amounts in thousands | (Column A) Fair value of acquired loans and leases at acquisition date |  | (Column B) Gross contractual amounts receivable at acquisition date |  | (Column C) Best estimate at acquisition date of contractual cash flows not expected to be collected |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Memorandum items 12.a, 12.b, 12.c, and 12.d are to be completed semiannually in the June and December reports only. |  |  |  |  |  |  |
| 12. Loans (not subject to the requirements of FASB ASC 310-30 (former AICPA Statement of Position 03-3)) and leases held for investment that were acquired in business combinations with acquisition dates in the current calendar year: ${ }^{1}$ |  |  |  |  |  |  |
| a. Loans secured by real estate. | RCFDG091 | NR | RCFDG092 | NR | RCFDG093 | NR |
| b. Commercial and industrial loans... | RCFDG094 | NR | RCFDG095 | NR | RCFDG096 | NR |
| c. Loans to individuals for household, family, and other personal expenditures. | RCFDG097 | NR | RCFDG098 | NR | RCFDG099 | NR |
| d. All other loans and all leases.... | RCFDG100 | NR | RCFDG101 | NR | RCFDG102 | NR |

Dollar amounts in thousands

| Memoranda item 13 is to be completed by banks that had construction, land development, and other land loans in domestic offices (as reported in Schedule RC-C, Part I, item 1.a., column B) that exceeded 100 percent of the sum of tier 1 capital (as reported in Schedule RC-R, Part I, item 26) plus the allowance for loan and lease losses or the allowance for credit losses on loans and leases, as applicable (as reported in Schedule RC, item 4.c) as of December 31, 2021. |  |  | M.13. |
| :---: | :---: | :---: | :---: |
| 13. Construction, land development, and other land loans in domestic offices with interest reserves: |  |  |  |
| a. Amount of loans that provide for the use of interest reserves (included in Schedule RC-C, part I, item 1.a, column B) $\qquad$ | RCONG376 | 0 | M.13.a. |
| b. Amount of interest capitalized from interest reserves on construction, land development, and other land loans that is included in interest and fee income on loans during the quarter (included in Schedule RI, item 1.a.(1)(a)(2)). | RIADG377 | 0 | M.13.b. |
| Memorandum item 14 is to be completed by all banks. <br> 14. Pledged loans and leases.. $\qquad$ | RCFDG378 | 524,488,000 | M.14. |
| Memorandum item 15 is to be completed for the December report only. 15. Reverse mortgages in domestic offices: |  |  | M. 15. |
| a. Reverse mortgages outstanding that are held for investment (included in Schedule RC-C, item 1.c, above): |  |  | M.15.a. |
| 1. Home Equity Conversion Mortgage (HECM) reverse mortgages | RCONJ466 | NR | M.15.a.1. |
| 2. Proprietary reverse mortgages.. | RCONJ467 | NR | M.15.a.2. |
| b. Estimated number of reverse mortgage loan referrals to other lenders during the year from whom compensation has been received for services performed in connection with the origination of the reverse mortgages: |  |  | M.15.b. |
| 1. Home Equity Conversion Mortgage (HECM) reverse mortgages. | RCONJ468 | NR | M.15.b.1. |
| 2. Proprietary reverse mortgages | RCONJ469 | NR | M.15.b.2. |
| c. Principal amount of reverse mortgage originations that have been sold during the year: |  |  | M.15.c. |
| 1. Home Equity Conversion Mortgage (HECM) reverse mortgages. | RCONJ470 | NR | M.15.c.1. |
| 2. Proprietary reverse mortgages. | RCONJ471 | NR | M.15.c.2. |
| Memorandum item 16 is to be completed by all banks. |  |  |  |
| 16. Revolving, open-end loans secured by 1-4 family residential properties and extended under lines of credit in domestic offices that have converted to non-revolving closed-end status (included in item 1.c.(1) above). | RCONLE75 | 9,624,000 | M.16. |
| Amounts reported in Memorandum items 17.a and 17.b will not be made available to the public on an individual institution basis. 17. Eligible loan modifications under Section 4013, Temporary Relief from Troubled Debt Restructurings, of the 2020 Coronavirus Aid, Relief, and Economic Security Act: |  |  | M.17. |
| a. Number of Section 4013 loans outstanding. | RCONLG24 | CONF | M.17.a. |
| b. Outstanding balance of Section 4013 loans......................................................................................... | RCONLG25 | CONF | M.17.b. |

[^24]
## Schedule RC-C Part II - Loans to Small Businesses and Small Farms(Form Type - 031)

Report the number and amount currently outstanding as of the report date of business loans with "original amounts" of \$1,000,000 or less and farm loans with "original amounts" of $\$ 500,000$ or less. The following guidelines should be used to determine the "original amount" of a loan:
(1) For loans drawn down under lines of credit or loan commitments, the "original amount" of the loan is the size of the line of credit or loan commitment when the line of credit or loan commitment was most recently approved, extended, or renewed prior to the report date. However, if the amount currently outstanding as of the report date exceeds this size, the "original amount" is the amount currently outstanding on the report date. (2) For loan participations and syndications, the "original amount" of the loan participation or syndication is the entire amount of the credit originated by the lead lender. (3) For all other loans, the "original amount" is the total amount of the loan at origination or the amount currently outstanding as of the report date, whichever is larger.


| Dollar amounts in thousands | (Column A) Number of Loans |  | (Column B) Amount Currently Outstanding |  |
| :---: | :---: | :---: | :---: | :---: |
| 3. Number and amount currently outstanding of "Loans secured by nonfarm nonresidential properties" in domestic offices reported in Schedule RC-C, part I, items 1.e.(1) and 1.e.(2), column B: |  |  |  |  |
| a. With original amounts of \$100,000 or less. | RCON5564 | 414 | RCON5565 | 13,000 |
| b. With original amounts of more than \$100,000 through \$250,000... | RCON5566 | 2270 | RCON5567 | 236,000 |
| c. With original amounts of more than \$250,000 through \$1,000,000... | RCON5568 | 8153 | RCON5569 | 3,328,000 |
| 4. Number and amount currently outstanding of "Commercial and industrial loans to U.S. addressees" in domestic offices reported in Schedule RC-C, part I, item 4.a, column B: |  |  |  |  |
| a. With original amounts of \$100,000 or less.. | RCON5570 | 2903524 | RCON5571 | 23,403,000 |
| b. With original amounts of more than \$100,000 through \$250,000.. | RCON5572 | 33513 | RCON5573 | 2,410,000 |
| c. With original amounts of more than \$250,000 through \$1,000,000............................ | RCON5574 | 14489 | RCON5575 | 2,289,000 |

Dollar amounts in thousands
5. Not applicable
6. Not applicable


| Dollar amounts in thousands | (Column A) Number of Loans |  | (Column B) Amount Currently Outstanding |  |
| :---: | :---: | :---: | :---: | :---: |
| 7. Number and amount currently outstanding of "Loans secured by farmland (including farm residential and other improvements)" in domestic offices reported in Schedule RC-C, part I, item 1.b, column B: |  |  |  |  |
| a. With original amounts of \$100,000 or less | RCON5578 | 5 | RCON5579 | 0 |
| b. With original amounts of more than \$100,000 through \$250,000.. | RCON5580 | 15 | RCON5581 | 1,000 |
| c. With original amounts of more than \$250,000 through \$500,000... | RCON5582 | 16 | RCON5583 | 3,000 |
| 8. Number and amount currently outstanding of "Loans to finance agricultural production and other loans to farmers" in domestic offices reported in Schedule RC-C, part I, item 3, column B: |  |  |  |  |
| a. With original amounts of \$100,000 or less.. | RCON5584 | 48045 | RCON5585 | 305,000 |
| b. With original amounts of more than \$100,000 through \$250,000... | RCON5586 | 85 | RCON5587 | 6,000 |
| c. With original amounts of more than \$250,000 through \$500,000..... | RCON5588 | 24 | RCON5589 | 2,000 |

## Schedule RC-D - Trading Assets and Liabilities(Form Type - 031)

Schedule RC-D is to be completed by banks that reported total trading assets of $\$ 10$ million or more in any of the four preceding calendar quarters, and all banks meeting the FDIC's definition of a large or highly complex institution for deposit insurance assessment purposes.

| Dollar amounts in thousands | Consolidated Bank |  |  |
| :---: | :---: | :---: | :---: |
| 1. U.S. Treasury securities... | RCFD3531 | 9,311,000 | 1. |
| 2. U.S. Government agency obligations (exclude mortgage-backed securities). | RCFD3532 | 0 | 2. |
| 3. Securities issued by states and political subdivisions in the U.S. | RCFD3533 | 598,000 | 3. |
| 4. Mortgage-backed securities (MBS): |  |  | 4. |
| a. Residential mortgage pass-through securities issued or guaranteed by FNMA, FHLMC, or GNMA.. | RCFDG379 | 13,545,000 | 4.a. |
| b. Other residential MBS issued or guaranteed by U.S. Government agencies or sponsored agencies (include CMOs, REMICs, and stripped MBS) ${ }^{1}$. | RCFDG380 | 729,000 | 4.b. |
| c. All other residential MBS.. | RCFDG381 | 1,097,000 | 4.c. |
| d. Commercial MBS issued or guaranteed by U.S. Government agencies or sponsored agencies ${ }^{1}$.. | RCFDK197 | 0 | 4.d. |
| e. All other commercial MBS.. | RCFDK198 | 341,000 | 4.e. |
| 5. Other debt securities: |  |  | 5. |
| a. Structured financial products. | RCFDHT62 | 4,256,000 | 5.a. |
| b. All other debt securities.. | RCFDG386 | 116,143,000 | 5.b. |
| 6. Loans: |  |  | 6. |
| a. Loans secured by real estate |  |  | 6.a. |
| 1. Loans secured by 1-4 family residential properties. | RCFDHT63 | 0 | 6.a.1. |
| 2. All other loans secured by real estate. | RCFDHT64 | 111,000 | 6.a.2. |
| b. Commercial and industrial loans. | RCFDF614 | 7,837,000 | 6.b. |
| c. Loans to individuals for household, family, and other personal expenditures (i.e., consumer loans) (includes purchased paper). | RCFDHT65 | 0 | 6.c. |
| d. Other loans... | RCFDF618 | 1,252,000 | 6.d. |
| 7. Not appliable |  |  | 7. |
| 8. Not applicable |  |  | 8. |
| 9. Other trading assets. | RCFD3541 | 142,520,000 | 9. |
| 10. Not applicable |  |  | 10. |
| 11. Derivatives with a positive fair value. | RCFD3543 | 57,426,000 | 11. |
| 12. Total trading assets (sum of items 1 through 11) (total of column A must equal Schedule RC, item 5).. | RCFD3545 | 355,166,000 | 12. |
| 13. Not available |  |  | 13. |
| a. Liability for short positions... | RCFD3546 | 85,560,000 | 13.a. |
| b. Other trading liabilities.. | RCFDF624 | 85,000 | 13.b. |
| 14. Derivatives with a negative fair value | RCFD3547 | 40,575,000 | 14. |
| 15. Total trading liabilities (sum of items 13.a through 14) (total of column A must equal Schedule RC, item 15).. | RCFD3548 | 126,220,000 | 15. |
| 1. Unpaid principal balance of loans measured at fair value (reported in Schedule RC-D, items 6.a through 6.d): |  |  | M.1. |
| a. Loans secured by real estate |  |  | M.1.a. |
| 1. Loans secured by 1-4 family residential properties.. | RCFDHT66 | 0 | M.1.a.1 |
| 2. All other loans secured by real estate. | RCFDHT67 | 140,000 | M.1.a.2 |
| b. Commercial and industrial loans.. | RCFDF632 | 10,107,000 | M.1.b. |
| c. Loans to individuals for household, family, and other personal expenditures (i.e., consumer loans) (includes purchased paper). | RCFDHT68 | 0 | M.1.c. |
| d. Other loans. | RCFDF636 | 1,890,000 | M.1.d. |
| Memorandum items 2 through 10 are to be completed by banks with $\$ 10$ billion or more in total trading assets. <br> 2. Loans measured at fair value that are past due 90 days or more: ${ }^{1}$ |  |  | M.2. |
| a. Fair value.. | RCFDF639 | 274,000 | M.2.a. |
| b. Unpaid principal balance.............. | RCFDF640 | 1,719,000 | M.2.b. |

[^25]| Dollar amounts in thousands | Consolidated Bank |  |  |
| :---: | :---: | :---: | :---: |
| Memorandum items 3 through 10 are to be completed by banks with $\$ 10$ billion or more in total trading assets. |  |  |  |
| 3. Structured financial products by underlying collateral or reference assets (for each column, sum of Memorandum items 3.a through 3.g must equal Schedule RC-D, sum of items 5.a.(1) through (3)): |  |  | M. 3. |
| a. Trust preferred securities issued by financial institutions. | RCFDG299 | 4,038,000 | M.3.a. |
| b. Trust preferred securities issued by real estate investment trusts | RCFDG332 | 0 | м.з.b. |
| c. Corporate and similar loans. | RCFDG333 | 218,000 | M.3.c. |
| d. 1-4 family residential MBS issued or guaranteed by U.S. government-sponsored enterprises (GSEs). | RCFDG334 | 0 | M.3.d. |
| e. 1-4 family residential MBS not issued or guaranteed by GSEs. | RCFDG335 | 0 | M.3.e. |
| f. Diversified (mixed) pools of structured financial products.. | RCFDG651 |  | M.3.f. |
| g. Other collateral or reference assets.. | RCFDG652 | 0 | M.3.g. |
| 4. Pledged trading assets: |  |  | M.4. |
| a. Pledged securities. | RCFDG387 | 98,055,000 | M.4.a. |
| b. Pledged loans... | RCFDG388 | 79,000 | M.4.b. |

## Dollar amounts in thousands

| 5. Asset-backed securities: |  |  | M.5. |
| :---: | :---: | :---: | :---: |
| a. Credit card receivables.. | RCFDF643 | 83,000 | M.5.a. |
| b. Home equity lines... | RCFDF644 | 0 | M.5.b. |
| c. Automobile loans.. | RCFDF645 | 45,000 | M.5.c. |
| d. Other consumer loans.. | RCFDF646 | 105,000 | M.5.d. |
| e. Commercial and industrial loans.. | RCFDF647 | 0 | M.5.e. |
| f. Other.. | RCFDF648 | 108,000 | M.5.f. |
| 6. Retained beneficial interests in securitizations (first-loss or equity tranches) |  |  | M.6. |
| 7. Equity securities (included in Schedule RC-D, item 9, above): |  |  | M.7. |
| a. Readily determinable fair values........................................................................................................... | RCFDF652 | 107,918,000 | M.7.a. |
| b. Other.. | RCFDF653 | 1,545,000 | M.7.b. |
| 8. Loans pending securitization.. | RCFDF654 | 0 | M.8. |
| 9. Other trading assets (itemize and describe amounts included in Schedule RC-D, item 9, that are greater than $\$ 1,000,000$ and exceed $25 \%$ of the item): ${ }^{1}$ |  |  | M.9. |
| a. Disclose component and the dollar amount of that component: |  |  | M.9.a. |
| 1. Describe component... | TEXTF655 | NR | M.9.a.1. |
| 2. Amount of component.................................................................................................................... | RCFDF655 | 0 | M.9.a.2. |
| b. Disclose component and the dollar amount of that component: |  |  | M.9.b. |
| (TEXTF656) NR | RCFDF656 | 0 | M.9.b.1. |
| c. Disclose component and the dollar amount of that component: |  |  | M.9.c. |
| (TEXTF657) NR | RCFDF657 | 0 | M.9.c.1. |
| 10. Other trading liabilities (itemize and describe amounts included in Schedule RC-D, item 13.b, that are greater than $\$ 1,000,000$ and exceed $25 \%$ of the item): |  |  | M. 10. |
| a. Disclose component and the dollar amount of that component: |  |  | M.10.a. |
| 1. Describe component...................................................................................................................... | TEXTF658 | NR | M.10.a.1. |
| 2. Amount of component..................................................................................................................... | RCFDF658 | 0 | M.10.a.2. |
| b. Disclose component and the dollar amount of that component: |  |  | M.10.b. |
| (TEXTF659) NR | RCFDF659 | 0 | M.10.b.1. |
| c. Disclose component and the dollar amount of that component: |  |  | M.10.c. |
| (TEXTF660) NR | RCFDF660 | 0 | M.10.c. 1. |

[^26]
## Schedule RC-E Part I - Deposits in Domestic Offices(Form Type - 031)

| Dollar amounts in thousands | (Column A) Transaction <br> Accounts Total Transaction accounts (including total demand deposits) |  | (Column B) Transaction Accounts Memo: Total demand deposits (included in column A) |  | (Column C) <br> Nontransaction Accounts Total nontransaction accounts (including MMDAs) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Deposits of: |  |  |  |  |  |  |
| 1. Individuals, partnerships, and corporations (include all certified and official checks) | RCONB549 | 441,181,000 |  |  | RCONB550 | 1,476,389,000 |
| 2. U.S. Government. | RCON2202 | 222,000 |  |  | RCON2520 | 7,000 |
| 3. States and political subdivisions in the U.S. | RCON2203 | 6,682,000 |  |  | RCON2530 | 39,349,000 |
| 4. Commercial banks and other depository institutions in the U.S. | RCONB551 | 2,074,000 |  |  | RCONB552 | 4,432,000 |
| 5. Banks in foreign countries..... | RCON2213 | 43,947,000 |  |  | RCON2236 | 11,986,000 |
| 6. Foreign governments and official institutions (including foreign central banks) | RCON2216 | 5,341,000 |  |  | RCON2377 | 12,036,000 |
| 7. Total (sum of items 1 through 6) (sum of columns $A$ and $C$ must equal Schedule RC, item 13.a). | RCON2215 | 499,447,000 | RCON2210 | 441,320,000 | RCON2385 | 1,544,199,000 |

1. Selected components of total deposits (i.e., sum of item 7, columns A and C):
a. Total Individual Retirement Accounts (IRAs) and Keogh Plan accounts.
b. Total brokered deposits
c. Brokered deposits of $\$ 250,000$ or less (fully insured brokered deposits) ${ }^{2}$.
d. Maturity data for brokered deposits:
2. Brokered deposits of $\$ 250,000$ or less with a remaining maturity of one year or less (included in Memorandum item 1.c above).
3. Not applicable
4. Brokered deposits of more than $\$ 250,000$ with a remaining maturity of one year or less (included in Memorandum item 1.b above)
e. Preferred deposits (uninsured deposits of states and political subdivisions in the U.S. reported in item 3 above which are secured or collateralized as required under state law) (to be completed for the December report only). f. Estimated amount of deposits obtained through the use of deposit listing services that are not brokered deposits.
g. Total reciprocal deposits (as of the report date)

Memorandum items 1.h.(1)(a), 1.h.(2)(a), 1.h.(3)(a), and 1.h.(4)(a) are to be completed by banks with $\$ 100$ billion or more in total assets
h. Sweep deposits:

1. Fully insured, affiliate sweep deposits.
a. Fully insured, affiliate, retail sweep deposits
2. Not fully insured, affiliate sweep deposits
a. Not fully insured, affiliate, retail sweep deposits.
3. Fully insured, non-affiliate sweep deposits
a. Fully insured, non-affiliate, retail sweep deposits
4. Not fully insured, non-affiliate sweep deposits.
a. Not fully insured, non-affiliate, retail sweep deposits
i. Total sweep deposits that are not brokered deposits
5. Components of total nontransaction accounts (sum of Memorandum items 2.a through 2.d must equal item 7, column C above):
a. Savings deposits:
6. Money market deposit accounts (MMDAs)

|  |  | M.1. |
| :---: | :---: | :---: |
| RCON6835 | 11,995,000 | M.1.a. |
| RCON2365 | 68,715,000 | M.1.b. |
| RCONHK05 | 57,591,000 | M.1.c. |
|  |  | M.1.d. |
| RCONHK06 | 45,623,000 | M.1.d.1. |
|  |  | M.1.d.2. |
| RCONK220 | 11,110,000 | M.1.d.3. |
| RCON5590 | NR | M.1.e. |
| RCONK223 | 0 | M.1.f. |
| RCONJH83 | 0 | M.1.g. |
|  |  | M.1.h. |
| RCONMT87 | 16,259,000 | M.1.h.1 |
| RCONMT88 | 16,259,000 | M.1.h.1.a. |
| RCONMT89 | 10,053,000 | M.1.h.2. |
| RCONMT90 | 10,053,000 | M.1.h.2.a. |
| RCONMT91 | 13,907,000 | M.1.h.3 |
| RCONMT92 | 13,907,000 | M.1.h.3.a. |
| RCONMT93 | 0 | M.1.h.4. |
| RCONMT94 | 0 | M.1.h.4.a. |
| RCONMT95 | 26,312,000 | M.1.i. |
|  |  | M.2. |
|  |  | M.2.a. |
| RCON6810 | 895,127,000 | M.2.a.1. |
| RCON0352 | 482,211,000 | M.2.a.2. |
| RCON6648 | 49,841,000 | M.2.b. |
| RCONJ473 | 22,928,000 | M.2.c. |
| RCONJ474 | 94,092,000 | M.2.d. |
| RCONF233 | 186,000 | M.2.e. |
|  |  | M.3. |
|  |  | M.3.a. |
| RCONHK07 | 17,503,000 | M.3.a. 1 |
| RCONHK08 | 41,753,000 | М.з.а.2 |
| RCONHK09 | 9,193,000 | М.з.а.з |
| RCONHK10 | 4,320,000 | M.3.a.4 |
| RCONHK11 | 59,252,000 | M.3.b. |
|  |  | M.4. |
|  |  | M.4.a. |
| RCONHK12 | 68,449,000 | M.4.a.1. |
| RCONHK13 | 24,807,000 | M.4.a.2. |
| RCONHK14 | 595,000 | M.4.a.3. |
| RCONHK15 | 241,000 | M.4.a.4. |

[^27]| b. Time deposits of more than $\$ 250,000$ with a REMAINING MATURITY of one year or less (included in Memorandum items 4.a.(1) and 4.a.(2) above) ${ }^{3}$. | RCONK222 | 82,200,000 | M.4.b. |
| :---: | :---: | :---: | :---: |
| 5. Does your institution offer one or more consumer deposit account products, i.e., transaction account or nontransaction savings account deposit products intended primarily for individuals for personal, household, or family use?. | RCONP752 | Yes | M.5. |
| Memorandum items 6 and 7 are to be completed by institutions with $\$ 1$ billion or more in total assets that answered "Yes" to Memorandum item 5 above. <br> 6. Components of total transaction account deposits of individuals, partnerships, and corporations (sum of Memorandum items 6 .a and $6 . b$ must be less than or equal to item 1 , column $A$, above): ${ }^{5}$ |  |  | M.6. |
| a. Total deposits in those noninterest-bearing transaction account deposit products intended primarily for individuals for personal, household, or family use. | RCONP753 | 34,376,000 | M.6.a. |
| b. Total deposits in those interest-bearing transaction account deposit products intended primarily for individuals for personal, household, or family use. | RCONP754 | 67,435,000 | M.6.b. |
| 7. Components of total nontransaction account deposits of individuals, partnerships, and corporations (sum of Memorandum items 7.a.(1), 7.a.(2), 7.b.(1), and 7.b.(2) plus all time deposits of individuals, partnerships, and corporations must equal item 1 , column C , above): |  |  | M.7. |
| a. Money market deposit accounts (MMDAs) of individuals, partnerships, and corporations (sum of Memorandum items 7.a.(1) and 7.a.(2) must be less than or equal to Memorandum item 2.a.(1) above): |  |  | M.7.a. |
| 1. Total deposits in those MMDA deposit products intended primarily for individuals for personal, household, or family use. | RCONP756 | 318,971,000 | M.7.a.1 |
| 2. Deposits in all other MMDAs of individuals, partnerships, and corporatio | RCONP757 | 516,791,000 | M.7.a.2 |
| b. Other savings deposit accounts of individuals, partnerships, and corporations (sum of Memorandum items 7.b.(1) and 7.b.(2) must be less than or equal to Memorandum item 2.a.(2) above): |  |  | M.7.b. |
| 1. Total deposits in those other savings deposit account deposit products intended primarily for individuals for personal, household, or family use. | RCONP758 | 406,996,000 | M.7.b.1 |
| 2. Deposits in all other savings deposit accounts of individuals, partnerships, and corporations | RCONP759 | 68,606,000 | M.7.b.2. |

## Schedule RC-E Part II - Deposits in Foreign Offices including Edge and Agreement subsidiaries and IBFs(Form Type - 031)

Dollar amounts in thousands

| D |  |  |
| :---: | :---: | :---: |
| 1. Individuals, partnerships, and corporations (include all certified and official checks). | RCFNB553 | 344,304,000 |
| 2. U.S. banks (including IBFs and foreign branches of U.S. banks) and other U.S. depository institutions..... | RCFNB554 | 1,862,000 |
| 3. Foreign banks (including U.S. branches and agencies of foreign banks, including their IBFs).. | RCFN2625 | 48,107,000 |
| 4. Foreign governments and official institutions (including foreign central banks). | RCFN2650 | 34,922,000 |
| 5. U.S. Government and states and political subdivisions in the U.S. | RCFNB555 | 72,000 |
| 6. Total. | RCFN2200 | 429,267,000 |
| 1. Time deposits with a remaining maturity of one year or less (included in Schedule RC, item 13.b)........................ | RCFNA245 | 82,379,000 |

[^28]
## Schedule RC-F - Other Assets(Form Type - 031)

| Dollar amounts in thousands |  |  | 1. |
| :---: | :---: | :---: | :---: |
| 1. Accrued interest receivable ${ }^{2}$. | RCFDB556 | 10,763,000 |  |
| 2. Net deferred tax assets ${ }^{3}$. | RCFD2148 | 6,259,000 | 2. |
| 3. Interest-only strips receivable (not in the form of a security) ${ }^{4}$. | RCFDHT80 | 0 | 3. |
| 4. Equity investments without readily determinable fair values ${ }^{5}$. | RCFD1752 | 4,646,000 | 4. |
| 5. Life insurance assets: |  |  | 5. |
| a. General account life insurance assets. | RCFDK201 | 6,576,000 | 5.a. |
| b. Separate account life insurance assets.. | RCFDK202 | 5,680,000 | 5.b. |
| c. Hybrid account life insurance assets... | RCFDK270 | 0 | 5.c. |
| 6. All other assets (itemize and describe amounts greater than \$100,000 that exceed $25 \%$ of this item).................. | RCFD2168 | 138,088,000 | 6. |
| a. Prepaid expenses. | RCFD2166 | 0 | 6.a. |
| b. Repossessed personal property (including vehicles).. | RCFD1578 | 0 | 6.b. |
| c. Derivatives with a positive fair value held for purposes other than trading................................................... | RCFDC010 | 0 | 6.c. |
| d. FDIC loss-sharing indemnification assets........... | RCFDJ448 | 0 | 6.d. |
| e. Computer software.... | RCFDFT33 | 0 | 6.e. |
| f. Accounts receivable... | RCFDFT34 | 58,178,000 | 6.f. |
| g. Receivables from foreclosed government-guaranteed mortgage loans....................................................... | RCFDFT35 | 0 | 6.g. |
| h. Disclose component and the dollar amount of that component: |  |  | 6.h. |
| 1. Describe component..................................................................................................................... | TEXT3549 | NR | 6.h.1. |
| 2. Amount of component................................................................................................................. | RCFD3549 | 0 | 6.h.2. |
| i. Disclose component and the dollar amount of that component: |  |  | 6.i. |
| 1. Describe component.. | TEXT3550 | NR | 6.i.1. |
| 2. Amount of component.................................................................................................................. | RCFD3550 | 0 | 6.i.2. |
| j. Disclose component and the dollar amount of that component: |  |  | 6.j. |
| 1. Describe component..................................................................................................................... | TEXT3551 | NR | 6.j. 1. |
| 2. Amount of component................................................................................................................. | RCFD3551 | 0 | 6.j.2. |
| 7. Total (sum of items 1 through 6) (must equal Schedule RC, item 11)............................................................... | RCFD2160 | 172,012,000 | 7. |

[^29]
## Schedule RC-G - Other Liabilities(Form Type - 031)

| Dollar amounts in thousands |  |  |  |
| :---: | :---: | :---: | :---: |
| 1. Not available |  |  | 1. |
| a. Interest accrued and unpaid on deposits in domestic offices ${ }^{6}$. | RCON3645 | 1,114,000 | 1.a. |
| b. Other expenses accrued and unpaid (includes accrued income taxes payable)............................................. | RCFD3646 | 28,391,000 | 1.b. |
| 2. Net deferred tax liabilities ${ }^{2}$ | RCFD3049 | 0 | 2. |
| 3. Allowance for credit losses on off-balance sheet credit exposures ${ }^{7}$. | RCFDB557 | 2,357,000 | 3. |
| 4. All other liabilities (itemize and describe amounts greater than \$100,000 that exceed 25 percent of this item)......... | RCFD2938 | 115,600,000 | 4. |
| a. Accounts payable.......................................................................................................................... | RCFD3066 | 83,828,000 | 4.a. |
| b. Deferred compensation liabilities.. | RCFDC011 | 0 | 4.b. |
| c. Dividends declared but not yet payable.. | RCFD2932 | 0 | 4.c. |
| d. Derivatives with a negative fair value held for purposes other than trading. | RCFDC012 | 0 | 4.d. |
| e. Operating lease liabilities.. | RCFDLB56 | 0 | 4.e. |
| f. Disclose component and the dollar amount of that component: |  |  | 4.f. |
| 1. Describe component..................................................................................................................... | TEXT3552 | NR | 4.f.1. |
| 2. Amount of component. | RCFD3552 | 0 | 4.f.2. |
| g. Disclose component and the dollar amount of that component: |  |  | 4.9. |
| 1. Describe component..................................................................................................................... | TEXT3553 | NR | 4.g.1. |
| 2. Amount of component.. | RCFD3553 | 0 | 4.g.2. |
| h. Disclose component and the dollar amount of that component: |  |  | 4.h. |
| 1. Describe component.................................................................................................................... | TEXT3554 | NR | 4.h.1. |
| 2. Amount of component. | RCFD3554 | 0 | 4.h.2. |
| 5. Total... | RCFD2930 | 147,462,000 | 5. |

[^30]
## Schedule RC-H - Selected Balance Sheet Items for Domestic Offices(Form Type - 031)

To be completed only by banks with foreign offices.


| Dollar amounts in thousands | (Column A) Amortized Cost of Held-to-Maturity Securities |  | (Column B) Fair Value of Available-for-Sale Securities |  |
| :---: | :---: | :---: | :---: | :---: |
| 10. U.S. Treasury securities.. | RCON0211 | 202,487,000 | RCON1287 | 81,638,000 |
| 11. U.S. Government agency obligations (exclude mortgage-backed securities). | RCON8492 | 0 | RCON8495 | 0 |
| 12. Securities issued by states and political subdivisions in the U.S.. | RCON8496 | 12,333,000 | RCON8499 | 13,501,000 |
| 13. Mortgage-backed securities (MBS): |  |  |  |  |
| a. Mortgage pass-through securities: |  |  |  |  |
| 1. Issued or guaranteed by FNMA, FHLMC, or GNMA. | RCONG389 | 112,554,000 | RCONG390 | 67,029,000 |
| 2. Other mortgage pass-through securities. | RCON1709 | 0 | RCON1713 | 0 |
| b. Other mortgage-backed securities (include CMOs, REMICs, and stripped MBS): |  |  |  |  |
| 1. Issued or guaranteed by U.S. Government agencies or sponsored agencies ${ }^{1}$. | RCONG393 | 426,000 | RCONG394 | 275,000 |
| 2. All other mortgage-backed securities.............................................................. | RCON1733 | 21,377,000 | RCON1736 | 3,240,000 |
| 14. Other domestic debt securities (include domestic structured financial products and domestic asset-backed securities). | RCONG397 | 5,127,000 | RCONG398 | 3,297,000 |
| 15. Other foreign debt securities (include foreign structured financial products and foreign asset-backed securities). | RCONG399 | 47,125,000 | RCONG400 | 4,629,000 |
| 16. Not applicable. |  |  |  |  |
| 17. Total held-to-maturity and available-for-sale debt securities (sum of items 10 through 15).. | RCON1754 | 401,429,000 | RCON1773 | 173,609,000 |

Dollar amounts in thousands
18. Equity investments not held for trading:
a. Equity securities with readily determinable fair values ${ }^{4}$.
b. Equity investments without readily determinable fair values.

Items 19, 20 and 21 are to be completed by banks that reported total trading assets of $\$ 10$ million or more in any of the four preceding calendar quarters and all banks meeting the FDIC's definition of a large or highly complex institution for deposit insurance assessment purposes.
19. Total trading assets.
20. Total trading liabilities.
21. Total loans held for trading
tem 22 is to be completed by banks that: (1) have elected to report financial instruments or servicing assets and liabilities at fair value under a fair value option with changes in fair value recognized in earnings, or (2) are required to complete Schedule RC-D, Trading Assets and Liabilities.
22. Total amount of fair value option loans held for investment and held for sale


[^31]
## Schedule RC-I - Assets and Liabilities of IBFs(Form Type - 031)

To be completed only by banks with IBFs and other "foreign" offices.
Dollar amounts in thousands

1. Total IBF assets of the consolidated bank (component of Schedule RC, item 12)....................................................
2. Total IBF liabilities (component of Schedule RC, item 21)........................................................................................

| RCFN2133 | $\mathbf{2 9 1 , 0 0 0}$ |
| :--- | ---: | .

## Schedule RC-K - Quarterly Averages(Form Type - 031)

| Dollar amounts in thousands |  |  | 1. |
| :---: | :---: | :---: | :---: |
| 1. Interest-bearing balances due from depository institutions............................................................................. | RCFD3381 | 507,323,000 |  |
| 2. U.S. Treasury securities and U.S. Government agency obligations (excluding mortgage-backed securities) ${ }^{2}$........... | RCFDB558 | 296,582,000 | 2. |
| 3. Mortgage-backed securities ${ }^{2}$. | RCFDB559 | 214,551,000 | 3. |
| 4. All other debt securities and equity securities with readily determinable fair values not held for trading ${ }^{2}$. | RCFDB560 | 118,415,000 | 4. |
| 5. Federal funds sold and securities purchased under agreements to resell. | RCFD3365 | 340,478,000 | 5. |
| 6. Loans: |  |  | 6. |
| a. Loans in domestic offices: |  |  | 6.a. |
| 1. Total loans. | RCON3360 | 1,011,308,000 | 6.a.1. |
| 2. Loans secured by real estate: |  |  | 6.a.2. |
| a. Loans secured by 1-4 family residential properties. | RCON3465 | 247,119,000 | 6.a.2.a. |
| b. All other loans secured by real estate............. | RCON3466 | 132,418,000 | 6.a.2.b. |
| 3. Loans to finance agricultural production and other loans to farmers | RCON3386 | 822,000 | 6.a.3. |
| 4. Commercial and industrial loans | RCON3387 | 163,034,000 | 6.a.4. |
| 5. Loans to individuals for household, family, and other personal expenditures: |  |  | 6.a.5. |
| a. Credit cards. | RCONB561 | 159,291,000 | 6.a.5.a. |
| b. Other (includes revolving credit plans other than credit cards, automobile loans, and other consumer loans) | RCONB562 | 78,359,000 | 6.a.5.b. |
| b. Total loans in foreign offices, Edge and Agreement subsidiaries, and IBFs. | RCFN3360 | 126,343,000 | 6.b. |
| Item 7 is to be completed by banks with total trading assets of $\$ 10$ million or more in any of the four preceding calendar quarters and all banks meeting the FDIC's definition of a large or highly complex institution for deposit insurance assessment purposes. <br> 7. Trading assets. $\qquad$ | RCFD3401 | 340,918,000 | 7. |
| 8. Lease financing receivables (net of unearned income).. | RCFD3484 | 39,000 | 8. |
| 9. Total assets ${ }^{4}$.. | RCFD3368 | 3,228,849,000 | 9. |
| 10. Interest-bearing transaction accounts in domestic offices (interest-bearing demand deposits, NOW accounts, ATS accounts, and telephone and preauthorized transfer accounts). | RCON3485 | 325,302,000 | 10. |
| 11. Nontransaction accounts in domestic offices: |  |  | 11. |
| a. Savings deposits (includes MMDAs).. | RCONB563 | 1,407,595,000 | 11.a. |
| b. Time deposits of \$250,000 or less. | RCONHK16 | 55,873,000 | 11.b. |
| c. Time deposits of more than \$250,000.. | RCONHK17 | 84,056,000 | 11.c. |
| 12. Interest-bearing deposits in foreign offices, EDGE and Agreement subsidiaries, and IBFs.................................. | RCFN3404 | 404,249,000 | 12. |
| 13. Federal funds purchased and securities sold under agreements to repurchase. | RCFD3353 | 106,580,000 | 13. |
| 14. Other borrowed money (includes mortgage indebtedness and obligations under capitalized leases).................... | RCFD3355 | 100,974,000 | 14. |

[^32]
## Schedule RC-L - Derivatives and Off-Balance Sheet Items(Form Type - 031)

Please read carefully the instructions for the preparation of Schedule RC-L. Some of the amounts reported in Schedule RC-L are regarded as volume indicators and not necessarily as measures of risk.

| Dollar amounts in thousands |  |  | 1. |
| :---: | :---: | :---: | :---: |
| 1. Unused commitments: |  |  |  |
| a. Revolving, open-end lines secured by 1-4 family residential properties, i.e., home equity lines.. | RCFD3814 | 17,017,000 | 1.a. |
| Item 1.a.(1) is to be completed for the December report only. <br> 1. Unused commitments for reverse mortgages outstanding that are held for investment in domestic offices.. | RCONHT72 | NR | 1.a.1. |
| b. Credit card lines (Sum of items 1.b.(1) and 1.b.(2) must equal item 1.b) | RCFD3815 | 861,179,000 | 1.b. |
| Items 1.b.(1) and 1.b.(2) are to be completed by banks with either $\$ 300$ million or more in total assets or $\$ 300$ million or more in credit card lines. (Sum of items 1.b.(1) and 1.b.(2) must equal item 1.b) <br> Items 1.b.(1) and 1.b.(2) are to be completed semiannually in the June and December reports only. <br> 1. Unused consumer credit card lines. | RCFDJ455 | NR | 1.b.1. |
| 2. Other unused credit card lines. | RCFDJ456 | NR | 1.b.2. |
| c. Commitments to fund commercial real estate, construction, and land development loans: |  |  | 1.c. |
| 1. Secured by real estate: |  |  | 1.c.1. |
| a. 1-4 family residential construction loan commitments... | RCFDF164 | 305,000 | 1.c.1.a |
| b. Commercial real estate, other construction loan, and land development loan commitments. | RCFDF165 | 10,064,000 | 1.c.1.b |
| 2. Not secured by real estate. | RCFD6550 | 13,027,000 | 1.c.2. |
| d. Securities underwriting. | RCFD3817 | 0 | 1.d. |
| e. Other unused commitments: |  |  | 1.e. |
| 1. Commercial and industrial loans. | RCFDJ457 | 308,921,000 | 1.e.1. |
| 2. Loans to financial institutions. | RCFDJ458 | 62,715,000 | 1.e.2. |
| 3. All other unused commitments. | RCFDJ459 | 199,289,000 | 1.e.3. |
| 2. Financial standby letters of credit and foreign office guarantees. | RCFD3819 | 67,167,000 | 2. |
| Item 2 .a is to be completed by banks with $\$ 1$ billion or more in total assets. <br> a. Amount of financial standby letters of credit conveyed to others ${ }^{1}$. $\qquad$ | RCFD3820 | 38,163,000 | 2.a. |
| 3. Performance standby letters of credit and foreign office guarantees | RCFD3821 | 5,774,000 | 3. |
| Item 3.a is to be completed by banks with $\$ 1$ billion or more in total assets. <br> a. Amount of performance standby letters of credit conveyed to others ${ }^{1}$. $\qquad$ | RCFD3822 | 1,357,000 | 3.a. |
| 4. Commercial and similar letters of credit.. | RCFD3411 | 4,303,000 | 4. |
| 5. Not applicable |  |  | 5. |
| 6. Securities lent and borrowed: |  |  | 6. |
| a. Securities lent (including customers' securities lent where the customer is indemnified against loss by the reporting bank). | RCFD3433 | 313,122,000 | 6.a. |
| b. Securities borrowed. | RCFD3432 | 187,548,000 | 6.b. |


| Dollar amounts in thousands | (Column A) Sold Protection |  | (Column B) Purchased Protection |  |
| :---: | :---: | :---: | :---: | :---: |
| 7. Credit derivatives: |  |  |  |  |
| a. Notional amounts: |  |  |  |  |
| 1. Credit default swaps... | RCFDC968 | 639,666,000 | RCFDC969 | 666,574,000 |
| 2. Total return swaps........................................................................................ | RCFDC970 | 14,797,000 | RCFDC971 | 34,053,000 |
| 3. Credit options.... | RCFDC972 | 76,372,000 | RCFDC973 | 73,421,000 |
| 4. Other credit derivatives...... | RCFDC974 | 3,000 | RCFDC975 | 6,061,000 |
| b. Gross fair values: |  |  |  |  |
| 1. Gross positive fair value............................................................................... | RCFDC219 | 5,548,000 | RCFDC221 | 6,117,000 |
| 2. Gross negative fair value.............................................................................. | RCFDC220 | 4,332,000 | RCFDC222 | 7,713,000 |

Dollar amounts in thousands


| $\frac{\text { Dollar amounts in thousands }}{\text { d. Notional amounts by remaining maturity: }}$ | (Column A) Remaining Maturity of One Year or Less |  | (Column B) Remaining Maturity of Over One Year Through Five Years |  | (Column C) Remaining Maturity of Over Five Years |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |
| 1. Sold credit protection: ${ }^{2}$ |  |  |  |  |  |  |
| a. Investment grade. | RCFDG406 | 127,349,000 | RCFDG407 | 369,727,000 | RCFDG408 | 80,412,000 |
| b. Subinvestment grade.............................................................. | RCFDG409 | 38,072,000 | RCFDG410 | 102,141,000 | RCFDG411 | 13,137,000 |
| 2. Purchased credit protection: ${ }^{3}$ |  |  |  |  |  |  |
| a. Investment grade. | RCFDG412 | 136,040,000 | RCFDG413 | 386,757,000 | RCFDG414 | 87,133,000 |
| b. Subinvestment grade.............................................................. | RCFDG415 | 44,454,000 | RCFDG416 | 107,951,000 | RCFDG417 | 17,774,000 |

[^33]| Dollar amounts in thousands |  |  | 8. |
| :---: | :---: | :---: | :---: |
| 8. Spot foreign exchange contracts. | RCFD8765 | 853,502,000 |  |
| 9. All other off-balance sheet liabilities (exclude derivatives) (itemize and describe each component of this item over $25 \%$ of Schedule RC, item 27.a, "Total bank equity capital"). | RCFD3430 | 144,189,000 | 9. |
| a. Not applicable |  |  | 9.a. |
| b. Commitments to purchase when-issued securities.................................................................................. | RCFD3434 | 0 | 9.b. |
| c. Standby letters of credit issued by another party (e.g., a Federal Home Loan Bank) on the bank's behalf......... | RCFDC978 | 0 | 9.c. |
| d. Disclose component and the dollar amount of that component: |  |  | 9.d. |
| 1. Describe component... | TEXT3555 | Click here for value | 9.d.1. |
| 2. Amount of component.. | RCFD3555 | 88,211,000 | 9.d.2. |
| e. Disclose component and the dollar amount of that component: |  |  | 9.e. |
| 1. Describe component..... | TEXT3556 | NR | 9.e.1. |
| 2. Amount of component... | RCFD3556 | 0 | 9.e.2. |
| f. Disclose component and the dollar amount of that component: |  |  | 9.f. |
| (TEXT3557) NR | RCFD3557 | 0 | 9.f.1. |
| 10. All other off-balance sheet assets (exclude derivatives) (itemize and describe each component of this item over $25 \%$ of Schedule RC, item 27.a, "Total bank equity capital"). | RCFD5591 | 0 | 10. |
| a. Commitments to sell when-issued securities. | RCFD3435 | 0 | 10.a. |
| b. Disclose component and the dollar amount of that component: |  |  | 10.b. |
| 1. Describe component... | TEXT5592 | NR | 10.b.1. |
| 2. Amount of component... | RCFD5592 | 0 | 10.b.2. |
| c. Disclose component and the dollar amount of that component: |  |  | 10.c. |
| 1. Describe component. | TEXT5593 | NR | 10.c.1. |
| 2. Amount of component.. | RCFD5593 | 0 | 10.c.2. |
| d. Disclose component and the dollar amount of that component: |  |  | 10.d. |
| 1. Describe component... | TEXT5594 | NR | 10.d.1. |
| 2. Amount of component.... | RCFD5594 | 0 | 10.d.2. |
| e. Disclose component and the dollar amount of that component: |  |  | 10.e. |
| 1. Describe component......... | TEXT5595 | NR | 10.e.1. |
| 2. Amount of component.................................................................................................................... | RCFD5595 | 0 | 10.e.2. |
| Items 11.a and 11.b are to be completed semiannually in the June and December reports only. 11. Year-to-date merchant credit card sales volume: |  |  | 11. |
| a. Sales for which the reporting bank is the acquiring bank........................................................................ | RCFDC223 | NR | 11.a. |
| b. Sales for which the reporting bank is the agent bank with risk.................................................................... | RCFDC224 | NR | 11.b. |

[^34]
## (TEXT3555) Forward Repo Agreements

| Dollar amounts in thousands | (Column A) Interest Rate Contracts |  | (Column B) Foreign Exchange Contracts |  | (Column C) Equity Derivative Contracts |  | (Column D) Commodity and Other Contracts |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12. Gross amounts (e.g., notional amounts): |  |  |  |  |  |  |  |  | 12. |
| a. Futures contracts | RCFD8693 | 835,852,000 | RCFD8694 | 55,283,000 | RCFD8695 | 77,827,000 | RCFD8696 | 58,294,000 | 12.a. |
| b. Forward contracts | RCFD8697 | 2,490,645,000 | RCFD8698 | 7,598,621,000 | RCFD8699 | 23,319,000 | RCFD8700 | 87,589,000 | 12.b. |
| c. Exchange-traded option contracts: |  |  |  |  |  |  |  |  |  |
| 1. Written options | RCFD8701 | 220,773,000 | RCFD8702 | 861,000 | RCFD8703 | 221,196,000 | RCFD8704 | 63,623,000 |  |
| 2. Purchased options.................................................. | RCFD8705 | 322,821,000 | RCFD8706 | 1,370,000 | RCFD8707 | 252,080,000 | RCFD8708 | 67,170,000 | 12c2 |
| d. Over-the-counter option contracts: |  |  |  |  |  |  |  |  | 12 |
| 1. Written options | RCFD8709 | 3,172,839,000 | RCFD8710 | 866,458,000 | RCFD8711 | 411,304,000 | RCFD8712 | 91,612,000 |  |
| 2. Purchased options. | RCFD8713 | 3,121,884,000 | RCFD8714 | 845,798,000 | RCFD8715 | 373,684,000 | RCFD8716 | 50,898,000 | 12d2 |
| e. Swaps. | RCFD3450 | 31,477,009,000 | RCFD3826 | 4,414,872,000 | RCFD8719 | 790,787,000 | RCFD8720 | 296,020,000 | 12 |
| 13. Total gross notional amount of derivative contracts held for trading | RCFDA126 | 41,272013,000 | RCFDA127 | 13,620,159,000 | RCFD8723 | 2,141,862,000 | RCFD8724 | 715,206,000 | 13. |
| 14. Total gross notional amount of derivative contracts held for purposes other than trading. | RCFD8725 | 369,810,000 | RCFD8726 | 163,104,000 | RCFD8727 | 8,335,000 | RCFD8728 | 0 | 14. |
| a. Interest rate swaps where the bank has agreed to pay a fixed rate. | RCFDA589 | 172,753,000 |  |  |  |  |  |  | 14.a. |
| 15. Gross fair values of derivative contracts: |  |  |  |  |  |  |  |  | 15. |
| a. Contracts held for trading: |  |  |  |  |  |  |  |  | 15.a. |
| 1. Gross positive fair value... | RCFD8733 | 338,639,000 | RCFD8734 | 186,519,000 | RCFD8735 | 57,545,000 | RCFD8736 | 25,984,000 |  |
| 2. Gross negative fair value. | RCFD8737 | 318,137,000 | RCFD8738 | 189,532,000 | RCFD8739 | 59,680,000 | RCFD8740 | 25,812,000 | 15a2 |
| b. Contracts held for purposes other than trading: |  |  |  |  |  |  |  |  | 15.b. |
| 1. Gross positive fair value.......................................... | RCFD8741 | 1,373,000 | RCFD8742 | 988,000 | RCFD8743 | 0 | RCFD8744 | 0 | 15b1. |
| 2. Gross negative fair value........................................ | RCFD8745 | 807,000 | RCFD8746 | 1,438,000 | RCFD8747 | 414,000 | RCFD8748 | 0 | 15b2 |


| Dollar amounts in thousands | $\begin{array}{\|c\|} \hline \text { (Column A) } \\ \text { Banks and } \\ \text { Securities Firms } \end{array}$ | (Column B) | (Column C) Hedge Funds | $\begin{aligned} & \text { (Column D) } \\ & \text { Sovereign } \\ & \text { Governments } \end{aligned}$ | (Column E) Corporations and All Other Counterparties |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Item 16 is to be completed only by banks with total assets of $\$ 10$ billion or more. 16. Over-the counter derivatives: ${ }^{1}$ |  |  |  |  |  |
| a. Net current credit exposure. | $\begin{array}{r} \hline \text { RCFDG418 } \\ 38,117,000 \end{array}$ |  | $\begin{array}{r} \hline \text { RCFDG420 } \\ 3,744,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDG421 } \\ 5,835,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDG422 } \\ 68,149,000 \end{array}$ |
| b. Fair value of collateral: |  |  |  |  |  |
| 1. Cash - U.S. dollar. | $\begin{aligned} & \hline \text { RCFDG423 } \\ & 24,003,000 \end{aligned}$ |  | $\begin{aligned} & \hline \text { RCFDG425 } \\ & 22,918,000 \end{aligned}$ | $\begin{array}{r} \hline \text { RCFDG426 } \\ 426,000 \end{array}$ | $\begin{aligned} & \hline \text { RCFDG427 } \\ & 14,144,000 \end{aligned}$ |
| 2. Cash - Other currencies.. | $\begin{aligned} & \hline \text { RCFDG428 } \\ & 13,358,000 \end{aligned}$ |  | $\begin{array}{r} \hline \text { RCFDG430 } \\ 1,217,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDG431 } \\ 4,666,000 \end{array}$ | $\begin{array}{r\|} \hline \text { RCFDG432 } \\ 13,820,000 \end{array}$ |
| 3. U.S. Treasury securities............................................... | $\begin{aligned} & \hline \text { RCFDG433 } \\ & 3,434,000 \end{aligned}$ |  | $\begin{array}{r} \hline \text { RCFDG435 } \\ 4,300,000 \end{array}$ | RCFDG436 | $\begin{array}{r} \hline \text { RCFDG437 } \\ 4,928,000 \end{array}$ |
| 4. U.S. Government agency and U.S. Government-sponsored agency debt securities. | RCFDG438 380,000 |  | RCFDG440 | RCFDG441 | $\begin{array}{r} \text { RCFDG442 } \\ 1,000 \end{array}$ |
| 5. Corporate bonds........................................................ | $\begin{array}{r\|} \hline \text { RCFDG443 } \\ 2,225,000 \end{array}$ |  | RCFDG445 | $\begin{array}{r} \text { RCFDG446 } \\ 9,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDG447 } \\ 4,860,000 \end{array}$ |
| 6. Equity securities......................................................... | $\begin{array}{r} \hline \text { RCFDG448 } \\ 226,000 \end{array}$ |  | $\begin{array}{r} \hline \text { RCFDG450 } \\ 117,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDG451 } \\ 23,000 \end{array}$ | RCFDG452 <br> $3,606,000$ |
| 7. All other collateral............................................................ | $\begin{array}{r} \hline \text { RCFDG453 } \\ 7,365,000 \end{array}$ |  | $\begin{array}{r} \text { RCFDG455 } \\ 715,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDG456 } \\ 409,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDG457 } \\ 15,906,000 \end{array}$ |
| 8. Total fair value of collateral (sum of items 16.b.(1) through <br> (7)) | $\begin{aligned} & \hline \text { RCFDG458 } \\ & 50,991,000 \end{aligned}$ |  | $\begin{aligned} & \hline \text { RCFDG460 } \\ & 29,267,000 \end{aligned}$ | $\begin{array}{r} \hline \text { RCFDG461 } \\ 5,533,000 \end{array}$ | $\begin{aligned} & \hline \text { RCFDG462 } \\ & 57,265,000 \end{aligned}$ |

[^35]
## Schedule RC-M - Memoranda(Form Type - 031)

Dollar amounts in thousands


[^36]Dollar amounts in thousands
b. URLs of all other public-facing Internet Web sites that the reporting institution uses to accept or solicit deposits from the public, if any (Example: www.examplebank.biz): ${ }^{1}$

1. URL 1.
$\qquad$
2. URL 3.
3. URL 4
4. URL 5
5. URL 6
6. URL 7
7. URL 8
8. URL 9
9. URL 10.
c. Trade names other than the reporting institution's legal title used to identify one or more of the institution's physical offices at which deposits are accepted or solicited from the public, if any:
10. Trade name 1
11. Trade name 2.
12. Trade name 3
13. Trade name 4
14. Trade name 5
15. Trade name 6

Item 9 is to be completed annually in the December report only.
9. Do any of the bank's Internet Web sites have transactional capability, i.e., allow the bank's customers to execute transactions on their accounts through the Web site?.

## 10. Secured liabilities:

a. Amount of "Federal funds purchased in domestic offices" that are secured (included in Schedule RC, item 14.a).
b. Amount of "Other borrowings" that are secured (included in Schedule RC-M, items 5.b.(1)(a) - (d))
11. Does the bank act as trustee or custodian for Individual Retirement Accounts, Health Savings Accounts, and other similar accounts?
12. Does the bank provide custody, safekeeping, or other services involving the acceptance of orders for the sale or purchase of securities?
13. Assets covered by loss-sharing agreements with the FDIC:
a. Loans and leases (included in Schedule RC, items 4.a and 4.b):

1. Loans secured by real estate in domestic offices:
a. Construction, land development, and other land loans:
2. 1-4 family residential construction loans
3. Other construction loans and all land development and other land loans.
b. Secured by farmland.
c. Secured by 1-4 family residential properties:
4. Revolving, open-end loans secured by 1-4 family residential properties and extended under lines of credit.
5. Closed-end loans secured by 1-4 family residential properties:
a. Secured by first liens
b. Secured by junior liens
d. Secured by multifamily (5 or more) residential properties
e. Secured by nonfarm nonresidential properties:
6. Loans secured by owner-occupied nonfarm nonresidential properties
7. Loans secured by other nonfarm nonresidential properties.
8. Not applicable
9. Not applicable
10. Not applicable
11. All other loans and all leases.

|  |  | 8.b. |
| :---: | :---: | :---: |
| TE01N528 | Click here for value | 8.b.1. |
| TE02N528 | Click here for value | 8.b.2. |
| TE03N528 | Click here for value | 8.b.3. |
| TE04N528 | NR | 8.b.4. |
| TE05N528 | NR | 8.b.5. |
| TE06N528 | NR | 8.b.6. |
| TE07N528 | NR | 8.b.7. |
| TE08N528 | NR | 8.b.8. |
| TE09N528 | NR | 8.b.9. |
| TE10N528 | NR | 8.b.10. |
|  |  | 8.c. |
| TE01N529 | Chase | 8.c.1. |
| TE02N529 | J.P.Morgan | 8.c.2. |
| TE03N529 | Click here for value | 8.c.3. |
| TE04N529 | Click here for value | 8.c.4. |
| TE05N529 | Click here for value | 8.c.5. |
| TE06N529 | NR | 8.c.6. |
| RCFD4088 | NR | 9. |
|  |  | 10. |
| RCONF064 | 0 | 10.a. |
| RCFDF065 | 22,928,000 | 10.b. |
| RCONG463 | Yes | 11. |
| RCONG464 | Yes | 12. |
|  |  | 13. |
|  |  | 13.a. |
|  |  | 13.a.1. |
|  |  | 13.a.1.a. |
| RCONK169 | 0 | 13.a.1.a. |
| RCONK170 | 0 | 13.a.1.a.2. |
| RCONK171 | 0 | 13.a.1.b. |
|  |  | 13.a.1.c. |
| RCONK172 | 0 | 13.a.1.c.1. |
|  |  | 13.a.1.c.2. |
| RCONK173 | 0 | 13.a1.c2a |
| RCONK174 | 0 | 13.a1.c2b |
| RCONK175 | 0 | 13.a.1.d. |
|  |  | 13.a.1.e. |
| RCONK176 | 0 | 13.a.1.e.1. |
| RCONK177 | 0 | 13.a.1.e.2 |
|  |  | 13.a.2. |
|  |  | 13.a.3. |
|  |  | 13.a.4. |
| RCFDK183 | 0 | 13.a.5. |

[^37]Dollar amounts in thousands

| b. Other real estate owned (included in Schedule RC, item 7): |  |  | 13.b. |
| :---: | :---: | :---: | :---: |
| 1. Construction, land development, and other land in domestic offices. | RCONK187 | 0 | 13.b.1. |
| 2. Farmland in domestic offices. | RCONK188 | 0 | 13.b.2. |
| 3. 1-4 family residential properties in domestic offices. | RCONK189 | 0 | 13.b.3. |
| 4. Multifamily (5 or more) residential properties in domestic offices. | RCONK190 | 0 | 13.b.4. |
| 5. Nonfarm nonresidential properties in domestic offices | RCONK191 | 0 | 13.b.5. |
| 6. In foreign offices | RCFNK260 | 0 | 13.b.6. |
| 7. Portion of covered other real estate owned included in items 13.b.(1) through (6) above that is protected by FDIC loss-sharing agreements. | RCFDK192 | 0 | 13.b.7. |
| c. Debt securities (included in Schedule RC, items 2.a and 2.b) | RCFDJ461 | 0 | 13.c. |
| d. Other assets (exclude FDIC loss-sharing indemnification assets) | RCFDJ462 | 0 | 13.d. |
| tems 14.a and 14.b are to be completed annually in the December report only. <br> 14. Captive insurance and reinsurance subsidiaries: |  |  | 14. |
| a. Total assets of captive insurance subsidiaries ${ }^{2}$. | RCFDK193 | NR | 14.a. |
| b. Total assets of captive reinsurance subsidiaries ${ }^{2}$. | RCFDK194 | NR | 14.b. |
| Item 15 is to be completed by institutions that are required or have elected to be treated as a Qualified Thrift Lender. 15. Qualified Thrift Lender (QTL) test: |  |  | 15. |
| a. Does the institution use the Home Owners' Loan Act (HOLA) QTL test or the Internal Revenue Service Domestic Building and Loan Association (IRS DBLA) test to determine its QTL compliance? (for the HOLA QTL test, enter 1 ; for the IRS DBLA test, enter 2). | RCONL133 | NR | 15.a. |
| b. Has the institution been in compliance with the HOLA QTL test as of each month end during the quarter or the IRS DBLA test for its most recent taxable year, as applicable? | RCONL135 | NR | 15.b. |
| Item 16.a and, if appropriate, items 16.b.(1) through 16.b.(3) are to be completed annually in the December report only. 16. International remittance transfers offered to consumers: ${ }^{1}$ |  |  | 16. |
| a. Estimated number of international remittance transfers provided by your institution during the calendar year ending on the report date. | RCONN523 | NR | 16.a. |
| Items 16.b.(1) through 16.b.(3) are to be completed by institutions that reported 501 or more international remittance transfers in item 16.a in either or both of the current report or the most recent prior report in which item 16.a was required to be completed. <br> b. Estimated dollar value of remittance transfers provided by your institution and usage of regulatory exceptions during the calendar year ending on the report date: |  |  | 16.b. |
| 1. Estimated dollar value of international remittance transfers. | RCONN524 | NR | 16.b.1. |
| 2. Estimated number of international remittance transfers for which your institution applied the permanent exchange rate exception. | RCONMM07 | NR | 16.b.2. |
| 3. Estimated number of international remittance transfers for which your institution applied the permanent covered third-party fee exception. | RCONMQ52 | NR | 16.b.3. |
| 17. U.S. Small Business Administration Paycheck Protection Program (PPP) loans and the Federal Reserve PPP Liquidity Facility (PPPLF): ${ }^{3}$ |  |  | 17. |
| a. Number of PPP loans outstanding. | RCONLG26 | 3286 | 17.a. |
| b. Outstanding balance of PPP loans | RCONLG27 | 300,000 | 17.b. |
| c. Outstanding balance of PPP loans pledged to the PPPLF.. | RCONLG28 | 0 | 17.c. |
| d. Outstanding balance of borrowings from Federal Reserve Banks under the PPPLF with a remaining maturity of: |  |  | 17.d. |
| 1. One year or less.. | RCONLL59 | 0 | 17.d.1. |
| 2. More than one year.. | RCONLL60 | 0 | 17.d.2. |
| e. Quarterly average amount of PPP loans pledged to the PPPLF and excluded from "Total assets for the leverage ratio" reported in Schedule RC-R, Part I, item 30. | RCONLL57 | 0 | 17.e. |
| 18. Money Market Mutual Fund Liquidity Facility (MMLF): |  |  | 18. |
| a. Outstanding balance of assets purchased under the MMLF.. | RCONLL61 | 0 | 18.a. |
| b. Quarterly average amount of assets purchased under the MMLF and excluded from "Total assets for the leverage ratio" reported in Schedule RC-R, Part I, item 30. | RCONLL58 | 0 | 18.b. |

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2. Report total assets before eliminating intercompany transactions between the consolidated insurance or reinsurance subsidiary and other offices or consolidated subsidiaries of the reporting bank.
3. Report information about international electronic transfers of funds offered to consumers in the United States that: (a) are "remittance transfers" as defined by subpart B of Regulation $E$ (12 CFR $\S 1005.30(e)$ ), or (b) would qualify as "remittance transfers" under subpart B of Regulation E ( 12 CFR $\S 1005.30$ (e)) but are excluded from that definition only because the provider is not providing those transfers in the normal course of its business. See 12 CFR § 1005.30(f). For purposes of this item 16, such trans
4. Paycheck Protection Program (PPP) covered loans as defined in sections 7(a)(36) and 7(a)(37) of the Small Business Act (15 U.S.C. 636(a)(36) and (37)). The PPP was established by Section 1102 of the 2020 Coronavirus Aid, Relief, and Economic Security Act.
(TE02N528) www.jpmorgan.com
(TE03N528) www.jpmorgan.chase.com
(TE03N529) JPMorgan Chase
(TE04N529) Chase Private Client
(TE05N529) J.P.Morgan Private Bank
(TEXT4087) www.jpmorganchase.com

## Schedule RC-N - Past Due and Nonaccrual Loans Leases and Other Assets(Form Type - 031)




[^38]| Dollar amounts in thousands | (Column A) Past due 30 through 89 days and still accruing |  | (Column B) Past due 90 days or more and still accruing |  | (Column C) Nonaccrual |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2. Loans to finance commercial real estate, construction, and land development activities (not secured by real estate) included in Schedule RC-N, items 4 and 7, above. | RCFD6558 | 254,000 | RCFD6559 | 1,000 | RCFD6560 | 217,000 |
| 3. Loans secured by real estate to non-U.S. addressees (domicile) (included in Schedule RC-N, item 1, above). | RCFD1248 | 44,000 | RCFD1249 | 0 | RCFD1250 | 67,000 |
| 4. Not applicable |  |  |  |  |  |  |
| 5. Loans and leases held for sale (included in Schedule RC-N, items 1 through <br> 8, above). | RCFDC240 | 452,000 | RCFDC241 | 91,000 | RCFDC226 | 640,000 |


| Dollar amounts in thousands | (Column A) Past due 30 through <br> 89 days |  | (Column B) Past due 90 days or more |  |
| :---: | :---: | :---: | :---: | :---: |
| 6. Derivative contracts: Fair value of amounts carried as assets. | RCFD3529 | 10,000 | RCFD3530 | 281,000 |

Dollar amounts in thousands

| Dollar amounts in thousands |  |  |
| :---: | :---: | :---: |
| Memorandum items 7, 8, 9.a, and $9 . b$ are to be completed semiannually in the June and December reports only. <br> 7. Additions to nonaccrual assets during the previous six months. | RCFDC410 | NR |
| 8. Nonaccrual assets sold during the previous six months | RCFDC411 | NR |


| Dollar amounts in thousands | (Column A) Past due 30 through 89 days and still accruing |  | (Column B) Past due 90 days or more and still accruing |  | (Column C) Nonaccrual |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 9. Purchased credit-impaired loans accounted for in accordance with FASB ASC 310-30 (former AICPA Stament of Position 03-3): ${ }^{2}$ |  |  |  |  |  |  |
| a. Outstanding balance.... | RCFDL183 | NR | RCFDL184 | NR | RCFDL185 | NR |
| b. Amount included in Schedule RC-N, items 1 through 7, above............ | RCFDL186 | NR | RCFDL187 | NR | RCFDL188 | NR |

[^39]
## Schedule RC-O - Other Data for Deposit Insurance and FICO Assessments(Form Type -031)

All FDIC-insured depository institutions must complete items 1 through 9, 10, and 11, Memorandum item 1, and, if applicable, item 9.a, Memorandum items 2, 3, and 6 through 18 each quarter. Unless otherwise indicated, complete items 1 through 11 and Memorandum items 1 through 3 on an "unconsolidated single FDIC certificate number basis" (see instructions) and complete Memorandum items 6 through 18 on a fully consolidated basis.

Dollar amounts in thousands

1. Total deposit liabilities before exclusions (gross) as defined in Section 3(I) of the Federal Deposit Insurance Act and FDIC regulations.
2. Total allowable exclusions, including interest accrued and unpaid on allowable exclusions (including foreign deposits)
3. Total foreign deposits, including interest accrued and unpaid thereon (included in item 2 above).
4. Average consolidated total assets for the calendar quarter.
a. Averaging method used (for daily averaging, enter 1 ; for weekly averaging, enter 2).
5. Average tangible equity for the calendar quarter ${ }^{1}$
6. Holdings of long-term unsecured debt issued by other FDIC-insured depository institutions.
7. Unsecured "Other borrowings" with a remaining maturity of (sum of items 7. a through 7. d must be less than or equal to Schedule RC-M, items 5.b.(1)(a)-(d) minus item 10.b):
a. One year or less.
b. Over one year through three years.
c. Over three years through five years.
d. Over five years.
8. Subordinated notes and debentures with a remaining maturity of (sum of items 8.a through 8.d must equal Schedule RC, item 19):
a. One year or less
b. Over one year through three years.
c. Over three years through five years.
d. Over five years.
9. Brokered reciprocal deposits (included in Schedule RC-E, Part I, Memorandum item 1.b).

Item 9 .a is to be completed on a fully consolidated basis by all institutions that own another insured depository institution.
a. Fully consolidated brokered reciprocal deposits.
10. Banker's bank certification: Does the reporting institution meet both the statutory definition of a banker's bank and the business conduct test set forth in FDIC regulations? If the answer to item 10 is "YES," complete items 10.a and 10.b.

If the answer to item 10 is "YES," complete items 10.a and 10.b.
a. Banker's bank deduction.
b. Banker's bank deduction limit.
11. Custodial bank certification: Does the reporting institution meet the definition of a custodial bank set forth in FDIC regulations? If the answer to item 11 is "YES," complete items 11.a and 11.b..

If the answer to item 11 is "YES," complete items 11.a and 11.b.
a. Custodial bank deduction.
b. Custodial bank deduction limit.

1. Total deposit liabilities of the bank (including related interest accrued and unpaid) less allowable exclusions (including related interest accrued and unpaid) (sum of Memorandum items 1.a.(1), 1.b.(1), 1.c.(1), and 1.d.(1) must equal Schedule RC-O, item 1 less item 2):
a. Deposit accounts (excluding retirement accounts) of $\$ 250,000$ or less: ${ }^{1}$
2. Amount of deposit accounts (excluding retirement accounts) of $\$ 250,000$ or less
3. Number of deposit accounts (excluding retirement accounts) of $\$ 250,000$ or less.
b. Deposit accounts (excluding retirement accounts) of more than $\$ 250,000:^{1}$
4. Amount of deposit accounts (excluding retirement accounts) of more than $\$ 250,000$.
5. Number of deposit accounts (excluding retirement accounts) of more than $\$ 250,000$.
c. Retirement deposit accounts of $\$ 250,000$ or less: ${ }^{1}$
6. Amount of retirement deposit accounts of $\$ 250,000$ or less.
7. Number of retirement deposit accounts of $\$ 250,000$ or less.
d. Retirement deposit accounts of more than $\$ 250,000:^{1}$

| RCFDF236 | 2,524,812,000 | 1. |
| :---: | :---: | :---: |
| RCFDF237 | 456,682,000 | 2. |
| RCFNF234 | 456,682,000 | 3. |
| RCFDK652 | 3,258,927,000 | 4. |
| RCFDK653 | 1 | 4.a. |
| RCFDK654 | 269,472,000 | 5. |
| RCFDK655 | 62,000 | 6. |
|  |  | 7. |
| RCFDG465 | 15,426,000 | 7.a. |
| RCFDG466 | 40,718,000 | 7.b. |
| RCFDG467 | 4,205,000 | 7.c. |
| RCFDG468 | 6,697,000 | 7.d. |
|  |  | 8. |
| RCFDG469 | 0 | 8.a. |
| RCFDG470 | 260,000 | 8.b. |
| RCFDG471 | 0 | 8.c. |
| RCFDG472 | 0 | 8.d. |
| RCONG803 | 0 | 9. |
| RCONL190 | NR | 9.a. |
| RCFDK656 | No | 10. |
| RCFDK657 | NR | 10.a. |
| RCFDK658 | NR | 10.b. |
| RCFDK659 | Yes | 11. |
| RCFDK660 | 953,186,000 | 11.a. |
| RCFDK661 | 245,665,000 | 11.b. |
|  |  | M.1. |
|  |  | M.1.a. |
| RCONF049 | 821,393,000 | M.1.a.1. |
| RCONF050 | 105240427 | M.1.a.2. |
|  |  | M.1.b. |
| RCONF051 | 1,234,741,000 | M.1.b.1. |
| RCONF052 | 768419 | M.1.b.2. |
|  |  | M.1.c. |
| RCONF045 | 9,830,000 | M.1.c.1. |
| RCONF046 | 1950319 | M.1.c.2. |
|  |  | M.1.d. |

[^40]
# JPMORGAN CHASE BANK, NATIONAL ASSOCIATION 

Dollar amounts in thousands


[^41]
## Dollar amounts in thousands

| Memorandum item 16 is to be completed by "large institutions" and "highly complex institutions" as defined in FDIC regulations. 16. Portion of loans restructured in troubled debt restructurings that are in compliance with their modified terms and are guaranteed or insured by the U.S. government (including the FDIC) (included in Schedule RC-C, part I, Memorandum item 1). | RCFDL189 | 0 | M. 16. |
| :---: | :---: | :---: | :---: |
| Memorandum item 17 is to be completed on a fully consolidated basis by those "large institutions" and "highly complex institutions" as defined in FDIC regulations that own another insured depository institution. <br> 17. Selected fully consolidated data for deposit insurance assessment purposes: |  |  | M. 17. |
| a. Total deposit liabilities before exclusions (gross) as defined in Section 3(I) of the Federal Deposit Insurance Act and FDIC regulations. | RCFDL194 | NR | M.17.a. |
| b. Total allowable exclusions, including interest accrued and unpaid on allowable exclusions (including foreign deposits). | RCFDL195 | NR | M.17.b. |
| c. Unsecured "Other borrowings" with a remaining maturity of one year or less. | RCFDL196 | NR | M.17.c. |
| d. Estimated amount of uninsured deposits in domestic offices of the institution and in insured branches in Puerto Rico and U.S. territories and possessions, including related interest accrued and unpaid.. | RCONL197 | NR | M.17.d. |


| Dollar amounts in thousands | (Column <br> A) <br> Two-Year <br> Probability <br> of Default <br> (PD) $<=$ <br> $1 \%$ | (Column <br> B) <br> Two-Year <br> Probability <br> of Default <br> (PD) <br> $1.01-4 \%$ | (Column <br> C) <br> Two-Year <br> Probability <br> of Default <br> (PD) <br> $4.01-7 \%$ | (Column <br> D) <br> Two-Year <br> Probability <br> of Default <br> (PD) <br> $7.01-10 \%$ | (Column <br> E) <br> Two-Year <br> Probability <br> of Default <br> (PD) <br> $10.01-14 \%$ | (Column <br> F) <br> Two-Year <br> Probability <br> of Default <br> (PD) <br> $14.01-16 \%$ | (Column <br> G) <br> Two-Year <br> Probability <br> of Default <br> (PD) <br> $16.01-18 \%$ | (Column <br> H) <br> Two-Year <br> Probability <br> of Default <br> (PD) <br> $18.01-20 \%$ | $\|$(Column I) <br> Two-Year <br> Probability <br> of Default <br> (PD) <br> $20.01-22 \%$ | (Column <br> J) <br> Two-Year <br> Probability <br> of Default <br> (PD) <br> $22.01-26 \%$ | (Column <br> K) <br> Two-Year <br> Probability <br> of Default <br> (PD) <br> $26.01-30 \%$ | (Column L) <br> Two-Year Probability of Default (PD) > 30\% | (Column M) <br> Two-Year <br> Probability of Default (PD) <br> Unscoreable | (Column N) <br> Two-Year Probability of Default (PD) Total | (Column <br> O) PDs <br> Were <br> Derived <br> Using |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 18. Outstanding balance of 1-4 family residential mortgage loans, consumer loans, and consumer leases by two-year probability of default: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| a. "Nontraditional 1-4 family residential mortgage loans" as defined for assessment purposes only in FDIC regulations. | RCFDM964 CONF | RCFDM965 CONF | RCFDM966 CONF | RCFDM967 CONF | RCFDM968 CONF | RCFDM969 CONF | RCFDM970 CONF | RCFDM971 CONF | RCFDM972 CONF | RCFDM973 CONF | RCFDM974 CONF | RCFDM975 CONF | RCFDM976 CONF | RCFDM977 CONF | RCFDM978 CONF |
| b. Closed-end loans secured by first liens on 1-4 family residential properties. | $\begin{array}{\|r\|} \hline \text { RCFDM979 } \\ \text { CONF } \end{array}$ | RCFDM980 CONF | RCFDM981 CONF | $\begin{array}{r} \text { RCFDM982 } \\ \text { CONF } \end{array}$ | RCFDM983 CONF | RCFDM984 CONF | $\begin{array}{r} \text { RCFDM985 } \\ \text { CONF } \end{array}$ | RCFDM986 CONF | RCFDM987 CONF | $\begin{array}{\|r\|} \hline \text { RCFDM988 } \\ \text { CONF } \end{array}$ | $\begin{array}{r} \text { RCFDM989 } \\ \text { CONF } \end{array}$ | RCFDM990 CONF | $\begin{array}{r} \text { RCFDM991 } \\ \text { CONF } \end{array}$ | $\begin{array}{\|r\|} \hline \text { RCFDM992 } \\ \text { CONF } \end{array}$ | RCFDM993 CONF |
| c. Closed-end loans secured by junior liens on 1-4 family residential properties. | $\begin{array}{r}\text { RCFDM994 } \\ \text { CONF } \\ \hline\end{array}$ | RCFDM995 CONF | RCFDM996 CONF | RCFDM997 CONF | RCFDM998 CONF | RCFDM999 CONF | RCFDNO01 CONF | RCFDNOO2 CONF | RCFDNOO3 CONF | RCFDNOO4 CONF | RCFDNOO5 CONF | RCFDNOO6 CONF | RCFDN007 CONF | RCFDNO08 CONF | RCFDN009 CONF |
| d. Revolving, open-end loans secured by 1-4 family residential properties and extended under lines of credit.. | RCFDN010 CONF | RCFDN011 CONF | RCFDN012 CONF | RCFDN013 CONF | RCFDN014 CONF | RCFDN015 CONF | RCFDN016 CONF | RCFDN017 CONF | RCFDN018 CONF | RCFDN019 CONF | RCFDNO20 CONF | RCFDN021 CONF | RCFDN022 CONF | RCFDNO23 CONF | RCFDN024 CONF |
| e. Credit cards | $\begin{array}{\|r\|} \hline \text { RCFDN040 } \\ \text { CONF } \end{array}$ | $\begin{array}{r} \text { RCFDN041 } \\ \text { CONF } \end{array}$ | $\begin{array}{r} \text { RCFDN042 } \\ \text { CONF } \end{array}$ | $\begin{array}{r} \text { RCFDN043 } \\ \text { CONF } \end{array}$ | $\begin{array}{r} \text { RCFDN044 } \\ \text { CONF } \end{array}$ | $\begin{array}{\|r\|} \hline \text { RCFDN045 } \\ \text { CONF } \end{array}$ | $\begin{array}{\|r\|} \hline \text { RCFDN046 } \\ \text { CONF } \\ \hline \end{array}$ | $\begin{array}{r} \text { RCFDN047 } \\ \text { CONF } \end{array}$ | $\begin{array}{r} \text { RCFDN048 } \\ \text { CONF } \end{array}$ | $\begin{array}{\|r\|} \hline \text { RCFDNO49 } \\ \text { CONF } \end{array}$ | $\begin{array}{r} \text { RCFDN050 } \\ \text { CONF } \end{array}$ | $\begin{array}{\|r\|} \hline \text { RCFDN051 } \\ \text { CONF } \end{array}$ | $\begin{array}{r} \text { RCFDN052 } \\ \text { CONF } \end{array}$ | $\begin{array}{\|r\|} \hline \text { RCFDNO53 } \\ \text { CONF } \end{array}$ | $\begin{array}{r} \text { RCFDN054 } \\ \text { CONF } \end{array}$ |
| f. Automobile loans. | RCFDN055 <br> CONF | RCFDN056 CONF | RCFDN057 CONF | RCFDN058 CONF | $\begin{array}{r} \text { RCFDN059 } \\ \text { CONF } \end{array}$ | RCFDN060 CONF | $\begin{array}{r} \text { RCFDN061 } \\ \text { CONF } \end{array}$ | RCFDN062 CONF | RCFDN063 CONF | $\begin{array}{\|r\|} \hline \text { RCFDN064 } \\ \text { CONF } \end{array}$ | RCFDN065 CONF | $\begin{array}{\|r\|} \hline \text { RCFDN066 } \\ \text { CONF } \end{array}$ | $\begin{array}{r} \text { RCFDN067 } \\ \text { CONF } \end{array}$ | RCFDN068 CONF | $\begin{array}{r} \text { RCFDN069 } \\ \text { CONF } \end{array}$ |
| g. Student loans. | $\begin{array}{\|r\|} \hline \text { RCFDN070 } \\ \text { CONF } \\ \hline \end{array}$ | RCFDN071 CONF | RCFDN072 CONF | RCFDN073 <br> CONF | $\begin{array}{r} \text { RCFDN074 } \\ \text { CONF } \end{array}$ | $\begin{array}{\|r\|} \hline \text { RCFDN075 } \\ \text { CONF } \end{array}$ | $\begin{array}{r} \text { RCFDN076 } \\ \text { CONF } \end{array}$ | $\begin{array}{r} \text { RCFDN077 } \\ \text { CONF } \end{array}$ | $\begin{array}{r} \text { RCFDN078 } \\ \text { CONF } \end{array}$ | $\begin{array}{\|r\|} \hline \text { RCFDNO79 } \\ \text { CONF } \end{array}$ | RCFDN080 CONF | $\begin{array}{\|r\|} \hline \text { RCFDN081 } \\ \text { CONF } \end{array}$ | RCFDN082 CONF | RCFDN083 CONF | RCFDN084 CONF |
| h. Other consumer loans and revolving credit plans other than credit cards....... | RCFDN085 CONF | $\begin{array}{\|r\|} \hline \text { RCFDN086 } \\ \text { CONF } \end{array}$ | RCFDN087 CONF | RCFDN088 CONF | $\begin{array}{r} \text { RCFDN089 } \\ \text { CONF } \end{array}$ | RCFDN090 CONF | $\begin{array}{r} \text { RCFDN091 } \\ \text { CONF } \end{array}$ | RCFDN092 CONF | RCFDN093 CONF | $\begin{array}{\|r\|} \hline \text { RCFDN094 } \\ \text { CONF } \end{array}$ | $\begin{array}{r} \text { RCFDN095 } \\ \text { CONF } \end{array}$ | $\begin{array}{\|r\|} \hline \text { RCFDN096 } \\ \text { CONF } \end{array}$ | $\begin{array}{r} \text { RCFDNO97 } \\ \text { CONF } \end{array}$ | RCFDN098 CONF | $\begin{array}{r} \text { RCFDN099 } \\ \text { CONF } \end{array}$ |
| i. Consumer leases. | $\begin{array}{\|r\|} \hline \text { RCFDN100 } \\ \text { CONF } \\ \hline \end{array}$ | RCFDN101 CONF | RCFDN102 CONF | RCFDN103 CONF | $\begin{array}{\|r\|} \hline \text { RCFDN104 } \\ \text { CONF } \end{array}$ | RCFDN105 CONF | $\begin{array}{r} \text { RCFDN106 } \\ \text { CONF } \end{array}$ | RCFDN107 CONF | RCFDN108 CONF | $\begin{array}{\|r\|} \hline \text { RCFDN109 } \\ \text { CONF } \end{array}$ | RCFDN110 CONF | $\begin{array}{\|r\|} \hline \text { RCFDN111 } \\ \text { CONF } \\ \hline \end{array}$ | RCFDN112 CONF | $\begin{array}{\|r\|} \hline \text { RCFDN113 } \\ \text { CONF } \end{array}$ | RCFDN114 CONF |
| j. Total. | $\begin{array}{\|r\|} \hline \text { RCFDN115 } \\ \text { CONF } \\ \hline \end{array}$ | $\begin{array}{\|r} \text { RCFDN116 } \\ \text { CONF } \end{array}$ | RCFDN117 CONF | $\begin{array}{r} \text { RCFDN118 } \\ \text { CONF } \end{array}$ | $\begin{array}{r} \text { RCFDN119 } \\ \text { CONF } \end{array}$ | $\begin{array}{\|r\|} \hline \text { RCFDN120 } \\ \text { CONF } \\ \hline \end{array}$ | $\begin{array}{r} \text { RCFDN121 } \\ \text { CONF } \\ \hline \end{array}$ | $\begin{array}{r} \text { RCFDN122 } \\ \text { CONF } \end{array}$ | $\begin{array}{r} \text { RCFDN123 } \\ \text { CONF } \end{array}$ | $\begin{array}{\|r\|} \hline \text { RCFDN124 } \\ \text { CONF } \\ \hline \end{array}$ | $\begin{array}{\|r\|} \hline \text { RCFDN125 } \\ \text { CONF } \\ \hline \end{array}$ | $\begin{array}{\|r\|} \hline \text { RCFDN126 } \\ \text { CONF } \\ \hline \end{array}$ | $\begin{array}{r} \text { RCFDN127 } \\ \text { CONF } \\ \hline \end{array}$ | $\begin{array}{\|r\|} \hline \text { RCFDN128 } \\ \text { CONF } \\ \hline \end{array}$ |  |

## Schedule RC-P - 1-4 Family Residential Mortgage Banking Activities in Domestic Offices(Form Type - 031)

Schedule RC-P is to be completed by banks at which either 1-4 family residential mortgage loan originations and purchases for resale from all sources, loan sales, or quarter-end loans held for sale or trading in domestic offices exceed $\$ 10$ million for two consecutive quarters. Dollar amounts in thousands

1. Retail originations during the quarter of 1-4 family residential mortgage loans for sale ${ }^{1}$
2. Wholesale originations and purchases during the quarter of 1-4 family residential mortgage loans for sale ${ }^{2}$.
3. 1-4 family residential mortgage loans sold during the quarter.
4. 1-4 family residential mortgage loans held for sale or trading at quarter-end (included in Schedule RC, items 4.a and 5)..
5. Noninterest income for the quarter from the sale, securitization, and servicing of 1-4 family residential mortgage loans (included in Schedule RI, items 5.c, 5.f, 5.g, and 5.i).
6. Repurchases and indemnifications of 1-4 family residential mortgage loans during the quarter.
7. Representation and warranty reserves for 1-4 family residential mortgage loans sold:
a. For representations and warranties made to U.S. government agencies and government-sponsored agencies..
b. For representations and warranties made to other parties
c. Total representation and warranty reserves (sum of items 7.a and 7.b). $\qquad$

| RCONHT81 | 2,481,000 |
| :---: | :---: |
| RCONHT82 | 2,874,000 |
| RCONFT04 | 5,012,000 |
| RCONFT05 | 10,328,000 |
| RIADHT85 | 361,000 |
| RCONHT86 | 32,000 |
| RCONL191 | CONF |
| RCONL192 | CONF |
| RCONM288 | 76,000 |

## Schedule RC-Q - Assets and Liabilities Measured at Fair Value on a Recurring Basis(Form Type - 031)

Schedule RC-Q is to be completed by banks that:
(1) Have elected to report financial instruments or servicing assets and liabilities at fair value under a fair value option with changes in fair value recognized in earnings, or (2) Are required to complete Schedule RC-D, Trading Assets and Liabilities.

| Dollar amounts in thousands | (Column A)Total Fair Value Reported on Schedule RC | (Column B) LESS: Amounts Netted in the Determination of Total Fair Value | (Column C) <br> Level 1 Fair Value Measurements | (Column D) <br> Level 2 Fair Value <br> Measurements | (Column E) <br> Level 3 Fair Value Measurements |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1. Available-for-sale debt securities and equity securities with readily determinable fair values not held for trading ${ }^{1}$. $\qquad$ | $\begin{aligned} & \text { RCFDJA36 } \\ & 197,214,000 \end{aligned}$ | RCFDG474 0 | $\begin{aligned} & \text { RCFDG475 } \\ & 92,223,000 \end{aligned}$ | $\begin{aligned} & \text { RCFDG476 } \\ & 104,741,000 \end{aligned}$ | $\begin{array}{r} \text { RCFDG477 } \\ 250,000 \\ \hline \end{array}$ |
| 2. Federal funds sold and securities purchased under agreements to resell. | $\begin{aligned} & \hline \text { RCFDG478 } \\ & 251,497,000 \end{aligned}$ | $\begin{gathered} \hline \text { RCFDG479 } \\ 139,110,000 \end{gathered}$ | RCFDG480 | $\begin{aligned} & \hline \text { RCFDG481 } \\ & 390,607,000 \end{aligned}$ | RCFDG482 0 |
| 3. Loans and leases held for sale | $\begin{aligned} & \hline \text { RCFDG483 } \\ & 15,007,000 \end{aligned}$ | RCFDG484 | RCFDG485 | $\begin{array}{r} \hline \text { RCFDG486 } \\ 13,960,000 \end{array}$ | RCFDG487 <br> $1,047,000$ |
| 4. Loans and leases held for in | $\begin{aligned} & \hline \text { RCFDG488 } \\ & 23,253,000 \end{aligned}$ | RCFDG489 | RCFDG490 | $\begin{aligned} & \hline \text { RCFDG491 } \\ & 22,846,000 \end{aligned}$ | $\begin{array}{r} \hline \text { RCFDG492 } \\ 407,000 \end{array}$ |
| 5. Trading assets: |  |  |  |  |  |
| a. Derivative a | $\begin{array}{r\|} \hline \text { RCFD3543 } \\ 57,426,000 \end{array}$ | $\begin{aligned} & \hline \text { RCFDG493 } \\ & 562,863,000 \end{aligned}$ | $\begin{array}{r} \text { RCFDG494 } \\ 806,000 \end{array}$ | $\begin{aligned} & \hline \text { RCFDG495 } \\ & 604,611,000 \end{aligned}$ | $\begin{aligned} & \hline \text { RCFDG496 } \\ & 14,872,000 \end{aligned}$ |
| b. Other trading assets. | $\begin{aligned} & \hline \text { RCFDG497 } \\ & 297,743,000 \end{aligned}$ | RCFDG498 0 | $\begin{gathered} \hline \text { RCFDG499 } \\ 151,392,000 \end{gathered}$ | $\begin{aligned} & \hline \text { RCFDG500 } \\ & 143,960,000 \end{aligned}$ | $\begin{array}{r\|} \hline \text { RCFDG501 } \\ 2,391,000 \end{array}$ |
| 1. Nontrading securities at fair value with changes in fair value reported in current earnings (included in Schedule RC-Q, item 5.b, above). | RCFDF240 | RCFDF684 | RCFDF692 | RCFDF241 | RCFDF242 |
| 6. All other assets | $\begin{aligned} & \hline \text { RCFDG391 } \\ & 21,260,000 \end{aligned}$ | $\begin{array}{r} \hline \text { RCFDG392 } \\ 183,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDG395 } \\ 8,029,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDG396 } \\ 5,483,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDG804 } \\ 7,931,000 \\ \hline \end{array}$ |
| 7. Total assets measured at fair value on a recurring basis (sum of items 1 through 5.b plus item 6). | $\begin{aligned} & \hline \text { RCFDG502 } \\ & 863,400,000 \end{aligned}$ | $\begin{aligned} & \hline \text { RCFDG503 } \\ & 702,156,000 \end{aligned}$ | $\begin{aligned} & \hline \text { RCFDG504 } \\ & 252,450,000 \end{aligned}$ | $\begin{aligned} & \hline \text { RCFDG505 } \\ & \mathbf{1 , 2 8 6 , 2 0 8 , 0 0 0} \end{aligned}$ | $\begin{aligned} & \hline \text { RCFDG506 } \\ & 26,898,000 \end{aligned}$ |
| 8. Deposits.............................................................................. | $\begin{array}{r} \hline \text { RCFDF252 } \\ 41,696,000 \end{array}$ | RCFDF686 | RCFDF694 | $\begin{aligned} & \hline \text { RCFDF253 } \\ & 39,486,000 \end{aligned}$ | $\begin{array}{r} \hline \text { RCFDF254 } \\ 2,210,000 \end{array}$ |
| 9. Federal funds purchased and securities sold under agreements to repurchase. | $\begin{aligned} & \text { RCFDG507 } \\ & 94,642,000 \end{aligned}$ | $\begin{aligned} & \hline \text { RCFDG508 } \\ & 140,028,000 \end{aligned}$ | RCFDG509 | $\begin{aligned} & \hline \text { RCFDG510 } \\ & 234,670,000 \end{aligned}$ | RCFDG511 |
| 10. Trading liabilities: |  |  |  |  |  |
| a. Derivative liabilities.. | $\begin{array}{r} \hline \text { RCFD3547 } \\ 40,575,000 \end{array}$ | $\begin{aligned} & \text { RCFDG512 } \\ & 564,289,000 \end{aligned}$ | $\begin{array}{r} \text { RCFDG513 } \\ \mathbf{1 , 0 6 8 , 0 0 0} \end{array}$ | $\begin{aligned} & \hline \text { RCFDG514 } \\ & 588,402,000 \end{aligned}$ | $\begin{aligned} & \hline \text { RCFDG515 } \\ & 15,394,000 \end{aligned}$ |
| b. Other trading liabilities....................................................... | $\begin{array}{r\|} \hline \text { RCFDG516 } \\ 85,645,000 \end{array}$ | RCFDG517 | $\begin{array}{r} \hline \text { RCFDG518 } \\ 61,389,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDG519 } \\ 24,205,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDG520 } \\ 51,000 \\ \hline \end{array}$ |

[^42]| Dollar amounts in thousands | (Column A) Total Fair Value Reported on Schedule RC | (Column B) LESS: Amounts Netted in the Determination of Total Fair Value | (Column C) <br> Level 1 Fair Value Measurements | (Column D) Level 2 Fair Value Measurements | (Column E) <br> Level 3 Fair Value Measurements |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 11. Other borrowed money | $\begin{aligned} & \hline \text { RCFDG521 } \\ & 35,545,000 \end{aligned}$ | RCFDG522 | RCFDG523 | $\begin{aligned} & \hline \text { RCFDG524 } \\ & 22,820,000 \end{aligned}$ | $\begin{aligned} & \hline \text { RCFDG525 } \\ & 12,725,000 \end{aligned}$ | 11. |
| 12. Subordinated notes and debentures. | RCFDG526 | RCFDG527 | RCFDG528 | RCFDG529 | RCFDG530 | 12. |
| 13. All other liabilities | $\begin{aligned} & \hline \text { RCFDG805 } \\ & 8,496,000 \end{aligned}$ | $\begin{array}{r} \hline \text { RCFDG806 } \\ 207,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDG807 } \\ 7,484,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDG808 } \\ 833,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDG809 } \\ 386,000 \\ \hline \end{array}$ | 13. |
| 14. Total liabilities measured at fair value on a recurring basis (sum of items 8 through 13). | $\begin{aligned} & \hline \text { RCFDG531 } \\ & 306,599,000 \end{aligned}$ | $\begin{aligned} & \hline \text { RCFDG532 } \\ & 704,524,000 \end{aligned}$ | $\begin{aligned} & \hline \text { RCFDG533 } \\ & 69,941,000 \end{aligned}$ | $\begin{aligned} & \hline \text { RCFDG534 } \\ & 910,416,000 \end{aligned}$ | $\begin{aligned} & \hline \text { RCFDG535 } \\ & 30,766,000 \end{aligned}$ | 14. |
| 1. All other assets (itemize and describe amounts included in Schedule RC-Q, item 6, that are greater than $\$ 100,000$ and exceed $25 \%$ of item $6)$ : |  |  |  |  |  | M.1. |
| a. Mortgage servicing assets.. | $\begin{array}{r} \hline \text { RCFDG536 } \\ 7,755,000 \end{array}$ | RCFDG537 0 | RCFDG538 | RCFDG539 | $\begin{array}{r} \hline \text { RCFDG540 } \\ 7,755,000 \end{array}$ | M.1.a. |
| b. Nontrading derivative assets................................................ | RCFDG541 | RCFDG542 | RCFDG543 | RCFDG544 | RCFDG545 | M.1.b. |

Dollar amounts in thousands

| Dollar amounts in thousands |  |  | M.1.c. |
| :---: | :---: | :---: | :---: |
| c. Disclose component and the dollar amount of that component: |  |  |  |
| 1. Describe component.. | TEXTG546 | Click here for value | M.1.c. 1 |

## (TEXTG546) Securities Provided as Collateral

| Dollar amounts in thousands | (Column A)Total <br> Fair Value <br> Reported on <br> Schedule RC | (Column B) LESS: Amounts Netted in the Determination of Total Fair Value | (Column C) <br> Level 1 Fair Value Measurements | (Column D) <br> Level 2 Fair Value <br> Measurements | (Column E) <br> Level 3 Fair Value Measurements |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2. Amount of component.. | RCFDG546 $7,805,000$ | RCFDG547 | $\begin{array}{r} \hline \text { RCFDG548 } \\ 7,317,000 \end{array}$ | RCFDG549 488,000 | RCFDG550 |

Dollar amounts in thousands


| Dollar amounts in thousands | (Column A)Total <br> Fair Value Reported on Schedule RC | (Column B) LESS: Amounts Netted in the Determination of Total Fair Value | (Column C) <br> Level 1 Fair Value <br> Measurements | (Column D) Level 2 Fair Value Measurements | (Column E) Level 3 Fair Value Measurements |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2. Amount of component.. | RCFDG551 | RCFDG552 0 | RCFDG553 0 | RCFDG554 0 | RCFDG555 |

Dollar amounts in thousands

| e. Disclose component and the dollar amount of that component: |
| :--- |
| 1. Describe component................................................................................................................................................ |
| TEXTG556 |


| Dollar amounts in thousands | $\begin{array}{\|c\|} \hline \text { (Column A)Total } \\ \text { Fair Value } \\ \text { Reported on } \\ \text { Schedule RC } \end{array}$ | (Column B) LESS: Amounts Netted in the Determination of Total Fair Value | (Column C) <br> Level 1 Fair Value <br> Measurements | (Column D) Level 2 Fair Value Measurements | (Column E) Level 3 Fair Value Measurements |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2. Amount of component. | RCFDG556 | RCFDG557 | RCFDG558 | RCFDG559 | RCFDG560 |

Dollar amounts in thousands

| Dolar amounts in thousands |
| :--- |
| f. Disclose component and the dollar amount of that component: <br> 1. Describe component................................................................................................................................................ <br> TEXTG561 |


| Dollar amounts in thousands | (Column A)Total Fair Value Reported on Schedule RC | (Column B) LESS: Amounts Netted in the Determination of Total Fair Value | (Column C) <br> Level 1 Fair Value Measurements | (Column D) Level 2 Fair Value Measurements | (Column E) Level 3 Fair Value Measurements |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2. Amount of component.............................................................. | RCFDG561 | RCFDG562 | RCFDG563 | RCFDG564 | RCFDG565 | M.1.f. ${ }^{\text {P }}$ |
| 2. All other liabilities (itemize and describe amounts included in Schedule RC-Q, item 13 , that are greater than $\$ 100,000$ and exceed $25 \%$ of item 13): |  |  |  |  |  | M.2. |
| a. Loan commitments (not accounted for as derivatives).............. | RCFDF261 | RCFDF689 | RCFDF697 | RCFDF262 | RCFDF263 | M.2.a. |
| b. Nontrading derivative liabilities............................................ | RCFDG566 | RCFDG567 | RCFDG568 | RCFDG569 | RCFDG570 | M.2.b. |

Dollar amounts in thousands

| c. Disclose component and the dollar amount of that component: |  |  | M.2.c. <br> M.2.c.1 |
| :---: | :---: | :---: | :---: |
| 1. Describe component.. | TEXTG571 | Click here for value |  |

(TEXTG571) Obligation to Return Securities Provided as Collateral

| Dollar amounts in thousands | (Column A)Total Fair Value Reported on Schedule RC | (Column B) <br> LESS: Amounts <br> Netted in the Determination of Total Fair Value | (Column C) Level 1 Fair Value Measurements | (Column D) Level 2 Fair Value Measurements | (Column E) Level 3 Fair Value <br> Measurements |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2. Amount of component............................................................. | $\begin{array}{r} \hline \text { RCFDG571 } \\ 8,075,000 \\ \hline \end{array}$ | RCFDG572 | $\begin{array}{r} \hline \text { RCFDG573 } \\ 7,317,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDG574 } \\ 758,000 \end{array}$ | RCFDG575 |

Dollar amounts in thousands


Dollar amounts in thousands

| e. Disclose component and the dollar amount of that component: |
| :--- |
| 1. Describe component................................................................................................................................................. |
| TEXTG581 |


| Dollar amounts in thousands | (Column A)Total <br> Fair Value Reported on Schedule RC | (Column B) <br> LESS: Amounts <br> Netted in the Determination of Total Fair Value | (Column C) <br> Level 1 Fair Value Measurements | (Column D) <br> Level 2 Fair Value <br> Measurements | (Column E) Level 3 Fair Value Measurements |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2. Amount of component. | RCFDG581 | RCFDG582 | RCFDG583 | RCFDG584 | RCFDG585 |

Dollar amounts in thousands

| D. Dollar amounts in thousands |
| :--- |
| f. Disclose component and the dollar amount of that component: |
| 1. Describe component |
| (TEXTG586) NR |


| Dollar amounts in thousands | (Column A)Total Fair Value Reported on Schedule RC | (Column B) <br> LESS: Amounts <br> Netted in the Determination of Total Fair Value | (Column C) <br> Level 1 Fair Value <br> Measurements | (Column D) <br> Level 2 Fair Value <br> Measurements | (Column E) Level 3 Fair Value <br> Measurements |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2. Amount of component............................................................. | RCFDG586 0 | RCFDG587 | RCFDG588 | RCFDG589 | RCFDG590 |


| Dollar amounts in thousands | Consolidated Bank |  | M.3. |
| :---: | :---: | :---: | :---: |
| 3. Loans measured at fair value (included in Schedule RC-C, Part I, items 1 throug |  |  |  |
| a. Loans secured by real estate: |  |  | M.3.a. |
| 1. Secured by 1-4 family residential properties. | RCFDHT87 | 10,897,000 | M.3.a. 1 |
| 2. All other loans secured by real estate. | RCFDHT88 | 6,940,000 | M.3.a.2. |
| b. Commercial and industrial loans. | RCFDF585 | 3,280,000 | M.3.b. |
| c. Loans to individuals for household, family, and other personal expenditures (i.e., consumer loans) (includes purchased paper). | RCFDHT89 | 232,000 | M.3.c. |
| d. Other loans.. | RCFDF589 | 16,912,000 | M.3.d. |
| 4. Unpaid principal balance of loans measured at fair value (reported in Schedule RC-Q, Memorandum item 3): |  |  | M.4. |
| a. Loans secured by real estate: |  |  | M.4.a. |
| 1. Secured by 1-4 family residential properties.. | RCFDHT91 | 11,429,000 | M.4.a.1. |
| 2. All other loans secured by real estate.. | RCFDHT92 | 7,117,000 | M.4.a.2 |
| b. Commercial and industrial loans. | RCFDF597 | 2,909,000 | M.4.b. |
| c. Loans to individuals for household, family, and other personal expenditures (i.e., consumer loans) (includes purchased paper). | RCFDHT93 | 236,000 | M.4.c. |
| d. Other loans.. | RCFDF601 | 17,548,000 | M.4.d. |

## Schedule RC-R Part I-Regulatory Capital Components and Ratios(Form Type - 031)

Part I is to be completed on a consolidated basis.

| Dollar amounts in thousands |  |  |  |
| :---: | :---: | :---: | :---: |
| 1. Common stock plus related surplus, net of treasury stock and unearned employee stock ownership plan (ESOP) shares. | RCFAP742 | 120,321,000 | 1. |
| 2. Retained earnings ${ }^{1}$ | RCFAKW00 | 204,884,000 | 2. |
| To be completed only by institutions that have adopted ASU 2016-13: <br> a. Does your institution have a CECL transition election in effect as of the quarter-end report date? (enter " 0 " for No; enter "1" for Yes with a 3-year CECL transition election; enter "2" for Yes with a 5-year 2020 CECL transition election.). | RCOAJJ29 | 2 | 2.a. |
| 3. Accumulated other comprehensive income (AOC) | RCFAB530 | -14,748,000 | 3. |
| a. AOCI opt-out election (enter "1" for Yes; enter "0" for No.) (Advanced approaches institutions must enter "0" for No.) | RCOAP838 | 0 | 3.a. |
| 4. Common equity tier 1 minority interest includable in common equity tier 1 capital | RCFAP839 | 0 | 4. |
| 5. Common equity tier 1 capital before adjustments and deductions (sum of items 1 through 4) | RCFAP840 | 310,457,000 | 5. |
| 6. LESS: Goodwill net of associated deferred tax liabilities (DTLs) | RCFAP841 | 40,891,000 | 6. |
| 7. LESS: Intangible assets (other than goodwill and mortgage servicing assets (MSAs)), net of associated DTLs | RCFAP842 | 76,000 | 7. |
| 8. LESS: Deferred tax assets (DTAs) that arise from net operating loss and tax credit carryforwards, net of any related valuation allowances and net of DTLs. | RCFAP843 | 22,000 | 8. |
| 9. AOCI-related adjustments (items 9.a through 9.e are effective January 1, 2015) (if entered "1" for Yes in item 3.a, complete only items 9.a through 9.e; if entered "0" for No in item 3.a, complete only item 9.f): |  |  | 9. |
| a. LESS: Net unrealized gains (losses) on available-for-sale debt securities (if a gain, report as a positive value; if a loss, report as a negative value). | RCFAP844 | NR | 9.a. |
| b. Not applicable. |  |  | 9.b. |
| c. LESS: Accumulated net gains (losses) on cash flow hedges (if a gain, report as a positive value; if a loss, report as a negative value). | RCFAP846 | NR | 9.c. |
| d. LESS: Amounts recorded in AOCI attributed to defined benefit postretirement plans resulting from the initial and subsequent application of the relevant GAAP standards that pertain to such plans (if a gain, report as a positive value; if a loss, report as a negative value). | RCFAP847 | NR | 9.d. |
| e. LESS: Net unrealized gains (losses) on held-to-maturity securities that are included in AOCI (if a gain, report as a positive value; if a loss, report as a negative value). | RCFAP848 | NR | 9.e. |
| f. LESS: Accumulated net gain (loss) on cash flow hedges included in AOCI, net of applicable income taxes, that relate to the hedging of items that are not recognized at fair value on the balance sheet (if a gain, report as a positive value; if a loss, report as a negative value) (To be completed only by institutions that entered " 0 " for No in item 3.a). | RCFAP849 | -4,859,000 | 9.f. |
| 10. Other deductions from (additions to) common equity tier 1 capital before threshold-based deductions: |  |  | 10. |
| a. LESS: Unrealized net gain (loss) related to changes in the fair value of liabilities that are due to changes in own credit risk (if a gain, report as a positive value; if a loss, report as a negative value). | RCFAQ258 | 327,000 | 10.a |
| b. LESS: All other deductions from (additions to) common equity tier 1 capital before threshold-based deductions. | RCFAP850 | 449,000 | 10.b |


| Dollar amounts in thousands | (Column A) Non-advanced Approaches Institutions |  | (Column B) Advanced Approaches Institutions |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 11. LESS: Non-significant investments in the capital of unconsolidated financial institutions in the form of common stock that exceed the 10 percent threshold for non-significant investments. |  |  | RCFWP851 | 0 | 11. |
| 12. Subtotal (for column A, item 5 minus items 6 through $10 . \mathrm{b}$; for column $B$, item 5 minus items 6 through 11). | RCFAP852 | NR | RCFWP852 | 273,551,000 | 12. |
| 13. Not available |  |  |  |  | 13. |
| a. LESS: Investments in the capital of unconsolidated financial institutions, net of associated DTLs, that exceed 25 percent of item 12. | RCFALB58 | NR |  |  | 13.a. |
| b. LESS: Significant investments in the capital of unconsolidated financial institutions in the form of common stock, net of associated DTLs, that exceed the 10 percent common equity tier 1 capital deduction threshold. |  |  | RCFWP853 | 0 | 13.b. |
| 14. Not available |  |  |  |  | 14. |
| a. LESS: MSAs, net of associated DTLs, that exceed 25 percent of item 12. | RCFALB59 | NR |  |  | 14.a. |
| b. LESS: MSAs, net of associated DTLs, that exceed the 10 percent common equity tier 1 capital deduction threshold. |  |  | RCFWP854 | 0 | 14.b. |
| 15. Not available |  |  |  |  | 15. |
| a. LESS: DTAs arising from temporary differences that could not be realized through net operating loss carrybacks, net of related valuation allowances and net of DTLs, that exceed 25 percent of item 12. | RCFALB60 | NR |  |  | 15.a |
| b. LESS: DTAs arising from temporary differences that could not be realized through net operating loss carrybacks, net of related valuation allowances and net of DTLs, that exceed the 10 percent common equity tier 1 capital deduction threshold...................................... |  |  | RCFWP855 | 0 | 15.b |
| 16. LESS: Amount of significant investments in the capital of unconsolidated financial institutions in the form of common stock, net of associated DTLs; MSAs, net of associated DTLs; and DTAs arising from temporary differences that could not be realized through net operating loss carrybacks, net of related valuation allowances and net of DTLs; that exceeds the 15 percent common equity tier 1 capital deduction threshold.. |  |  | RCFWP856 | 0 | 16. |
| 17. LESS: Deductions applied to common equity tier 1 capital due to insufficient amounts of additional tier 1 capital and tier 2 capital to cover deductions. | RCFAP857 | NR | RCFWP857 | 0 | 17. |
| 18. Total adjustments and deductions for common equity tier 1 capital ${ }^{3}$ | RCFAP858 | NR | RCFWP858 | 0 | 18. |
| 19. Common equity tier 1 capital (item 12 minus item 18).................................................. | RCFAP859 | NR | RCFWP859 | 273,551,000 | 19. |

Dollar amounts in thousands

| 20. Additional tier 1 capital instruments plus related surplus | RCFAP860 | 0 | 20. |
| :---: | :---: | :---: | :---: |
| 21. Non-qualifying capital instruments subject to phase out from additional tier 1 capital | RCFAP861 | 0 | 21. |
| 22. Tier 1 minority interest not included in common equity tier 1 capital | RCFAP862 | 3,000 | 22. |
| 23. Additional tier 1 capital before deductions (sum of items 20, 21, and 22) | RCFAP863 | 3,000 | 23. |
| 24. LESS: Additional tier 1 capital deduc | RCFAP864 | 0 | 24. |
| 25. Additional tier 1 capital (greater of item 23 minus item 24 , or zero) | RCFAP865 | 3,000 | 25. |
| 26. Tier 1 capital ${ }^{1}$.. | RCFA8274 | 273,554,000 | 26. |
| 27. Average total consolidated assets ${ }^{2}$. | RCFAKW03 | 3,230,306,000 | 27. |
| 28. LESS: Deductions from common equity tier 1 capital and additional tier 1 capital (sum of items $6,7,8,10 . b, 13$ through 15, 17, and certain elements of item 24 - see instructions) ${ }^{3}$. | RCFAP875 | 41,438,000 | 28. |
| 29. LESS: Other deductions from (additions to) assets for leverage ratio purposes | RCFAB596 | 8,147,000 | 29. |
| 30. Total assets for the leverage ratio (item 27 minus items 28 and 29) | RCFAA224 | 3,180,721,000 | 30. |
| 31. Leverage ratio (item 26 divided by 30). | RCFA7204 | 8.6004\% | 31. |
| a. Does your institution have a community bank leverage ratio (CBLR) framework election in effect as of the quarter-end report date? (enter "1" for Yes; enter "0" for No). | RCOALE74 | 0 | 31.a. |
| Item 31.b is to be completed only by non-advanced approaches institutions that elect to use the Standardized Approach for Counterparty Credit Risk (SA-CCR) for purposes of the standardized approach and supplementary leverage ratio. <br> b. Standardized Approach for Counterparty Credit Risk opt-in election (enter "1" for Yes; leave blank for No.) ${ }^{4}$...... | RCOANC99 | NR | 31.b. |

[^43]| Dollar amounts in thousands | (Column A) Amount |  | (Column B) Percentage |  |
| :---: | :---: | :---: | :---: | :---: |
| 32. Total assets (Schedule RC, item 12); (must be less than \$10 billion).. | RCFA2170 | NR |  |  |
| 33. Trading assets and trading liabilities (Schedule RC, sum of items 5 and 15). Report as a dollar amount in Column A and as a percentage of total assets ( $5 \%$ limit) in Column B. | RCFAKX77 | NR | RCFAKX78 | NR |
| 34. Off-balance sheet exposures: |  |  |  |  |
| a. Unused portion of conditionally cancellable commitments. | RCFAKX79 | NR |  |  |
| b. Securities lent and borrowed (Schedule RC-L, sum of items 6.a and 6.b)... | RCFAKX80 | NR |  |  |
| c. Other off-balance sheet exposures... | RCFAKX81 | NR |  |  |
| d. Total off-balance sheet exposures (sum of items 34.a through 34.c). Report as a dollar amount in Column A and as a percentage of total assets ( $25 \%$ limit) in Column B.. | RCFAKX82 | NR | RCFAKX83 | NR |

Dollar amounts in thousands

| 35. Unconditionally cancellable commitments. | RCFAS540 | NR | 35. |
| :---: | :---: | :---: | :---: |
| 36. Investments in the tier 2 capital of unconsolidated financial institutions.. | RCFALB61 | NR | 36. |
| 37. Allocated transfer risk reserve. | RCFA3128 | NR | 37. |
| 38. Amount of allowances for credit losses on purchased credit-deteriorated assets: ${ }^{1}$ |  |  | 38. |
| a. Loans and leases held for investment. | RCFAJJ30 | NR | 38.a. |
| b. Held-to-maturity debt securities. | RCFAJJ31 | NR | 38.b. |
| c. Other financial assets measured at amortized cost | RCFAJJ32 | NR | 38.c. |
| 39. Tier 2 capital instruments plus related surplus. | RCFAP866 | 52,000 | 39. |
| 40. Non-qualifying capital instruments subject to phase-out from tier 2 capital.. | RCFAP867 |  | 40. |
| 41. Total capital minority interest that is not included in tier 1 capital. | RCFAP868 | 1,000 | 41. |
| 42. Allowance for loan and lease losses and eligible credit reserves includable in tier 2 capital |  |  | 42. |
| a. Allowance for loan and lease losses includable in tier 2 capital ${ }^{3}$. | RCFA5310 | 18,949,000 | 42.a. |
| b. (Advanced approaches institutions that exit parallel run only): Eligible credit reserves includable in tier 2 capital. | RCFW5310 | 5,923,000 | 42.b. |
| 43. Not applicable. |  |  | 43. |
| 44. Tier 2 capital before deductions |  |  | 44. |
| a. Tier 2 capital before deductions (sum of items 39 through 42). | RCFAP870 | 19,002,000 | 44.a. |
| b. (Advanced approaches institutions that exit parallel run only): Tier 2 capital before deductions (sum of items 39 through 41, plus item 42.b). | RCFWP870 | 5,976,000 | 44.b. |
| 45. LESS: Tier 2 capital deductions. | RCFAP872 | 312,000 | 45. |
| 46. Tier 2 capital |  |  | 46. |
| a. Tier 2 capital (greater of item 44.a minus item 45, or zero). | RCFA5311 | 18,690,000 | 46.a. |
| b. (Advanced approaches institutions that exit parallel run only): Tier 2 capital (greater of item $44 . \mathrm{b}$ minus item 45, or zero). | RCFW5311 | 5,664,000 | 46.b. |
| 47. Total capital |  |  | 47. |
| a. Total capital (sum of items 26 and 46.a). | RCFA3792 | 292,244,000 | 47.a. |
| b. (Advanced approaches institutions that exit parallel run only): Total capital (sum of items 26 and 46.b)............ | RCFW3792 | 279,218,000 | 47.b. |
| 48. Total risk-weighted assets |  |  | 48. |
| a. Total risk-weighted assets (from Schedule RC-R, Part II, item 31).. | RCFAA223 | 1,584,591,315 | 48.a. |
| b. (Advanced approaches institutions that exit parallel run only): Total risk-weighted assets using advanced approaches rule (from FFIEC 101 Schedule A, item 60). | RCFWA223 | 1,489,078,000 | 48.b. |

[^44]| Dollar amounts in thousands | (Column A) Percentage |  | (Column B) Percentage |  |
| :---: | :---: | :---: | :---: | :---: |
| 49. Common equity tier 1 capital ratio (Column A: item 19, column A or B, as applicable, divided by item 48.a) (Advanced approaches institutions that exit parallel run only: Column B: item 19, column B, divided by item 48.b). | RCFAP793 | 17.2632\% | RCFWP793 | 18.3705\% |
| 50. Tier 1 capital ratio (Column A: item 26 divided by item 48.a) (Advanced approaches institutions that exit parallel run only: Column B: item 26 divided by item 48.b).. | RCFA7206 | 17.2634\% | RCFW7206 | 18.3707\% |
| 51. Total capital ratio (Column A: item 47.a divided by item 48.a) (Advanced approaches institutions that exit parallel run only: Column B: item 47. b divided by item 48.b). | RCFA7205 | 18.4429\% | RCFW7205 | 18.7511\% |

## Dollar amounts in thousands

| 52. Institution-specific capital buffer necessary to avoid limitations on distributions and discretionary bonus payments: <br> a. Capital conservation buffer. |  |  | 52. <br> 52.a. |
| :---: | :---: | :---: | :---: |
|  | RCFAH311 | 10.4429\% |  |
| b. Advanced approaches institutions and institutions subject to Category III capital standards only:Total applicable capital buffer. | RCFWH312 | 2.5000\% | 52.b. |
| 53. Eligible retained income ${ }^{1}$ | RCFAH313 | NR | 53. |
| 54. Distributions and discretionary bonus payments during the quarter ${ }^{2}$. | RCFAH314 | NR | 54. |
| 55. Advanced approaches institutions and institutions subject to Category III capital standards only: Supplementary leverage ratio information: |  |  | 55. |
| a. Total leverage exposure ${ }^{3}$. | RCFAH015 | 3,848,373,000 | 55.a. |
| b. Supplementary leverage ratio.............................................................................................................. | RCFAH036 | 7.1083\% | 55.b. |

[^45]
## Schedule RC-R Part II - Risk-Weighted Assets(Form Type - 031)



| Dollar amounts in thousands | $\begin{aligned} & \hline \text { (Column A) } \\ & \text { Totals from } \\ & \text { Schedule RC } \end{aligned}$ | (Column B) Adjustments to Totals Reported in Column A | (Column C) Allocation by Risk-Weight Category 0\% | (Column D) Allocation by Risk-Weight Category 2\% | (Column E) Allocation by Risk-Weight Category 4\% | (Column F) Allocation by Risk-Weight Category 10\% | (Column G) <br> Allocation by <br> Risk-Weight <br> Category 20\% | (Column H) <br> Allocation by <br> Risk-Weight <br> Category 50\% | (Column I) <br> Allocation by <br> Risk-Weight <br> Category <br> $100 \%$ | (Column J) <br> Allocation by <br> Risk-Weight <br> Category <br> $150 \%$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. Cash and balances due from depository institutions... | $\begin{array}{c\|} \hline \text { RCFDD957 } \\ 551,018,000 \end{array}$ | $\begin{array}{r\|} \hline \text { RCFDS396 } \\ 1,438,000 \end{array}$ | RCFDD958 501,962,000 |  |  |  | $\begin{array}{r\|} \hline \text { RCFDD959 } \\ 36,918,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDS397 } \\ 4,150,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDD960 } \\ 5,228,000 \end{array}$ | $\begin{array}{c\|} \hline \text { RCFDS398 } \\ 1,322,000 \end{array}$ |
| 2. Securities: |  |  |  |  |  |  |  |  |  |  |
| a. Held-to-maturity securities ${ }^{3}$. |  <br> RCFDD961 <br> $327,768,000$ | $\begin{array}{r} \hline \text { RCFDS399 } \\ -2,000 \end{array}$ | $\begin{array}{c\|} \hline \text { RCFDD962 } \\ 235,116,000 \end{array}$ | RCFDHJ74 0 | RCFDHJ75 0 |  | $\begin{aligned} & \text { RCFDD963 } \\ & 87,459,000 \end{aligned}$ | $\begin{gathered} \hline \text { RCFDD964 } \\ 5,195,000 \end{gathered}$ | RCFDD965 0 | RCFDS400 |
| b. Available-for-sale debt securities and equity securities with readily determinable fair values not held for trading. | $\begin{aligned} & \text { RCFDJA21 } \\ & 182,250,000 \\ & \hline \end{aligned}$ | $\begin{array}{r} \text { RCFDS402 } \\ 5,000 \\ \hline \end{array}$ | $\begin{aligned} & \text { RCFDD967 } \\ & 148,642,000 \\ & \hline \end{aligned}$ | RCFDHJ76 0 | RCFDHJ77 ${ }^{0}$ |  | $\begin{gathered} \text { RCFDD968 } \\ 22,805,000 \\ \hline \end{gathered}$ | $\begin{gathered} \text { RCFDD969 } \\ 10,427,000 \\ \hline \end{gathered}$ | $\begin{array}{r} \text { RCFDD970 } \\ 371,000 \\ \hline \end{array}$ | RCFDS403 0 |
| 3. Federal funds sold and securities purchased under agreements to resell: |  |  |  |  |  |  |  |  |  |  |
| a. Federal funds sold in domestic offices..... | $\begin{array}{r} \hline \text { RCOND971 } \\ 64,000 \\ \hline \end{array}$ |  | RCOND972 0 |  |  |  | $\begin{array}{r} \hline \text { RCOND973 } \\ 64,000 \end{array}$ | RCONS410 | RCOND974 0 | RCONS411 0 |
| b. Securities purchased under agreements to resell........ | $\begin{array}{c\|} \hline \text { RCFDH171 } \\ 364,072,000 \end{array}$ | $\begin{array}{c\|} \hline \text { RCFDH172 } \\ 364,072,000 \end{array}$ |  |  |  |  |  |  |  |  |
| 4. Loans and leases held for sale: |  |  |  |  |  |  |  |  |  |  |
| a. Residential mortgage exposures............................. | $\begin{array}{c\|} \hline \text { RCFDS413 } \\ 10,726,000 \end{array}$ | RCFDS414 0 | RCFDH173 0 |  |  |  | $\begin{array}{r} \hline \text { RCFDS415 } \\ 667,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDS416 } \\ \hline 7,677,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDS417 } \\ 2,382,000 \end{array}$ |  |
| b. High volatility commercial real estate exposures........ | RCFDS419 0 | RCFDS420 0 | RCFDH174 0 |  |  |  | RCFDH175 0 | RCFDH176 0 | RCFDH177 0 | RCFDS421 |
| c. Exposures past due 90 days or more or on nonaccrual ${ }^{3}$. | $\begin{array}{r}\text { RCFDS423 } \\ 81,000 \\ \hline\end{array}$ | RCFDS424 0 | RCFDS425 0 | RCFDHJ78 0 | RCFDHJ79 0 |  | RCFDS426 0 | RCFDS427 0 | RCFDS428 0 | $\begin{array}{r} \text { RCFDS429 } \\ 81,000 \end{array}$ |


| Dollar amounts in thousands | (Column K) Allocation by Risk-Weight Category 250\% | (Column L) Allocation by Risk-Weight Category 300\% | (Column M) Allocation by Risk-Weight Category 400\% | (Column N) Allocation by Risk-Weight Category 600\% | (Column O) <br> Allocation by Risk-Weight Category 625\% | (Column P) <br> Allocation by Risk-Weight Category 937.5\% | (Column Q) <br> Allocation by Risk-Weight Category 1,250\% | (Column R) <br> Application of <br> Other <br> Risk-Weighting <br> Approaches <br> Exposure <br> Amount | (Column S) <br> Application of Other <br> Risk-Weighting Approaches Risk-Weighted Asset Amount |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. Cash and balances due from depository institutions |  |  |  |  |  |  |  |  |  |
| 2. Securities: |  |  |  |  |  |  |  |  |  |
| a. Held-to-maturity securities |  |  |  |  |  |  |  |  |  |
| b. Available-for-sale debt securities and equity securities with readily determinable fair values not held for trading. | RCFDH270 | RCFDS405 0 |  | RCFDS406 0 |  |  |  | RCFDH271 | RCFDH272 |
| 3. Federal funds sold and securities purchased under agreements to resell: |  |  |  |  |  |  |  |  |  |
| a. Federal funds sold in domestic offices |  |  |  |  |  |  |  |  |  |

[^46]| Dollar amounts in thousands | (Column K) <br> Allocation by <br> Risk-Weight <br> Category 250\% | (Column L) <br> Allocation by <br> Risk-Weight <br> Category 300\% | (Column M) Allocation by Risk-Weight Category 400\% | (Column N) Allocation by Risk-Weight Category 600\% | (Column O) Allocation by Risk-Weight Category 625\% | (Column P) Allocation by Risk-Weight Category 937.5\% | (Column Q) Allocation by Risk-Weight Category 1,250\% |  | (Column S) Application of Other Risk-Weighting Approaches Risk-Weighted Asset Amount |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| b. Securities purchased under agreements to resell |  |  |  |  |  |  |  |  |  |
| 4. Loans and leases held for sale: |  |  |  |  |  |  |  |  |  |
| a. Residential mortgage exposures.................................... |  |  |  |  |  |  |  | RCFDH273 | RCFDH274 0 |
| b. High volatility commercial real estate exposures................ |  |  |  |  |  |  |  | RCFDH275 | RCFDH276 0 |



| Dollar amounts in thousands | (Column K) Allocation by Risk-Weight Category 250\% | (Column L) <br> Allocation by <br> Risk-Weight <br> Category 300\% | (Column M) Allocation by Risk-Weight Category 400\% | (Column N) <br> Allocation by <br> Risk-Weight <br> Category 600\% | (Column O) Allocation by Risk-Weight Category 625\% | (Column P) <br> Allocation by Risk-Weight Category 937.5\% | (Column Q) Allocation by Risk-Weight Category 1,250\% |  | (Column S) <br> Application of <br> Other <br> Risk-Weighting <br> Approaches <br> Risk-Weighted <br> Asset Amount |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4. Loans and leases held for sale (continued): |  |  |  |  |  |  |  |  |  |
| d. All other exposures. |  |  |  |  |  |  |  | RCFDH279 0 | RCFDH280 0 |
| 5. Loans and leases held for investment: |  |  |  |  |  |  |  |  |  |
| a. Residential mortgage exposures.. |  |  |  |  |  |  |  | RCFDH281 0 | RCFDH282 0 |
| b. High volatility commercial real estate exposures........... |  |  |  |  |  |  |  | RCFDH283 0 | RCFDH284 0 |
| c. Exposures past due 90 days or more or on nonaccrual ${ }^{11}$.. |  |  |  |  |  |  |  | RCFDH285 0 | RCFDH286 0 |
| d. All other exposures. |  |  |  |  |  |  |  | RCFDH287 0 | RCFDH2888 |
| 6. LESS: Allowance for loan and lease losses |  |  |  |  |  |  |  |  |  |
| 7. Trading assets.. | RCFDH289 0 | $\begin{array}{r} \hline \text { RCFDH186 } \\ \hline \end{array}$ | RCFDH290 0 | RCFDH187 |  |  |  | $\begin{array}{r} \hline \text { RCFDH291 } \\ 1,430,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDH292 } \\ 809,000 \end{array}$ |
| 8. All other assets ${ }^{12}$. | $\begin{aligned} & \hline \text { RCFDH293 } \\ & 15,029,000 \end{aligned}$ | RCFDH188 | RCFDS470 | $\begin{array}{r} \text { RCFDS471 } \\ 2,000 \end{array}$ |  |  |  | $\begin{array}{r\|} \hline \text { RCFDH294 } \\ 3,931,000 \end{array}$ | $\begin{array}{c\|} \hline \text { RCFDH295 } \\ 3,846,000 \\ \hline \end{array}$ |
| a. Separate account bank-owned life insurance.................... |  |  |  |  |  |  |  | $\begin{array}{r\|} \hline \text { RCFDH296 } \\ 5,685,000 \\ \hline \end{array}$ | $\begin{array}{r} \hline \text { RCFDH297 } \\ 2,197,000 \\ \hline \end{array}$ |
| b. Default fund contributions to central counterparties........... |  |  |  |  |  |  |  | $\begin{array}{r} \hline \text { RCFDH298 } \\ 4,336,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDH299 } \\ 1,665,000 \end{array}$ |

[^47]| Dollar amounts in thousands | $\begin{gathered} \text { (Column A) } \\ \text { Totals } \end{gathered}$ | (Column B) Adjustments to Totals Reported in Column A | (Column Q) <br> Exposure <br> Amount 1,250\% | (Column T) Total Risk-Weighted Asset Amount by Calculation Methodology SSFA | (Column U) Total Risk-Weighted Asset Amount by Calculation Methodology Gross-Up |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 9. On-balance sheet securitization exposures: |  |  |  |  |  |
| a. Held-to-maturity securities................................................. | $\begin{aligned} & \hline \text { RCFDS475 } \\ & 85,059,000 \end{aligned}$ | $\begin{aligned} & \hline \text { RCFDS476 } \\ & 85,059,000 \end{aligned}$ | RCFDS477 | $\begin{aligned} & \hline \text { RCFDS478 } \\ & 17,017,000 \end{aligned}$ | RCFDS479 |
| b. Available-for-sale securities. | $\begin{array}{r} \hline \text { RCFDS480 } \\ 14,964,000 \end{array}$ | $\begin{array}{r} \text { RCFDS481 } \\ 14,964,000 \end{array}$ | RCFDS482 0 | $\begin{array}{r} \hline \text { RCFDS483 } \\ 3,002,000 \end{array}$ | RCFDS484 |
| c. Trading assets................................................................... | $\begin{array}{r} \hline \text { RCFDS485 } \\ 1,753,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDS486 } \\ 1,749,000 \end{array}$ | RCFDS487 $4,000$ | RCFDS488 $18,000$ | RCFDS489 |
| d. All other on-balance sheet securitization exposures................. | $\begin{aligned} & \hline \text { RCFDS490 } \\ & 110,259,000 \end{aligned}$ | $\begin{array}{r} \hline \text { RCFDS491 } \\ 110,251,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDS492 } \\ 8,000 \end{array}$ | $\begin{array}{r\|} \hline \text { RCFDS493 } \\ 21,561,000 \end{array}$ | RCFDS494 |
| 10. Off-balance sheet securitization exposures................................ | $\begin{aligned} & \hline \text { RCFDS495 } \\ & 55,908,000 \end{aligned}$ | $\begin{aligned} & \hline \text { RCFDS496 } \\ & 55,812,000 \end{aligned}$ | $\begin{array}{r} \hline \text { RCFDS497 } \\ 96,000 \end{array}$ | $\begin{aligned} & \hline \text { RCFDS498 } \\ & 4,578,000 \end{aligned}$ | RCFDS499 |


| Dollar amounts in thousands | (Column A) Totals From Schedule RC | (Column B) Adjustments to Totals Reported in Column A | (Column C) Allocation by Risk-Weight Category 0\% | (Column D) Allocation by Risk-Weight Category 2\% | (Column E) Allocation by Risk-Weight Category 4\% | (Column F) Allocation by Risk-Weight Category 10\% | (Column G) <br> Allocation by <br> Risk-Weight <br> Category 20\% | (Column H) Allocation by Risk-Weight Category 50\% | (Column I) <br> Allocation by Risk-Weight Category 100\% | (Column J) Allocation by Risk-Weight Category 150\% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 11. Total balance sheet assets ${ }^{14}$. | $\begin{array}{l\|} \hline \text { RCFD2170 } \\ 3,267,963,000 \end{array}$ | $\begin{array}{l\|} \hline \text { RCFDS500 } \\ \mathbf{1 , 0 5 4 , 4 6 9 , 0 0 0} \end{array}$ | $\begin{aligned} & \hline \text { RCFDD987 } \\ & 904,364,000 \end{aligned}$ | $\begin{array}{r} \hline \text { RCFDHJ90 } \\ 35,000 \end{array}$ | $\begin{gathered} \hline \text { RCFDHJ91 } \\ 8,452,000 \end{gathered}$ |  | $\begin{array}{c\|} \hline \text { RCFDD988 } \\ 168,735,000 \end{array}$ | $\begin{aligned} & \hline \text { RCFDD989 } \\ & 326,553,000 \end{aligned}$ | $\begin{aligned} & \hline \text { RCFDD990 } \\ & 764,674,000 \end{aligned}$ | $\begin{aligned} & \hline \text { RCFDS503 } \\ & 10,256,000 \end{aligned}$ |


| Dollar amounts in thousands | (Column K) Allocation by Risk-Weight Category 250\% | (Column L) Allocation by Risk-Weight Category 300\% | (Column M) Allocation by Risk-Weight Category 400\% | (Column N) Allocation by Risk-Weight Category 600\% | (Column O) Allocation by Risk-Weight Category 625\% | (Column P) <br> Allocation by <br> Risk-Weight <br> Category 937.5\% | (Column Q) <br> Allocation by <br> Risk-Weight <br> Category 1,250\% | (Column R) Application of Other Risk-Weighting Approaches Exposure Amount |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 11. Total balance sheet assets ${ }^{14}$. | $\begin{array}{r} \hline \text { RCFDS504 } \\ 15,029,000 \end{array}$ | RCFDS505 | RCFDS506 | $\begin{array}{r} \hline \text { RCFDS507 } \\ 2,000 \end{array}$ |  |  | $\begin{array}{r} \hline \text { RCFDS510 } \\ 12,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDH300 } \\ 15,382,000 \\ \hline \end{array}$ |


| Dollar amounts in thousands | (Column A) Face, Notional, or Other Amount | (Column B) Credit Equivalent Amount | (Column C) Allocation by Risk-Weight Category 0\% | (Column D) Allocation by Risk-Weight Category 2\% | (Column E) Allocation by Risk-Weight Category 4\% | (Column F) Allocation by Risk-Weight Category 10\% | (Column G) <br> Allocation by <br> Risk-Weight <br> Category 20\% | (Column H) <br> Allocation by <br> Risk-Weight <br> Category 50\% | (Column I) <br> Allocation by <br> Risk-Weight <br> Category <br> $100 \%$ | (Column J) Allocation by Risk-Weight Category $150 \%$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12. Financial standby letters of cred | $\begin{array}{c\|} \hline \text { RCFDD991 } \\ 28,955,000 \end{array}$ | $\begin{array}{c\|} \hline \text { RCFDD992 } \\ 28,955,000 \end{array}$ | $\begin{array}{r\|} \hline \text { RCFDD993 } \\ 420,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDHJ92 } \\ 36,000 \end{array}$ | RCFDHJ93 0 |  | $\begin{array}{r} \hline \text { RCFDD994 } \\ 6,896,000 \end{array}$ | $\begin{gathered} \hline \text { RCFDD995 } \\ 3,074,000 \end{gathered}$ | $\begin{array}{c\|} \hline \text { RCFDD996 } \\ 18,309,000 \end{array}$ | $\begin{array}{r\|} \hline \text { RCFDS511 } \\ 220,000 \end{array}$ |
| 13. Performance standby letters of credit and transaction-related contingent items.. | $\begin{array}{c\|} \hline \text { RCFDD997 } \\ 6,722,000 \\ \hline \end{array}$ | $\begin{gathered} \hline \text { RCFDD998 } \\ 3,361,000 \end{gathered}$ | $\begin{gathered} \hline \text { RCFDD999 } \\ 170,000 \\ \hline \end{gathered}$ |  |  |  | $\begin{gathered} \hline \text { RCFDG603 } \\ 729,000 \end{gathered}$ | $\begin{gathered} \hline \text { RCFDG604 } \\ 151,000 \end{gathered}$ | $\begin{gathered} \hline \text { RCFDG605 } \\ 2,158,000 \end{gathered}$ | $\begin{array}{c\|} \hline \text { RCFDS512 } \\ 153,000 \\ \hline \end{array}$ |
| 14. Commercial and similar letters of credit with an original maturity of one year or less. | RCFDG606 $3,290,000$ | RCFDG607 658,000 | RCFDG608 43,000 | RCFDHJ94 0 | RCFDHJ95 |  | RCFDG609 216,000 | RCFDG610 28,000 | RCFDG611 281,000 | RCFDS513 90,000 |
| 15. Retained recourse on small business obligations sold with recourse. | RCFDG612 0 | RCFDG613 0 | RCFDG614 ${ }^{0}$ |  |  |  | RCFDG615 0 | RCFDG616 0 | RCFDG617 ${ }^{0}$ | RCFDS514 |


| Dollar amounts in thousands | (Column A) Face, Notional, or Other Amount | (Column B) Credit Equivalent Amount | (Column C) Allocation by Risk-Weight Category 0\% | (Column D) Allocation by Risk-Weight Category 2\% | (Column E) Allocation by Risk-Weight Category 4\% | (Column F) Allocation by Risk-Weight Category 10\% | (Column G) Allocation by Risk-Weight Category 20\% | (Column H) Allocation by Risk-Weight Category 50\% | (Column I) Allocation by Risk-Weight Category 100\% | (Column J) Allocation by Risk-Weight Category 150\% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 16. Repo-style transactions ${ }^{21}$. | $\begin{array}{c\|} \hline \text { RCFDS515 } \\ 111,183,000 \end{array}$ | $\begin{aligned} & \hline \text { RCFDS516 } \\ & 111,183,000 \end{aligned}$ | $\begin{array}{c\|} \hline \text { RCFDS517 } \\ 14,523,000 \end{array}$ | $\begin{array}{c\|} \hline \text { RCFDS518 } \\ 10,296,000 \end{array}$ | RCFDS519 0 |  | $\begin{array}{r} \hline \text { RCFDS520 } \\ 26,651,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDS521 } \\ 1,380,000 \end{array}$ | $\begin{aligned} & \hline \text { RCFDS522 } \\ & 56,390,000 \end{aligned}$ | $\begin{array}{c\|} \hline \text { RCFDS523 } \\ 1,943,000 \end{array}$ |
| 17. All other off-balance sheet liabilities.............................. | $\begin{array}{r} \hline \text { RCFDG618 } \\ 587,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDG619 } \\ 587,000 \end{array}$ | RCFDG620 0 |  |  |  | $\begin{array}{r} \hline \text { RCFDG621 } \\ 210,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDG622 } \\ 3,000 \end{array}$ | $\begin{array}{c\|} \hline \text { RCFDG623 } \\ 374,000 \end{array}$ | RCFDS524 |
| 18. Unused commitments:* |  |  |  |  |  |  |  |  |  |  |
| a. Original maturity of one year or less........................ | $\begin{array}{c\|} \hline \text { RCFDS525 } \\ 70,190,000 \end{array}$ | $\begin{aligned} & \hline \text { RCFDS526 } \\ & 14,038,000 \end{aligned}$ | $\begin{array}{c\|} \hline \text { RCFDS527 } \\ 401,000 \\ \hline \end{array}$ | $\begin{array}{c\|} \hline \text { RCFDHJ96 } \\ 230,000 \\ \hline \end{array}$ | RCFDHJ97 0 |  | $\begin{array}{r} \hline \text { RCFDS528 } \\ 1,656,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDS529 } \\ 1,300,000 \\ \hline \end{array}$ | $\begin{aligned} & \hline \text { RCFDS530 } \\ & 10,451,000 \end{aligned}$ | RCFDS531 |

[^48]| Dollar amounts in thousands | (Column A) <br> Face, <br> Notional, or <br> Other Amount | $\begin{gathered} \text { (Column B) } \\ \text { Credit } \\ \text { Equivalent } \\ \text { Amount } \end{gathered}$ | (Column C) Allocation by Risk-Weight Category 0\% | (Column D) Allocation by Risk-Weight Category 2\% | (Column E) Allocation by Risk-Weight Category 4\% | (Column F) Allocation by Risk-Weight Category 10\% | (Column G) Allocation by Risk-Weight Category 20\% | (Column H) Allocation by Risk-Weight Category 50\% | (Column I) Allocation by Risk-Weight Category 100\% | (Column J) <br> Allocation by <br> Risk-Weight <br> Category <br> $150 \%$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| b. Original maturity exceeding one yea | $\begin{gathered} \hline \text { RCFDG624 } \\ 405,856,000 \end{gathered}$ | $\begin{array}{c\|} \hline \text { RCFDG625 } \\ 202,928,000 \end{array}$ | $\begin{gathered} \hline \text { RCFDG626 } \\ 1,564,000 \end{gathered}$ | $\begin{array}{c\|} \hline \text { RCFDHJ98 } \\ 4,831,000 \end{array}$ | RCFDHJ99 0 |  | $\begin{aligned} & \hline \text { RCFDG627 } \\ & 26,236,000 \end{aligned}$ | $\begin{array}{r} \hline \text { RCFDG628 } \\ 6,004,000 \end{array}$ | $\begin{gathered} \hline \text { RCFDG629 } \\ 163,968,000 \end{gathered}$ | $\begin{array}{r\|} \hline \text { RCFDS539 } \\ 325,000 \end{array}$ |
| 19. Unconditionally cancelable commitments. | $\begin{array}{c\|} \hline \text { RCFDS540 } \\ 894,250,000 \end{array}$ | RCFDS541 ${ }_{0}$ |  |  |  |  |  |  |  |  |
| 20. Over-the-counter derivatives.. |  | $\begin{gathered} \hline \text { RCFDS542 } \\ 230,533,000 \end{gathered}$ | $\begin{array}{r\|} \hline \text { RCFDS543 } \\ 23,218,000 \end{array}$ | RCFDHK00 ${ }_{0}$ | RCFDHK01 0 | RCFDS544 0 | $\begin{gathered} \hline \text { RCFDS545 } \\ 52,926,000 \end{gathered}$ | $\begin{array}{r} \hline \text { RCFDS546 } \\ 4,122,000 \end{array}$ | $\begin{array}{c\|} \hline \text { RCFDS547 } \\ 148,705,000 \end{array}$ | $\begin{array}{c\|} \hline \text { RCFDS548 } \\ 1,562,000 \end{array}$ |
| 21. Centrally cleared derivatives.. |  | $\begin{array}{r} \hline \text { RCFDS549 } \\ 86,914,000 \end{array}$ | ${ }^{\text {RCFDS550 }} 0$ | $\begin{gathered} \hline \text { RCFDS551 } \\ 82,602,000 \end{gathered}$ | $\begin{array}{r\|} \hline \text { RCFDS552 } \\ 369,000 \end{array}$ |  | RCFDS554 0 | RCFDS555 | $\begin{array}{r} \hline \text { RCFDS556 } \\ 3,943,000 \end{array}$ | RCFDS557 |
| 22. Unsettled transactions (failed trades) ${ }^{22}$. | $\begin{array}{r} \hline \text { RCFDH191 } \\ 524,000 \end{array}$ |  | $\begin{array}{r} \hline \text { RCFDH193 } \\ 434,000 \end{array}$ |  |  |  | $\begin{array}{r} \hline \text { RCFDH194 } \\ 10,000 \end{array}$ | ${ }^{\text {RCFDH195 }}{ }_{0}$ | $\begin{array}{r} \text { RCFDH196 } \\ 46,000 \end{array}$ | RCFDH197 ${ }_{0}$ |

[^49]| Dollar amounts in thousands | (Column O) Allocation by Risk-Weight Category 625\% | (Column P) <br> Allocation by <br> Risk-Weight <br> Category 937.5\% | (Column Q) <br> Allocation by <br> Risk-Weight <br> Category 1,250\% | (Column R) Application of Other Risk-Weighting Approaches Credit Equivalent Amount | (Column S) Application of Other Risk-Weighting Approaches Risk-Weighted Asset Amount |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 16. Repo-style transactions ${ }^{24}$. |  |  |  | RCFDH301 | RCFDH302 |
| 17. All other off-balance sheet liabilities |  |  |  |  |  |
| 18. Unused commitments:* |  |  |  |  |  |
| a. Original maturity of one year or less... |  |  |  | RCFDH303 | RCFDH304 0 |
| b. Original maturity exceeding one year..................................... |  |  |  | RCFDH307 | RCFDH308 |
| 19. Unconditionally cancelable commitments |  |  |  |  |  |
| 20. Over-the-counter derivatives................................................... |  |  |  | RCFDH309 | RCFDH310 |
| 21. Centrally cleared derivatives |  |  |  |  |  |
| 22. Unsettled transactions (failed trades) ${ }^{25}$...................................... | RCFDH198 1,000 | RCFDH199 3,000 | $\begin{array}{r} \hline \text { RCFDH200 } \\ 30,000 \end{array}$ |  |  |

[^50]| Dollar amounts in thousands | (Column C) Allocation by Risk-Weight Category 0\% | (Column D) Allocation by Risk-Weight Category 2\% | (Column E) Allocation by Risk-Weight Category 4\% | (Column F) Allocation by Risk-Weight Category 10\% | (Column G) Allocation by Risk-Weight Category 20\% | (Column H) Allocation by Risk-Weight Category 50\% | (Column I) Allocation by Risk-Weight Category 100\% | (Column J) Allocation by Risk-Weight Category 150\% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 23. Total assets, derivatives, off-balance sheet items, and other items subject to risk weighting by risk-weight category (for each of columns C through P, sum of items 11 through 22; for column $Q$, sum of items 10 through 22). $\qquad$ | $\begin{aligned} & \text { RCFDG630 } \\ & 945,137,000 \end{aligned}$ | RCFDS558 $98,030,000$ | $\begin{array}{r} \text { RCFDS559 } \\ 8,821,000 \end{array}$ | RCFDS560 | $\begin{aligned} & \text { RCFDG631 } \\ & 284,265,000 \end{aligned}$ | $\begin{aligned} & \text { RCFDG632 } \\ & 342,615,000 \end{aligned}$ | $\begin{aligned} & \text { RCFDG633 } \\ & \mathbf{1 , 1 6 9 , 2 9 9 , 0 0 0} \end{aligned}$ | $\begin{aligned} & \text { RCFDS561 } \\ & 14,549,000 \end{aligned}$ |
| 24. Risk weight factor |  |  |  |  |  |  |  |  |
| 25. Risk-weighted assets by risk-weight category (for each column, item 23 multiplied by item 24). | RCFDG634 | $\begin{array}{r} \hline \text { RCFDS569 } \\ \mathbf{1 , 9 6 0 , 6 0 0} \end{array}$ | $\begin{array}{r} \text { RCFDS570 } \\ 352,840 \end{array}$ | RCFDS571 | $\begin{aligned} & \hline \text { RCFDG635 } \\ & 56,853,000 \end{aligned}$ | $\begin{aligned} & \hline \text { RCFDG636 } \\ & 171,307,500 \end{aligned}$ | $\begin{array}{c\|} \hline \text { RCFDG637 } \\ \mathbf{1 , 1 6 9 , 2 9 9 , 0 0 0} \end{array}$ | $\begin{array}{r} \text { RCFDS572 } \\ 21,823,500 \end{array}$ |


| Dollar amounts in thousands | (Column K) Allocation by Risk-Weight Category 250\% | (Column L) Allocation by Risk-Weight Category 300\% | (Column M) Allocation by Risk-Weight Category 400\% | (Column N) Allocation by Risk-Weight Category 600\% | (Column O) Allocation by Risk-Weight Category 625\% | (Column P) Allocation by Risk-Weight Category 937.5\% | (Column Q) Allocation by Risk-Weight Category 1,250\% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 23. Total assets, derivatives, off-balance sheet items, and other items subject to risk weighting by risk-weight category (for each of columns C through P, sum of items 11 through 22 ; for column $Q$, sum of items 10 through 22).. | $\begin{aligned} & \text { RCFDS562 } \\ & 15,029,000 \\ & \hline \end{aligned}$ | RCFDS563 | RCFDS564 | RCFDS565 2,000 | RCFDS566 1,000 | RCFDS567 3,000 | $\begin{array}{r}\text { RCFDS568 } \\ 138,000 \\ \hline\end{array}$ |
| 24. Risk weight factor |  |  |  |  |  |  |  |
| 25. Risk-weighted assets by risk-weight category (for each column, item 23 multiplied by item 24). | $\begin{aligned} & \text { RCFDS573 } \\ & 37,572,500 \end{aligned}$ | RCFDS574 | RCFDS575 | $\begin{array}{r} \text { RCFDS576 } \\ 12,000 \end{array}$ | $\begin{array}{r} \text { RCFDS577 } \\ 6,250 \end{array}$ | $\begin{array}{r} \text { RCFDS578 } \\ 28,125 \end{array}$ | $\begin{aligned} & \text { RCFDS579 } \\ & 1,725,000 \end{aligned}$ |

Dollar amounts in thousands

| 26. Risk-weighted assets base for purposes of calculating the allowance for loan and lease losses 1.25 percent threshold. | RCFDS580 | 1,515,955,000 | 26. |
| :---: | :---: | :---: | :---: |
| 27. Standardized market-risk weighted assets (applicable only to banks that are covered by the market risk capital rule) | RCFDS581 | 70,650,000 | 27. |
| 28. Risk-weighted assets before deductions for excess allowance of loan and lease losses and allocated risk transfer risk reserve ${ }^{27}$. | RCFDB704 | 1,586,283,315 | 28. |
| 29. LESS: Excess allowance for loan and lease losses | RCFDA222 | 1,616,000 | 29. |
| 30. LESS: Allocated transfer risk reserv | RCFD3128 | 76,000 | 30 |
| 31. Total risk-weighted assets (item 28 minus items 29 and 30) | RCFDG641 | 1,584,591,315 | 31. |
| 1. Current credit exposure across all derivative contracts covered by the regulatory capital rules.. | RCFDG642 | 70,037,000 | M. |



Dollar amounts in thousands
4. Amount of allowances for credit losses on purchased credit-deteriorated assets: ${ }^{1}$
a. Loans and leases held for investment.
b. Held-to-maturity debt securities.
c. Other financial assets measured at amortized cost.

|  |  | M.4. |
| :--- | ---: | :--- |
| RCFDJJ30 | $\mathbf{3 3 4 , 0 0 0}$ | M.4.a. |
| RCFDJJ31 | $\mathbf{0}$ | M.4.b. |
| RCFDJJ32 | $\mathbf{0}$ | M.4.c. |

[^51]
## Schedule RC-S - Servicing Securitization and Asset Sale Activities(Form Type - 031)

| Dollar amounts in thousands | (Column A) 1-4 Family Residential Loans | (Column B) Home Equity Lines | (Column C) Credit Card Receivables | (Column D) Auto Loans | (Column E) Other Consumer Loans | (Column F) Commercial and Industrial Loans | (Column G) All Other Loans, All Leases, and All Other Assets |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. Outstanding principal balance of assets sold and securitized by the reporting bank with servicing retained or with recourse or other seller-provided credit enhancements | $\begin{aligned} & \text { RCFDB705 } \\ & 32,177,000 \end{aligned}$ | RCFDB706 | RCFDB707 | RCFDB708 402,000 | RCFDB709 385,000 | RCFDB710 | RCFDB711 15,112,000 |
| 2. Maximum amount of credit exposure arising from recourse or other seller-provided credit enhancements provided to structures reported in item 1. $\qquad$ | RCFDHU09 249,000 | RCFDHU10 | RCFDHU11 | RCFDHU12 12,000 | RCFDHU13 | RCFDHU14 0 | $\begin{array}{r} \text { RCFDHU15 } \\ 1,830,000 \\ \hline \end{array}$ |
| Item 3 is to be completed by banks with $\$ 100$ billion or more in total assets. <br> 3. Reporting bank's unused commitments to provide liquidity to structures reported in item $1^{1}$. $\qquad$ | RCFDB726 | RCFDB727 | RCFDB728 | RCFDB729 | RCFDB730 | RCFDB731 | $\begin{array}{r}\text { RCFDB732 } \\ 5,000 \\ \hline\end{array}$ |
| 4. Past due loan amounts included in item |  |  |  |  |  |  |  |
| a. 30-89 days past due.. | $\begin{array}{r} \hline \text { RCFDB733 } \\ 296,000 \end{array}$ | RCFDB734 0 | RCFDB735 0 | $\begin{array}{r} \hline \text { RCFDB736 } \\ 3,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDB737 } \\ 17,000 \end{array}$ | RCFDB738 | $\begin{array}{r} \hline \text { RCFDB739 } \\ 411,000 \end{array}$ |
| b. 90 days or more past due. | $\begin{array}{r} \text { RCFDB740 } \\ 324,000 \end{array}$ | RCFDB741 | RCFDB742 | $\begin{array}{r} \hline \text { RCFDB743 } \\ 1,000 \end{array}$ | $\begin{array}{r} \text { RCFDB744 } \\ 17,000 \end{array}$ | RCFDB745 | RCFDB746 $\mathbf{2 2 2 , 0 0 0}$ |
| 5. Charge-offs and recoveries on assets sold and securitized with servicing retained or with recourse or other seller-provided credit enhancements (calendar year-to-date): |  |  |  |  |  |  |  |
| a. Charge-offs.. | $\begin{array}{r} \hline \text { RIADB747 } \\ 7,000 \end{array}$ | RIADB748 | RIADB749 | RIADB750 | RIADB751 | $\begin{array}{ll} \hline \text { RIADB752 } & 0 \\ \hline \end{array}$ | RIADB753 |
| b. Recoveries. | $\begin{array}{r} \hline \text { RIADB754 } \\ 1,000 \end{array}$ | RIADB755 | $\begin{array}{ll} \hline \text { RIADB756 } & 0 \\ \hline \end{array}$ | RIADB757 | RIADB758 | $\begin{array}{ll} \hline \text { RIADB759 } & 0 \\ & \end{array}$ | RIADB760 $\quad 0$ |
| Item 6 is to be completed by banks with $\$ 10$ billion or more in total assets. <br> 6. Total amount of ownership (or seller's) interest carried as securities or loans ${ }^{1}$ $\qquad$ |  | RCFDHU16 0 | RCFDHU17 0 |  |  | RCFDHU18 0 |  |
| 7. Not applicable |  |  |  |  |  |  |  |
| 8. Not applicable |  |  |  |  |  |  |  |
| 9. Maximum amount of credit exposure arising from credit enhancements provided by the reporting bank to other institutions' securitization structures in the form of standby letters of credit, purchased subordinated securities, and other enhancements. | $\begin{aligned} & \text { RCFDB776 } \\ & 4,288,000 \end{aligned}$ |  |  | RCFDB779 338,000 | $\begin{array}{r} \text { RCFDB780 } \\ 186,000 \end{array}$ | RCFDB781 $\mathbf{2 4 2 , 0 0 0}$ | $\begin{array}{r} \text { RCFDB782 } \\ 8,528,000 \\ \hline \end{array}$ |
| Item 10 is to be completed by banks with $\$ 10$ billion or more in total assets. 10. Reporting bank's unused commitments to provide liquidity to other institutions' securitization structures ${ }^{1}$ $\qquad$ | RCFDB783 101,000 |  |  | RCFDB786 | RCFDB787 | RCFDB788 0 | RCFDB789 |
| 11. Assets sold with recourse or other seller-provided credit enhancements and not securitized by the reporting bank. | $\begin{array}{r} \hline \text { RCFDB790 } \\ 129,000 \end{array}$ |  |  |  |  |  | $\begin{array}{r} \hline \text { RCFDB796 } \\ 504,000 \end{array}$ |
| 12. Maximum amount of credit exposure arising from recourse or other seller-provided credit enhancements provided to assets reported in item 11.... | $\begin{aligned} & \text { RCFDB797 } \\ & 128,000 \end{aligned}$ |  |  |  |  |  | $\begin{array}{r} \hline \text { RCFDB803 } \\ 140,000 \\ \hline \end{array}$ |

[^52]| Dollar amounts in thousand |  |  | M.1. |
| :---: | :---: | :---: | :---: |
| 1. Not applicable |  |  |  |
| 2. Outstanding principal balance of assets serviced for others (includes participations serviced for others): |  |  | M.2. |
| a. Closed-end 1-4 family residential mortgages serviced with recourse or other servicer-provided credit enhancements. | RCFDB804 | 3,489,000 | M.2.a. |
| b. Closed-end 1-4 family residential mortgages serviced with no recourse or other servicer-provided credit enhancements. | RCFDB805 | 572,447,000 | M.2.b. |
| c. Other financial assets (includes home equity lines) ${ }^{1}$ | RCFDA591 | 681,345,000 | M.2.c. |
| d. 1-4 family residential mortgages serviced for others that are in process of foreclosure at quarter-end (includes closed-end and open-end loans). | RCFDF699 | 752,000 | M.2.d. |
| Memorandum item 3 is to be completed by banks with $\$ 10$ billion or more in total assets. <br> 3. Asset-backed commercial paper conduits: ${ }^{2}$ |  |  | M.3. |
| a. Maximum amount of credit exposure arising from credit enhancements provided to conduit structures in the form of standby letters of credit, subordinated securities, and other enhancements: |  |  | M.3.a. |
| 1. Conduits sponsored by the bank, a bank affiliate, or the bank's holding company. | RCFDB806 | 2,200,000 | M.3.a.1. |
| 2. Conduits sponsored by other unrelated institutions... | RCFDB807 | 0 | M.3.a.2 |
| b. Unused commitments to provide liquidity to conduit structures: |  |  | M.3.b. |
| 1. Conduits sponsored by the bank, a bank affiliate, or the bank's holding company. | RCFDB808 | 35,321,000 | M.3.b.1. |
| 2. Conduits sponsored by other unrelated institutions.. | RCFDB809 | 0 | M.3.b.2 |
| 4. Outstanding credit card fees and finance charges included in Schedule RC-S, item 1, column ${ }^{2}$. | RCFDC407 | 0 | M.4. |

## Schedule RC-T - Fiduciary and Related Services(Form Type - 031)

Dollar amounts in thousands

1. Does the institution have fiduciary powers? (If "NO," do not complete Schedule RC-T.)...........................................
2. Does the institution exercise the fiduciary powers it has been granted?.
3. Does the institution have any fiduciary or related activity (in the form of assets or accounts) to report in this schedule?
(If "NO," do not complete the rest of Schedule RC-T.).

| RCFDA345 | Yes |
| :---: | :---: |
| RCFDA346 | Yes |
| RCFDB867 | Yes |



[^53]| 14. Personal trust and agency accounts. | RIADB904 | 68,000 | 14. |
| :---: | :---: | :---: | :---: |
| 15. Employee benefit and retirement-related trust and agency accounts: |  |  | 15. |
| a. Employee benefit - defined contribution | RIADB905 | 38,000 | 15.a |
| b. Employee benefit - defined benefit. | RIADB906 | 51,000 | 15.b |
| c. Other employee benefit and retirement-related accounts.. | RIADB907 | 12,000 | 15.c. |
| 16. Corporate trust and agency accounts. | RIADA479 | 14,000 | 16. |
| 17. Investment management and investment advisory agency accounts | RIADJ315 | 380,000 | 17. |
| 18. Foundation and endowment trust and agency accounts.. | RIADJ316 | 42,000 | 18. |
| 19. Other fiduciary accounts.. | RIADA480 | 2,000 | 19. |
| 20. Custody and safekeeping accounts. | RIADB909 | 457,000 | 20. |
| 21. Other fiduciary and related services income. | RIADB910 | 20,000 | 21. |
| 22. Total gross fiduciary and related services income (sum of items 14 through 21) (must equal Schedule RI, item 5.a) | RIAD4070 | 1,084,000 | 22. |
| a. Fiduciary and related services income - foreign offices (included in item 22).. | RIADB912 | 414,000 | 22.a |
| 23. Less: Expenses.. | RIADC058 | NR | 23. |
| 24. Less: Net losses from fiduciary and related services.... | RIADA488 | NR | 24. |
| 25. Plus: Intracompany income credits for fiduciary and related services.. | RIADB911 | NR | 25. |
| 26. Net fiduciary and related services income.. | RIADA491 | NR | 26. |


| Dollar amounts in thousands | (Column A) Personal Trust <br> and Agency and <br> Investment Management <br> Agency Accounts |  | (Column B) Employee Benefit and Retirement-Related Trust and Agency Accounts |  | (Column C) All Other Accounts |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. Managed assets held in fiduciary accounts: |  |  |  |  |  |  |
| a. Noninterest-bearing deposits | RCFDJ263 | NR | RCFDJ264 | NR | RCFDJ265 | NR |
| b. Interest-bearing deposits. | RCFDJ266 | NR | RCFDJ267 | NR | RCFDJ268 | NR |
| c. U.S. Treasury and U.S. Government agency obligations..................... | RCFDJ269 | NR | RCFDJ270 | NR | RCFDJ271 | NR |
| d. State, county, and municipal obligations | RCFDJ272 | NR | RCFDJ273 | NR | RCFDJ274 | NR |
| e. Money market mutual funds....... | RCFDJ275 | NR | RCFDJ276 | NR | RCFDJ277 | NR |
| f. Equity mutual funds. | RCFDJ278 | NR | RCFDJ279 | NR | RCFDJ280 | NR |
| g. Other mutual funds. | RCFDJ281 | NR | RCFDJ282 | NR | RCFDJ283 | NR |
| h. Common trust funds and collective investment funds. | RCFDJ284 | NR | RCFDJ285 | NR | RCFDJ286 | NR |
| i. Other short-term obligations. | RCFDJ287 | NR | RCFDJ288 | NR | RCFDJ289 | NR |
| j. Other notes and bonds. | RCFDJ290 | NR | RCFDJ291 | NR | RCFDJ292 | NR |
| k. Investments in unregistered funds and private equity investments....... | RCFDJ293 | NR | RCFDJ294 | NR | RCFDJ295 | NR |
| l. Other common and preferred stocks. | RCFDJ296 | NR | RCFDJ297 | NR | RCFDJ298 | NR |
| m . Real estate mortgages... | RCFDJ299 | NR | RCFDJ300 | NR | RCFDJ301 | NR |
| n. Real estate..... | RCFDJ302 | NR | RCFDJ303 | NR | RCFDJ304 | NR |
| o. Miscellaneous assets.. | RCFDJ305 | NR | RCFDJ306 | NR | RCFDJ307 | NR |
| p. Total managed assets held in fiduciary accounts (for each column, sum of Memorandum items 1.a through 1.0). | RCFDJ308 | NR | RCFDJ309 | NR | RCFDJ310 | NR |


| Dollar amounts in thousands | (Column A) Managed Assets |  | (Column B) Number of Managed Accounts |  |
| :---: | :---: | :---: | :---: | :---: |
| q. Investments of managed fiduciary accounts in advised or sponsored mutual funds............ | RCFDJ311 | NR | RCFDJ312 | NR |


| Dollar amounts in thousands | (Column A) Number of Issues |  | (Column B) Principal Amount Outstanding |  |
| :---: | :---: | :---: | :---: | :---: |
| 2. Corporate trust and agency accounts: |  |  |  |  |
| a. Corporate and municipal trusteeships..... | RCFDB927 | NR | RCFDB928 | NR |
| 1. Issues reported in Memorandum item 2.a that are in default... | RCFDJ313 | NR | RCFDJ314 | NR |
| b. Transfer agent, registrar, paying agent, and other corporate agency... | RCFDB929 | NR |  |  |


| Dollar amounts in thousands | (Column A) Number of Funds |  | (Column B) Market Value of Fund Assets |  |
| :---: | :---: | :---: | :---: | :---: |
| Memoranda items 3.a through $3 . g$ are to be completed by banks with collective investment funds and common trust funds with a total market value of $\$ 1$ billion or more as of the preceding December 31. <br> 3. Collective investment funds and common trust funds: |  |  |  |  |
| a. Domestic equity.. | RCFDB931 | 16 | RCFDB932 | 33,950,000 |
| b. International/Global equity... | RCFDB933 | 14 | RCFDB934 | 21,098,000 |
| c. Stock/Bond blend.. | RCFDB935 | 49 | RCFDB936 | 55,866,000 |
| d. Taxable bond.. | RCFDB937 | 23 | RCFDB938 | 28,666,000 |
| e. Municipal bond. | RCFDB939 | 0 | RCFDB940 | 0 |
| f. Short term investments/Money market... | RCFDB941 | 1 | RCFDB942 | 9,160,000 |
| g. Specialty/Other.................................................................................................. | RCFDB943 | 6 | RCFDB944 | 38,563,000 |
| h. Total collective investment funds (sum of Memorandum items 3.a through 3.g)........... | RCFDB945 | 109 | RCFDB946 | 187,303,000 |


| Dollar amounts in thousands | (Column A) Gross Losses Managed Accounts |  | (Column B) Gross Losses Non-Managed Accounts |  | (Column C) Recoveries |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4. Fiduciary settlements, surcharges, and other losses: |  |  |  |  |  |  |
| a. Personal trust and agency accounts........ | RIADB947 | NR | RIADB948 | NR | RIADB949 | NR |
| b. Employee benefit and retirement-related trust and agency accounts..... | RIADB950 | NR | RIADB951 | NR | RIADB952 | NR |
| c. Investment management agency accounts...................... | RIADB953 | NR | RIADB954 | NR | RIADB955 | NR |
| d. Other fiduciary accounts and related services... | RIADB956 | NR | RIADB957 | NR | RIADB958 | NR |
| e. Total fiduciary settlements, surcharges, and other losses (sum of Memorandum items 4.a through 4.d) (sum of columns A and B minus column C must equal Schedule RC-T, item 24). | RIADB959 | NR | RIADB960 | NR | RIADB961 | NR |

## Schedule RC-V - Variable Interest Entities(Form Type - 031)



Dollar amounts in thousands

| 5. Total assets of asset-backed commercial paper (ABCP) conduit VIEs. | RCFDJF77 | 22,563,000 |
| :---: | :---: | :---: |
| 6. Total liabilities of ABCP conduit VIEs. | RCFDJF78 | 12,215,000 |

## Optional Narrative Statement Concerning the Amounts Reported in the Consolidated Reports of Condition and Income(Form Type - 031)

| Dollar amounts in thousands |  |  |  |
| :---: | :---: | :---: | :---: |
| 1. Comments?... | .... | RCON6979 | No |
| 2. Bank Management Statement. |  | TEXT6980 | NR |

# Consolidated Reports of Condition and Income for A Bank With Domestic and Foreign Offices - FFIEC 031 

Institution Name
City
State
Zip Code
Call Report Report Date
Report Type
RSSD-ID
FDIC Certificate Number
OCC Charter Number
ABA Routing Number
Last updated on

JPMORGAN CHASE BANK, NATIONAL ASSOCIATION COLUMBUS
OH
43240
6/30/2023
031
852218
628
8
21000021
8/3/2023


# Consolidated Reports of Condition and Income for A Bank With Domestic and Foreign Offices - FFIEC 031 

## Report at the close of business June 30, 2023

This report is required by law: 12 U.S.C. §324 (State member banks); 12 U.S.C. §1817 (State non member banks); 12 U.S.C. §161 (National banks); and 12 U.S.C. §1464 (Savings associations).

NOTE: Each bank's board of directors and senior management are responsible for establishing and maintaining an effective system of internal control, including controls over the Reports of Condition and Income. The Reports of Condition and Income are to be prepared in accordance with federal regulatory authority instructions. The Reports of Condition and Income must be signed by the Chief Financial Officer (CFO) of the reporting bank (or by the individual performing an equivalent function) and attested to by not less than two directors (trustees) for state non member banks and three directors for state member banks, national banks, and savings associations.

I, the undersigned CFO (or equivalent) of the named bank, attest that the Reports of Condition and Income (including the supporting

Signature of Chief Financial Officer (or Equivalent)

Date of Signature

## (20230630) <br> (RCON 9999)

Unless the context indicates otherwise, the term "bank" in this report form refers to both banks and savings associations.
schedules) for this report date have been prepared in conformance with the instructions issued by the appropriate Federal regulatory authority and are true and correct to the best of my knowledge and belief.

We, the undersigned directors (trustees), attest to the correctness of the Reports of Condition and Income (including the supporting schedules) for this report date and declare that the Reports of Condition and Income have been examined by us and to the best of our knowledge and belief have been prepared in conformance with the instructions issued by the appropriate Federal regulatory authority and are true and correct.

## $\overline{\text { Director (Trustee) }}$

Director (Trustee)

Director (Trustee)

## FDIC Certificate Number 628 (RSSD 9050)

To fulfill the signature and attestation requirement for the Reports of Condition and Income for this report date, attach your bank's completed signature page (or a photocopy or a computer generated version of this page) to the hard-copy record of the data file submitted to the CDR that your bank must place in its files.
The appearance of your bank's hard-copy record of the submitted data file need not match exactly the appearance of the FFIEC's sample report forms, but should show at least the caption of each Call Report item and the reported amount.

## JPMORGAN CHASE BANK, NATIONAL ASSOCIATION

Legal Title of Bank (RSSD 9017)

## COLUMBUS

City (RSSD 9130)
OH
State Abbreviation (RSSD 9200)
Zip Code (RSSD 9220)

[^54]
## Consolidated Reports of Condition and Income for A Bank With Domestic and Foreign Offices - FFIEC 031

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For information or assistance, national banks, state nonmember banks, and savings associations should contact the FDIC's DataCollection and Analysis Section, 550 17th Street, NW, Washington, DC 20429, toll free on (800) 688-FDIC(3342), Monday throughFriday between 8:00 a.m. and 5:00 p.m., Eastern Time. State member banks should contact their Federal Reserve District Bank.

Schedule RC-Q - Assets and Liabilities Measured
at Fair Value on a Recurring Basis(Form Type

- 031)................................................................ 5

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Optional Narrative Statement Concerning the
Amounts Reported in the Consolidated Reports of Condition and Income(Form Type - 031)......... 77

## Contact Information for the Reports of Condition and Income

To facilitate communication between the Agencies and the bank concerning the Reports of Condition and Income, please provide contact information for (1) the Chief Financial Officer (or equivalent) of the bank signing the reports for this quarter, and (2) the person at the bank-other than the Chief Financial Officer (or equivalent)-to whom questions about the reports should be directed. If the Chief Financial Officer (or equivalent) is the primary contact for questions about the reports, please provide contact information for another person at the bank who will serve as a secondary contact for communications between the Agencies and the bank concerning the Reports of Condition and Income. Enter "none" for the contact's e-mail address or fax number if not available. Contact information for the Reports of Condition and Income is for the confidential use of the Agencies and will not be released to the public.

## Chief Financial Officer (or Equivalent) Signing the Reports

| CONF |
| :--- |
| Name (TEXT C490) |
| CONF |
| Title (TEXT C491) |
| CONF |
| E-mail Address (TEXT C492) |
| CONF |
| Area Code / Phone Number / Extension (TEXT C493) |
| CONF |
| Area Code / FAX Number (TEXT C494) |

Other Person to Whom Questions about the Reports Should be Directed

| CONF |
| :--- |
| Name (TEXT C495) |
| CONF |
| Title (TEXT C496) |
| CONF |
| E-mail Address (TEXT 4086) |
| CONF |
| Area Code / Phone Number / Extension (TEXT 8902) |
| CONF |
| Area Code / FAX Number (TEXT 9116) |

## Emergency Contact Information

This information is being requested so the Agencies can distribute critical, time-sensitive information to emergency contacts at banks. Please provide primary contact information for a senior official of the bank who has decision-making authority. Also provide information for a secondary contact if available. Enter "none" for the contact's e-mail address or fax number if not available. Emergency contact information is for the confidential use of the Agencies and will not be released to the public.

## Primary Contact

| CONF |
| :--- |
| Name (TEXT C366) |
| CONF |
| Title (TEXT C367) |
| CONF |
| E-mail Address (TEXT C368) |
| $\frac{\text { CONF }}{\text { Area Code / Phone Number / Extension (TEXT C369) }}$ |
| $\frac{\text { CONF }}{\text { Area Code / FAX Number (TEXT C370) }}$ |

Secondary Contact

| CONF |
| :--- |
| Name (TEXT C371) |
| CONF |
| Title (TEXT C372) |
| CONF |
| E-mail Address (TEXT C373) |
| CONF |
| Area Code / Phone Number / Extension (TEXT C374) |
| $\frac{\text { CONF }}{\text { Area Code / FAX Number (TEXT C375) }}$ |

## USA PATRIOT Act Section 314(a) Anti-Money Laundering Contact Information

This information is being requested to identify points-of-contact who are in charge of your bank's USA PATRIOT Act Section 314(a) information requests. Bank personnel listed could be contacted by law enforcement officers or the Financial Crimes Enforcement Network (FinCEN) for additional information related to specific Section 314(a) search requests or other anti-terrorist financing and anti- money laundering matters. Communications sent by FinCEN to the bank for purposes other than Section 314(a) notifications will state the intended purpose and should be directed to the appropriate bank personnel for review. Any disclosure of customer records to law enforcement officers or FinCEN must be done in compliance with applicable law, including the Right to Financial Privacy Act (12 U.S.C. 3401 et seq.).

Please provide information for a primary and secondary contact. Information for a third and fourth contact may be provided at the bank's option. Enter "none" for the contact's e-mail address if not available. This contact information is for the confidential use of the Agencies, FinCEN, and law enforcement officers and will not be released to the public.

## Primary Contact

| CONF |
| :--- |
| Name (TEXT C437) |
| CONF |
| Title (TEXT C438) |
| CONF |
| E-mail Address (TEXT C439) |
| CONF |
| Area Code / Phone Number / Extension (TEXT C440) |

## Secondary Contact

| CONF |
| :--- |
| Name (TEXT C442) |
| CONF |
| Title (TEXT C443) |
| CONF |
| $\frac{\text { E-mail Address (TEXT C444) }}{\text { CONF }}$ |
| $\frac{\text { Area Code / Phone Number / Extension (TEXT 8902) }}{}$ |

Third Contact

| CONF |
| :--- |
| Name (TEXT C870) |
| CONF |
| Title (TEXT C871) |
| CONF |
| E-mail Address (TEXT C368) |
| CONF |
| Area Code / Phone Number / Extension (TEXT C873) |

## Fourth Contact

| CONF |
| :--- |
| Name (TEXT C875) |
| CONF |
| Title (TEXT C876) |
| CONF |
| E-mail Address (TEXT C877) |
| CONF |
| Area Code / Phone Number / Extension (TEXT C878) |

## Bank Demographic Information(Form Type - 031)

| Dollar amounts in thousands |  |  |
| :---: | :---: | :---: |
| 1. Reporting date. | RCON9999 | 20230630 |
| 2. FDIC certificate number. | RSSD9050 | 628 |
| 3. Legal title of bank..................................................................................................................................... | RSSD9017 | Click here for value |
| 4. City... | RSSD9130 | Columbus |
| 5. State abbreviation.. | RSSD9200 | OH |
| 6. Zip code.................................................................................................................................................. | RSSD9220 | 43240 |
| 7. Legal Entity Identifier (LEI) (Report only if your institution already has an LEI.).................................................. | RCON9224 | Click here for value |

(RCON9224) 7H6GLXDRUGQFU57RNE97
(RSSD9017) JPMorgan Chase Bank National Association
Contact Information(Form Type - 031)

| Dollar amounts in thousands |  |  | 1. |
| :---: | :---: | :---: | :---: |
| 1. Contact Information for the Reports of Condition and Income |  |  |  |
| a. Chief Financial Officer (or Equivalent) Signing the Reports |  |  | 1.a. |
| 1. Name.... | TEXTC490 | CONF | 1.a.1. |
| 2. Title...................................................................................................................................... | TEXTC491 | CONF | 1.a.2. |
| 3. E-mail Address............................................................................................................................ | TEXTC492 | CONF | 1.a.3. |
| 4. Telephone.... | TEXTC493 | CONF | 1.a.4. |
| 5. FAX........................................................................................................................................... | TEXTC494 | CONF | 1.a.5. |
| b. Other Person to Whom Questions about the Reports Should be Directed |  |  | 1.b. |
| 1. Name...................................................................................................................................... | TEXTC495 | CONF | 1.b.1. |
| 2. Title | TEXTC496 | CONF | 1.b.2. |
| 3. E-mail Address.. | TEXT4086 | CONF | 1.b.3. |
| 4. Telephone................................................................................................................................ | TEXT8902 | CONF | 1.b.4. |
| 5. FAX....................................................................................................................................... | TEXT9116 | CONF | 1.b.5. |
| 2. Person to whom questions about Schedule RC-T - Fiduciary and Related Services should be directed |  |  | 2. |
| a. Name and Title.. | TEXTB962 | CONF | 2.a. |
| b. E-mail Address....... | TEXTB926 | CONF | 2.b. |
| c. Telephone............ | TEXTB963 | CONF | 2.c. |
| d. FAX.................................................................................................................................................. | TEXTB964 | CONF | 2.d. |
| 3. Emergency Contact Information |  |  | 3. |
| a. Primary Contact |  |  | 3.a. |
| 1. Name................................................................................................................................... | TEXTC366 | CONF | 3.a.1. |
| 2. Title... | TEXTC367 | CONF | 3.a.2. |
| 3. E-mail Address.. | TEXTC368 | CONF | 3.a.3. |
| 4. Telephone................................................................................................................................ | TEXTC369 | CONF | 3.a.4. |
| 5. FAX........................................................................................................................................... | TEXTC370 | CONF | 3.a.5. |
| b. Secondary Contact |  |  | 3.b. |
| 1. Name.......................................................................................................................................... | TEXTC371 | CONF | 3.b.1. |
| 2. Title........................................................................................................................................ | TEXTC372 | CONF | 3.b.2. |
| 3. E-mail Address......................................................................................................................... | TEXTC373 | CONF | 3.b.3. |
| 4. Telephone.................................................................................................................................... | TEXTC374 | CONF | 3.b.4. |
| 5. FAX........................................................................................................................................ | TEXTC375 | CONF | 3.b.5. |
| 4. USA PATRIOT Act Section 314(a) Anti-Money Laundering Contact Information |  |  | 4. |
| a. Primary Contact |  |  | 4.a. |


| Dollar amounts in thousands |  |  | 4.a.1. |
| :---: | :---: | :---: | :---: |
| 1. Name. | TEXTC437 | CONF |  |
| 2. Title.. | TEXTC438 | CONF | 4.a.2. |
| 3. E-mail Address... | TEXTC439 | CONF | 4.a.3. |
| 4. Telephone... | TEXTC440 | CONF | 4.a.4. |
| b. Secondary Contact |  |  | 4.b. |
| 1. Name.. | TEXTC442 | CONF | 4.b.1. |
| 2. Title.. | TEXTC443 | CONF | 4.b.2. |
| 3. E-mail Address.. | TEXTC444 | CONF | 4.b.3. |
| 4. Telephone.. | TEXTC445 | CONF | 4.b.4. |
| c. Third Contact |  |  | 4.c. |
| 1. Name... | TEXTC870 | CONF | 4.c.1. |
| 2. Title.. | TEXTC871 | CONF | 4.c.2. |
| 3. E-mail Address. | TEXTC872 | CONF | 4.c.3. |
| 4. Telephone. | TEXTC873 | CONF | 4.c.4. |
| d. Fourth Contact |  |  | 4.d. |
| 1. Name. | TEXTC875 | CONF | 4.d.1. |
| 2. Title... | TEXTC876 | CONF | 4.d.2. |
| 3. E-mail Address. | TEXTC877 | CONF | 4.d.3. |
| 4. Telephone... | TEXTC878 | CONF | 4.d.4. |
| 5. Chief Executive Officer Contact Information |  |  | 5. |
| a. Chief Executive Officer |  |  | 5.a. |
| 1. Name... | TEXTFT42 | CONF | 5.a.1. |
| 2. E-mail Address.. | TEXTFT44 | CONF | 5.a.2. |
| 3. Telephone........ | TEXTFT43 | CONF | 5.a.3. |
| 4. FAX...... | TEXTFT45 | CONF | 5.a.4. |

## Schedule RI - Income Statement(Form Type - 031)

All Report of Income schedules are to be reported on a calendar year-to-date basis in thousands of dollars.
Dollar amounts in thousands

| 1. Interest incom |  |  | $\begin{aligned} & \text { 1. } \\ & \text { 1.a. } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| a. Interest and fee income on loans: |  |  |  |
| 1. In domestic offices: |  |  | 1.a.1. |
| a. Loans secured by real estate: |  |  | 1.a.1.a. |
| 1. Loans secured by 1-4 family residential properties.............................................................. | RIAD4435 | 5,482,000 | 1.a.1.a.1. |
| 2. All other loans secured by real estate................................................................................ | RIAD4436 | 3,470,000 | 1.a.1.a.2. |
| b. Loans to finance agricultural production and other loans to farmers............................................. | RIAD4024 | 26,000 | 1.a.1.b. |
| c. Commercial and industrial loans.............................................................................................. | RIAD4012 | 5,278,000 | 1.a.1.c. |
| d. Loans to individuals for household, family, and other personal expenditures: |  |  | 1.a.1.d. |
| 1. Credit cards. | RIADB485 | 11,392,000 | 1.a.1.d.1. |
| 2. Other (includes revolving credit plans other than credit cards, automobile loans, and other consumer loans) | RIADB486 | 1,925,000 | 1.a.1.d.2. |
| e. Loans to foreign governments and official institutions. | RIAD4056 | 1,000 | 1.a.1.e. |
| f. All other loans in domestic offices. | RIADB487 | 7,162,000 | 1.a.1.f. |
| 2. In foreign offices, Edge and Agreement subsidiaries, and IBFs.. | RIAD4059 | 3,627,000 | 1.a.2. |
| 3. Total interest and fee income on loans (sum of items 1.a.(1)(a) through 1.a.(2))...................................... | RIAD4010 | 38,363,000 | 1.a.3. |
| b. Income from lease financing receivables................................................................................................. | RIAD4065 | 2,000 | 1.b. |
| c. Interest income on balances due from depository institutions ${ }^{1}$.. | RIAD4115 | 10,501,000 | 1.c. |
| d. Interest and dividend income on securities: |  |  | 1.d. |
| 1. U.S. Treasury securities and U.S. Government agency obligations (excluding mortgage-backed securities). | RIADB488 | 2,251,000 | 1.d.1. |
| 2. Mortgage-backed securities. | RIADB489 | 3,516,000 | 1.d.2. |
| 3. All other securities (includes securities issued by states and political subdivisions in the U.S.)................. | RIAD4060 | 2,982,000 | 1.d.3. |
| e. Interest income from trading assets.. | RIAD4069 | 3,618,000 | 1.e. |
| f. Interest income on federal funds sold and securities purchased under agreements to resell. | RIAD4020 | 6,752,000 | 1.f. |
| g. Other interest income | RIAD4518 | 1,706,000 | 1.g. |
| h. Total interest income (sum of items 1.a.(3) through 1.g). | RIAD4107 | 69,691,000 | 1.h. |
| 2. Interest expense: |  |  | 2. |
| a. Interest on deposits: |  |  | 2.a. |
| 1. Interest on deposits in domestic offices: |  |  | 2.a.1. |
| a. Transaction accounts (interest-bearing demand deposits, NOW accounts, ATS accounts, and telephone and preauthorized transfer accounts). | RIAD4508 | 5,269,000 | 2.a.1.a. |
| b. Nontransaction accounts: |  |  | 2.a.1.b. |
| 1. Savings deposits (includes MMDAs). | RIAD0093 | 4,301,000 | 2.a.1.b.1. |
| 2. Time deposits of \$250,000 or less... | RIADHK03 | 526,000 | 2.a.1.b.2. |
| 3. Time deposits of more than \$250,000.. | RIADHK04 | 2,703,000 | 2.a.1.b.3. |
| 2. Interest on deposits in foreign offices, Edge and Agreement subsidiaries, and IBFs............................... | RIAD4172 | 5,988,000 | 2.a.2. |
| b. Expense of federal funds purchased and securities sold under agreements to repurchase.. | RIAD4180 | 2,221,000 | 2.b. |
| c. Interest on trading liabilities and other borrowed money.............................................. | RIAD4185 | 3,830,000 | 2.c. |
| d. Interest on subordinated notes and debentures.. | RIAD4200 | 7,000 | 2.d. |
| e. Total interest expense (sum of items 2.a through 2.d)......... | RIAD4073 | 24,845,000 | 2.e. |
| 3. Net interest income (item 1.h minus 2.e)....................................................................................................... | RIAD4074 | 44,846,000 | 3. |
| 4. Provision for loan and lease losses ${ }^{1}$. | RIADJJ33 | 5,103,000 | 4. |
| 5. Noninterest income: |  |  | 5. |
| a. Income from fiduciary activities ${ }^{2}$........................................................................................................ | RIAD4070 | 2,200,000 | 5.a. |
| b. Service charges on deposit accounts in domestic offices.......................................................................... | RIAD4080 | 2,293,000 | 5.b. |

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# JPMORGAN CHASE BANK, NATIONAL ASSOCIATION 

Dollar amounts in thousands

| c. Trading revenue ${ }^{3}$. | RIADA220 | 15,207,000 | 5.c. |
| :---: | :---: | :---: | :---: |
| d. Income from securities-related and insurance activities: |  |  | 5.d. |
| 1. Fees and commissions from securities brokerage. | RIADC886 | 802,000 | 5.d. 1 |
| 2. Investment banking, advisory, and underwriting fees and commissions. | RIADC888 | 848,000 | 5.d. 2 |
| 3. Fees and commissions from annuity sales.. | RIADC887 | 1,000 | 5.d.3 |
| 4. Underwriting income from insurance and reinsurance activities. | RIADC386 | 0 | 5.d. 4 |
| 5. Income from other insurance activities. | RIADC387 | 4,000 | 5.d.5 |
| e. Venture capital revenue.. | RIADB491 | 0 | 5.e. |
| f. Net servicing fees. | RIADB492 | 570,000 | 5.f. |
| g. Net securitization income. | RIADB493 | 0 | 5.g. |
| h. Not applicable |  |  | 5.h. |
| i. Net gains (losses) on sales of loans and leases. | RIAD5416 | 37,000 | 5.i. |
| j. Net gains (losses) on sales of other real estate owned. | RIAD5415 | 0 | 5.j. |
| k. Net gains (losses) on sales of other assets ${ }^{4}$. | RIADB496 | 39,000 | 5.k. |
| I. Other noninterest income*. | RIADB497 | 9,268,000 | 5.1. |
| m . Total noninterest income (sum of items 5.a through 5.l) | RIAD4079 | 31,269,000 | 5.m. |
| 6. Not available |  |  | 6. |
| a. Realized gains (losses) on held-to-maturity securities............................................................................ | RIAD3521 | 0 | 6.a. |
| b. Realized gains (losses) on available-for-sale debt securities | RIAD3196 | -1,768,000 | 6.b. |
| 7. Noninterest expense: |  |  | 7. |
| a. Salaries and employee benefits.. | RIAD4135 | 18,660,000 | 7.a. |
| b. Expenses of premises and fixed assets (net of rental income) (excluding salaries and employee benefits and mortgage interest) | RIAD4217 | 2,975,000 | 7.b. |
| c. Not available |  |  | 7.c. |
| 1. Goodwill impairment losses. | RIADC216 | 0 | 7.c. 1 |
| 2. Amortization expense and impairment losses for other intangible assets. | RIADC232 | 61,000 | 7.c. 2 |
| d. Other noninterest expense* | RIAD4092 | 15,375,000 | 7.d. |
| e. Total noninterest expense (sum of items 7.a through 7.d). | RIAD4093 | 37,071,000 | 7.e. |
| 8. Not available |  |  | 8. |
| a. Income (loss) before change in net unrealized holding gains (losses) on equity securities not held for trading, applicable income taxes, and discontinued operations (item 3 plus or minus items 4, 5.m, 6.a, 6.b, and 7.e)........ | RIADHT69 | 32,173,000 | 8.a. |
| b. Change in net unrealized holding gains (losses) on equity securities not held for trading ${ }^{5}$. | RIADHT70 | 7,000 | 8.b. |
| c. Income (loss) before applicable income taxes and discontinued operations (sum of items 8.a and 8.b)............ | RIAD4301 | 32,180,000 | 8.c. |
| 9. Applicable income taxes (on item 8.c) | RIAD4302 | 6,468,000 | 9. |
| 0. Income (loss) before discontinued operations (item 8.c minus item 9)............................................................ | RIAD4300 | 25,712,000 | 10. |
| 1. Discontinued operations, net of applicable income taxes (Describe on Schedule RI-E - Explanations)* ................ | RIADFT28 | 0 | 11. |
| 2. Net income (loss) attributable to bank and noncontrolling (minority) interests (sum of items 10 and 11)............... | RIADG104 | 25,712,000 | 12. |
| 3. LESS: Net income (loss) attributable to noncontrolling (minority) interests (if net income, report as a positive value; net loss, report as a negative value). | RIADG103 | -1,000 | 13. |
| 4. Net income (loss) attributable to bank (item 12 minus item 13).. | RIAD4340 | 25,713,000 | 14. |
| Interest expense incurred to carry tax-exempt securities, loans, and leases acquired after August 7, 1986, that is not deductible for federal income tax purposes. | RIAD4513 | 282,000 | M.1. |
| Memorandum item 2 is to be completed by banks with $\$ 1$ billion or more in total assets <br> Income from the sale and servicing of mutual funds and annuities in domestic offices (included in Schedule RI, item $\qquad$ <br> ). | RIAD8431 | 35,000 | M.2. |
| Income on tax-exempt loans and leases to states and political subdivisions in the U.S. (included in Schedule RI, tems 1.a and 1.b). | RIAD4313 | 364,000 | M.3. |
| 4. Income on tax-exempt securities issued by states and political subdivisions in the U.S. (included in Schedule RI, tem 1.d.(3)) | RIAD4507 | 590,000 | M.4. |
| 5. Number of full-time equivalent employees at end of current period (round to nearest whole number) | RIAD4150 | 219830 | M.5. |
| Not applicable |  |  | M.6. |

[^56]Dollar amounts in thousands
7. If the reporting institution has applied pushdown accounting this calendar year, report the date of the institution's acquisition (see instructions) ${ }^{2}$
8. Trading revenue (from cash instruments and derivative instruments) (sum of Memorandum items 8.a through 8.e must equal Schedule RI, item 5.c):

Memorandum items 8.a through 8.e are to be completed by banks that reported average trading assets (Schedule RC-K, item 7) of $\$ 2$ million or more for any quarter of the preceding calendar year.
a. Interest rate exposures.
...........
b. Foreign exchange exposures.............
c. Equity security and index exposures.
d. Commodity and other exposures.
e. Credit exposures.

Memorandum items 8.f through 8.h are to be completed by banks with $\$ 100$ billion or more in total assets that are required to complete Schedule RI, Memorandum items 8.a through 8.e, above.
f. Impact on trading revenue of changes in the creditworthiness of the bank's derivatives counterparties on the bank's derivative assets (year-to-date changes) (included in Memorandum items 8.a through 8.e above):

1. Gross credit valuation adjustment (CVA).
2. CVA hedge
g. Impact on trading revenue of changes in the creditworthiness of the bank on the bank's derivative liabilities (year-to-date changes) (included in Memorandum items 8.a through 8.e above):
3. Gross debit valuation adjustment (DVA).
4. DVA hedge.
h. Gross trading revenue, before including positive or negative net CVA and net DVA
5. Net gains (losses) recognized in earnings on credit derivatives that economically hedge credit exposures held outside the trading account:
a. Net gains (losses) on credit derivatives held for trading.
b. Net gains (losses) on credit derivatives held for purposes other than trading.
6. Credit losses on derivatives (see instructions).
7. Does the reporting bank have a Subchapter $S$ election in effect for federal income tax purposes for the current tax year?.
Memorandum item 12 is to be completed by banks that are required to complete Schedule RC-C, Part I, Memorandum items 8.b and 8.c and is to be completed semiannually in the June and December reports only.
8. Noncash income from negative amortization on closed-end loans secured by 1-4 family residential properties (included in Schedule RI, item 1.a.(1)(a)(1)).
Memorandum item 13 is to be completed by banks that have elected to account for assets and liabilities under a fair value option. 13. Net gains (losses) recognized in earnings on assets and liabilities that are reported at fair value under a fair value option:
a. Net gains (losses) on assets.
9. Estimated net gains (losses) on loans attributable to changes in instrument-specific credit risk.
b. Net gains (losses) on liabilities
10. Estimated net gains (losses) on liabilities attributable to changes in instrument-specific credit risk
11. Other-than-temporary impairment losses on held-to-maturity and available-for-sale debt securities ${ }^{2}$.

Memorandum item 15 is to be completed by institutions with $\$ 1$ billion or more in total assets that answered "Yes" to Schedule RC-E, Part I, Memorandum item 5.
15. Components of service charges on deposit accounts in domestic offices (sum of Memorandum items 15.a through 15.d must equal Schedule RI, item 5.b):
a. Consumer overdraft-related service charges levied on those transaction account and nontransaction savings account deposit products intended primarily for individuals for personal, household, or family use. b. Consumer account periodic maintenance charges levied on those transaction account and nontransaction savings account deposit products intended primarily for individuals for personal, household, or family use.
c. Consumer customer automated teller machine (ATM) fees levied on those transaction account and nontransaction savings account deposit products intended primarily for individuals for personal, household, or family use.
d. All other service charges on deposit accounts.

| RIAD9106 | 0 | M.7. |
| :---: | :---: | :---: |
|  |  | M.8. |
| RIAD8757 | 3,571,000 | M.8.a. |
| RIAD8758 | 3,071,000 | M.8.b. |
| RIAD8759 | 6,768,000 | M.8.c. |
| RIAD8760 | 1,184,000 | M.8.d. |
| RIADF186 | 613,000 | M.8.e. |
|  |  | M.8.f. |
| RIADFT36 | 121,000 | M.8.f.1. |
| RIADFT37 | -183,000 | M.8.f.2. |
|  |  | M.8.g. |
| RIADFT38 | -112,000 | M.8.g.1 |
| RIADFT39 | 0 | M.8.g.2. |
| RIADFT40 | 15,381,000 | M.8.h. |
|  |  | M.9. |
| RIADC889 | 0 | M.9.a. |
| RIADC890 | -211,000 | M.9.b. |
| RIADA251 | -21,000 | M. 10. |
| RIADA530 | No | M.11. |
| RIADF228 | 0 | M. 12. |
|  |  | M. 13. |
| RIADF551 | 9,780,000 | M.13.a. |
| RIADF552 | 283,000 | M.13.a. 1 |
| RIADF553 | -5,413,000 | M.13.b. |
| RIADF554 | 0 | M.13.b. 1 |
| RIADJ321 | NR | M. 14. |
|  |  | M.15. |
| RIADH032 | 571,000 | M.15.a. |
| RIADH033 | 398,000 | M.15.b. |
| RIADH034 | 154,000 | M.15.c. |
| RIADH035 | 1,170,000 | M.15.d. |

[^57]
## Schedule RI-A - Changes in Bank Equity Capital(Form Type - 031)

| Dollar amounts in thousands |  |  |
| :---: | :---: | :---: |
| 1. Total bank equity capital most recently reported for the December 31, 2022, Reports of Condition and Income (i.e., after adjustments from amended Reports of Income). | RIAD3217 | 303,620,000 |
| 2. Cumulative effect of changes in accounting principles and corrections of material accounting errors*. | RIADB507 | 451,000 |
| 3. Balance end of previous calendar year as restated (sum of items 1 and 2). | RIADB508 | 304,071,000 |
| 4. Net income (loss) attributable to bank (must equal Schedule RI, item 14). | RIAD4340 | 25,713,000 |
| 5. Sale, conversion, acquisition, or retirement of capital stock, net (excluding treasury stock transactions) | RIADB509 | 0 |
| 6. Treasury stock transactions, net.. | RIADB510 | 0 |
| 7. Changes incident to business combinations, net. | RIAD4356 | 0 |
| 8. LESS: Cash dividends declared on preferred stock | RIAD4470 | 0 |
| 9. LESS: Cash dividends declared on common stock. | RIAD4460 | 18,000,000 |
| 10. Other comprehensive income ${ }^{1}$. | RIADB511 | 3,573,000 |
| 11. Other transactions with stockholders (including a parent holding company) (not included in items 5, 6, 8, or 9 above) * $\qquad$ | RIAD4415 | 12,000 |
| 12. Total bank equity capital end of current period (sum of items 3 through 11) (must equal Schedule RC, item 27.a).. | RIAD3210 | 315,369,000 |

[^58]
## Schedule RI-B Part I - Charge-offs and Recoveries on Loans and Leases(Form Type 031)

Part I includes charge-offs and recoveries through the allocated transfer risk reserve.

| Dollar amounts in thousands | (Column A) Charge-offs Calendar year-to-date |  | (Column B) Recoveries Calendar year-to-date |  | 1. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1. Loans secured by real estate: |  |  |  |  |  |
| a. Construction, land development, and other land loans in domestic offices: |  |  |  |  | 1.a. |
| 1. 1-4 family residential construction loans.. | RIADC891 | 0 | RIADC892 | 0 | 1.a.1. |
| 2. Other construction loans and all land development and other land loans.............. | RIADC893 | 0 | RIADC894 | 0 | 1.a.2. |
| b. Secured by farmland in domestic offices............................................................... | RIAD3584 | 0 | RIAD3585 | 0 | 1.b. |
| c. Secured by 1-4 family residential properties in domestic offices: |  |  |  |  | 1.c. |
| 1. Revolving, open-end loans secured by 1-4 family residential properties and extended under lines of credit. | RIAD5411 | 14,000 | RIAD5412 | 45,000 | 1.c.1. |
| 2. Closed-end loans secured by 1-4 family residential properties: |  |  |  |  | 1.c.2. |
| a. Secured by first liens... | RIADC234 | 54,000 | RIADC217 | 64,000 | 1.c. 2 |
| b. Secured by junior liens.. | RIADC235 | 2,000 | RIADC218 | 7,000 | 1.c.2.b |
| d. Secured by multifamily (5 or more) residential properties in domestic offices. | RIAD3588 | 0 | RIAD3589 | 0 | 1.d. |
| e. Secured by nonfarm nonresidential properties in domestic offices: |  |  |  |  | 1.e. |
| 1. Loans secured by owner-occupied nonfarm nonresidential properties.. | RIADC895 | 0 | RIADC896 | 4,000 | 1.e.1. |
| 2. Loans secured by other nonfarm nonresidential properties....... | RIADC897 | 93,000 | RIADC898 | 0 | 1.e.2. |
| f. In foreign offices... | RIADB512 | 0 | RIADB513 | 0 | 1.f. |
| 2. Not applicable |  |  |  |  | 2. |
| 3. Loans to finance agricultural production and other loans to farmers................................. | RIAD4655 | 2,000 | RIAD4665 | 0 | 3. |
| 4. Commercial and industrial loans: |  |  |  |  | 4. |
| a. To U.S. addressees (domicile). | RIAD4645 | 402,000 | RIAD4617 | 65,000 | 4.a. |
| b. To non-U.S. addressees (domicile) | RIAD4646 | 45,000 | RIAD4618 | 3,000 | 4.b. |
| 5. Loans to individuals for household, family, and other personal expenditures: |  |  |  |  | 5. |
| a. Credit cards. | RIADB514 | 2,172,000 | RIADB515 | 367,000 | 5.a. |
| b. Automobile loans.. | RIADK129 | 222,000 | RIADK133 | 96,000 | 5.b. |
| c. Other (includes revolving credit plans other than credit cards and other consumer loans). | RIADK205 | 1,000 | RIADK206 | 1,000 | 5.c. |
| 6. Loans to foreign governments and official institutions.. | RIAD4643 | 0 | RIAD4627 | 0 | 6. |
| 7. All other loans. | RIAD4644 | 185,000 | RIAD4628 | 28,000 | 7. |
| 8. Lease financing receivables: |  |  |  |  | 8. |
| a. Leases to individuals for household, family, and other personal expenditures.............. | RIADF185 | 0 | RIADF187 | 0 | 8.a. |
| b. All other leases. | RIADC880 | 0 | RIADF188 | 0 | 8.b. |
| 9. Total (sum of items 1 through 8)... | RIAD4635 | 3,192,000 | RIAD4605 | 680,000 | 9. |
| 1. Loans to finance commercial real estate, construction, and land development activities (not secured by real estate) included in Schedule RI-B, part I, items 4 and 7, above. | RIAD5409 | 1,000 | RIAD5410 | 0 | M.1. |
| 2. Loans secured by real estate to non-U.S. addressees (domicile) (included in Schedule RI-B, part I, item 1, above). $\qquad$ | RIAD4652 | 0 | RIAD4662 | 0 | M.2. |
| 3. Not applicable |  |  |  |  | M.3. |

Dollar amounts in thousands
Memorandum item 4 is to be completed by banks that (1) together with affiliated institutions, have outstanding credit card receivables (as defined in the instructions) that exceed $\$ 500$ million as of the report date, or (2) are credit card specialty banks as defined for Uniform Bank Performance Report purposes.
4. Uncollectible retail credit card fees and finance charges reversed against income (i.e., not included in charge-offs against the allowance for loan and lease losses) ${ }^{2}$

| RIADC388 | 420,000 |
| :--- | ---: |

[^59]
## Schedule RI-B Part II - Changes in Allowances for Credit Losses(Form Type - 031)

| Dollar amounts in thousands | (Column A) Loans and Leases Held for Investment |  | (Column B)Held-to-maturity DebtSecurities |  | (Column C) Available-for-sale Debt Securities |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. Balance most recently reported for the December 31, 2022, Reports of Condition and Income (i.e., after adjustments from amended Reports of Income). | RIADB522 | 19,714,000 | RIADJH88 | 67,000 | RIADJH94 | 0 |
| 2. Recoveries (column A must equal Part I, item 9, column B, abov | RIAD4605 | 680,000 | RIADJH89 | 0 | RIADJH95 | 0 |
| 3. LESS: Charge-offs (column A must equal Part I, item 9, column A, above less Schedule RI-B, Part II, item 4, column A). | RIADC079 | 3,192,000 | RIADJH92 | 0 | RIADJH98 | 0 |
| 4. LESS: Write-downs arising from transfers of financial assets ${ }^{3}$ | RIAD5523 | 0 | RIADJJ00 | 0 | RIADJJ01 | 0 |
| 5. Provisions for credit losses ${ }^{4}$. | RIAD4230 | 5,281,000 | RIADJH90 | 13,000 | RIADJH96 | 0 |
| 6. Adjustments* (see instructions for this schedule)* | RIADC233 | -564,000 | RIADJH91 | -6,000 | RIADJH97 | 0 |
| 7. Balance end of current period (sum of items 1,2,5, and 6, less items 3 and <br> 4) (column A must equal Schedule RC, item 4.c). | RIAD3123 | 21,919,000 | RIADJH93 | 74,000 | RIADJH99 | 0 |


| Dollar amounts in thousands |  |  | M.1. |
| :---: | :---: | :---: | :---: |
| 1. Allocated transfer risk reserve included in Schedule RI-B, Part II, item 7, column A, above. | RIADC435 | 34,000 |  |
| Memorandum items 2 and 3 are to be completed by banks that (1) together with affiliated institutions, have outstanding credit card receivables (as defined in the instructions) that exceed $\$ 500$ million as of the report date, or (2) are credit card specialty banks as defined for Uniform Bank Performance Report purposes. <br> 2. Separate valuation allowance for uncollectible retail credit card fees and finance charges. | RIADC389 | 0 | M.2. |
| 3. Amount of allowance for loan and lease losses attributable to retail credit card fees and finance charges ${ }^{1}$. | RIADC390 | 404,000 | M.3. |
| 4. Amount of allowance for post-acquisition credit losses on purchased credit-impaired loans accounted for in accordance with FASB ASC 310-30 (former AICPA Statement of Position 03-3) (included in Schedule RI-B, Part II, item 7, column <br> A, above) ${ }^{2}$. $\qquad$ | RIADC781 | NR | M.4. |
| 5. Provisions for credit losses on other financial assets measured at amortized cost (not included in item 5, above) ${ }^{3}$... | RIADJJ02 | -3,000 | M. 5. |
| 6. Allowance for credit losses on other financial assets measured at amortized cost (not included in item 7, above) ${ }^{3} \ldots$ | RCFDJJ03 | 18,000 | M.6. |
| 7. Provisions for credit losses on off-balance-sheet credit exposures ${ }^{3}$. | RIADMG93 | -188,000 | M.7. |
| 8. Estimated amount of expected recoveries of amounts previously written off included within the allowance for credit losses on loans and leases held for investment (included in item 7, column A, "Balance end of current period," above) ${ }^{3}$. | RIADMG94 | 1,683,000 | M.8. |

[^60]
## Schedule RI-C Part I - Disaggregated Data on the Allowance for Loan and Lease Losses(Form Type - 031)

Schedule RI-C is to be completed by institutions with $\$ 1$ billion or more in total assets.

| Dollar amounts in thousands | (Column A) Recorded Investment: Individually Evaluated for Impairment and Determined to be Impaired (ASC 310-10-35) | (Column B) Allowance Balance: Individually Evaluated for Impairment and Determined to be Impaired (ASC 310-10-35) | (Column C) Recorded Investment: Collectively Evaluated for Impairment (ASC $450-20$ ) | (Column D) Allowance Balance: Collectively Evaluated for Impairment (ASC 450-20) | (Column E) Recorded Investment: Purchased Credit-Impaired Loans (ASC 310-30) | (Column F) <br> Allowance Balance: <br> Purchased <br> Credit-Impaired <br> Loans (ASC 310-30) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. Real estate loans: |  |  |  |  |  |  |
|  | RCFDM708 | RCFDM709 | RCFDM710 | RCFDM711 | RCFDM712 | RCFDM713 |
| a. Construction loans. | NR | NR | NR | NR | NR | NR |
|  | RCFDM714 | RCFDM715 | RCFDM716 | RCFDM717 | RCFDM719 ${ }^{\text {N }}$ | RCFDM720 |
| b. Commercial real estate loans... | NR | NR | NR | NR | NR | NR |
|  | RCFDM721 | RCFDM722 | RCFDM723 | RCFDM724 | RCFDM725 | RCFDM726 |
| c. Residential real estate loans.. | NR | NR | NR | NR | NR | NR |
|  | RCFDM727 | RCFDM728 | RCFDM729 | RCFDM730 | RCFDM731 | RCFDM732 |
| 2. Commercial loans ${ }^{3}$. | NR | NR | NR | NR | NR | NR |
|  | RCFDM733 | RCFDM734 | RCFDM735 | RCFDM736 | RCFDM737 | RCFDM738 |
| 3. Credit cards.............................................................................................. | NR | NR | NR | NR | NR | NR |
|  | RCFDM739 | RCFDM740 | RCFDM741 | RCFDM742 | RCFDM743 | RCFDM744 |
| 4. Other consumer loans................................................................................. | NR | NR | NR | NR | NR | NR |
| allocated, if any |  |  |  | RCFDM745 |  |  |
|  | RCFDM746 | RCFDM747 | RCFDM748 | RCFDM749 | RCFDM750 | RCFDM751 |
| 6. Total (for each column, sum of items 1.a through 5) ${ }^{4}$.......................................... | NR | NR | NR | NR | NR | NR |

[^61]
## Schedule RI-C Part II - Disaggregated Data on the Allowances for Credit Losses(Form Type-031)

| Dollar amounts in thousands | (Column A) Amortized Cost |  | (Column B) Allowance Balance |  |
| :---: | :---: | :---: | :---: | :---: |
| 1. Real estate loans: |  |  |  |  |
| a. Construction loans.. | RCFDJJ04 | 10,499,000 | RCFDJJ12 | 222,000 |
| b. Commercial real estate loans. | RCFDJJ05 | 131,969,000 | RCFDJJ13 | 1,996,000 |
| c. Residential real estate loans. | RCFDJJ06 | 326,424,000 | RCFDJJ14 | 1,041,000 |
| 2. Commercial loans ${ }^{3}$. | RCFDJJ07 | 565,337,000 | RCFDJJ15 | 7,526,000 |
| 3. Credit cards.. | RCFDJJ08 | 167,989,000 | RCFDJJ16 | 10,449,000 |
| 4. Other consumer loans. | RCFDJJ09 | 62,113,000 | RCFDJJ17 | 685,000 |
| 5. Unallocated, if any............................................................................................... |  |  | RCFDJJ18 | 0 |
| 6. Total (sum of items 1.a. through 5) ${ }^{4}$............................................................................. | RCFDJJ11 | 1,264,331,000 | RCFDJJ19 | 21,919,000 |

Dollar amounts in thousands

| 7. Securities issued by states and political subdivisions in the U.S. | RCFDJJ20 | 37,000 |  |
| :---: | :---: | :---: | :---: |
| 8. Mortgage-backed securities (MBS) (including CMOs, REMICs, and stripped MBS)............................................. | RCFDJJ21 | 37,000 |  |
| 9. Asset-backed securities and structured financial products.... | RCFDJJ23 | 0 |  |
| 10. Other debt securities... | RCFDJJ24 | 0 |  |
| 11. Total (sum of items 7 through 10) ${ }^{5}$. | RCFDJJ25 | 74,000 |  |

## Schedule RI-D - Income from Foreign Offices(Form Type - 031)

For all banks with foreign offices (including Edge or Agreement subsidiaries and IBFs) and total foreign office assets of $\$ 10$ billion or more where foreign office revenues, assets, or net income exceed 10 percent of consolidated total revenues, total assets, or net income.

| Dollar amounts in thousands |  |  |  |
| :---: | :---: | :---: | :---: |
| 1. Total interest income in foreign offices. | RIADC899 | 20,065,000 | 1. |
| 2. Total interest expense in foreign offices | RIADC900 | 18,002,000 | 2. |
| 3. Provision for loan and lease losses in foreign offices ${ }^{1}$. | RIADKW02 | 52,000 | 3. |
| 4. Noninterest income in foreign offices: |  |  | 4. |
| a. Trading revenue. | RIADC902 | 11,393,000 |  |
| b. Investment banking, advisory, brokerage, and underwriting fees and commissions. | RIADC903 | 1,320,000 |  |
| c. Net securitization income. | RIADC904 | 0 |  |
| d. Other noninterest income. | RIADC905 | 2,174,000 |  |
| 5. Realized gains (losses) on held-to-maturity and available-for-sale debt securities and change in net unrealized holding gains (losses) on equity securities not held for trading in foreign offices.. | RIADJA28 | -58,000 | 5 |
| 6. Total noninterest expense in foreign offices. | RIADC907 | 10,530,000 | 6. |
| 7. Adjustments to pretax income in foreign offices for internal allocations to foreign offices to reflect the effects of equity capital on overall bank funding costs. | RIADC908 | 0 | 7. |
| 8. Applicable income taxes (on items 1 through 7). | RIADC909 | 1,829,000 | 8 |
| 9. Discontinued operations, net of applicable income taxes, in foreign offices.. | RIADGW64 | 0 | 9. |
| 10. Net income attributable to foreign offices before internal allocations of income and expense (item 1 plus or minus items 2 through 9). | RIADC911 | 4,481,000 | 10 |
| 11. Not applicable |  |  | 11 |
| 12. Eliminations arising from the consolidation of foreign offices with domestic offices. | RIADC913 | 8,730,000 | 12 |
| 13. Consolidated net income attributable to foreign offices (sum of items 10 and 12).. | RIADC914 | 13,211,000 | 13 |

[^62]
## Schedule RI-E - Explanations (Form Type - 031)

Schedule RI-E is to be completed each quarter on a calendar year-to-date basis.
Detail all adjustments in Schedule RI-A and RI-B, all extraordinary items and other adjustments in Schedule RI, and all significant items of other noninterest income and other noninterest expense in Schedule RI. (See instructions for details.)

Dollar amounts in thousands

1. Other noninterest income (from Schedule RI, item 5.I) Itemize and describe amounts greater than \$100,000 that exceed 7 percent of Schedule RI, item 5.I:
a. Income and fees from the printing and sale of checks.
b. Earnings on/increase in value of cash surrender value of life insurance.
c. Income and fees from automated teller machines (ATMs).
d. Rent and other income from other real estate owned.
e. Safe deposit box rent.
f. Bank card and credit card interchange fees.
g. Income and fees from wire transfers.
h. Disclose component and the dollar amount of that component:
2. Describe component..
3. Amount of component
i. Disclose component and the dollar amount of that component:
4. Describe component.
5. Amount of component.
j. Disclose component and the dollar amount of that component:
6. Describe component.
7. Amount of component.
8. Other noninterest expense (from Schedule RI, item 7.d) Itemize and describe amounts greater than $\$ 100,000$ that exceed 7 percent of Schedule RI, item 7.d:
a. Data processing expenses.
b. Advertising and marketing expenses.
c. Directors' fees.
d. Printing, stationery, and supplies.
e. Postage
f. Legal fees and expenses.
g. FDIC deposit insurance assessments.
h. Accounting and auditing expenses.
i. Consulting and advisory expenses.
j. Automated teller machine (ATM) and interchange expenses.
k. Telecommunications expenses.
I. Other real estate owned expenses.
m . Insurance expenses (not included in employee expenses, premises and fixed asset expenses, and other real estate owned expenses).
n . Disclose component and the dollar amount of that component:
9. Describe component.
10. Amount of component
o. Disclose component and the dollar amount of that component:
11. Describe component..
12. Amount of component
p. Disclose component and the dollar amount of that component:
13. Describe component.
14. Amount of component.
15. Discontinued operations and applicable income tax effect (from Schedule RI, item 11) (itemize and describe each discontinued operation):
a. Disclose component, the gross dollar amount of that component, and its related income tax:
16. Describe component.
17. Amount of component


| Dollar amounts in thousands |  |  | 3.a.3. |
| :---: | :---: | :---: | :---: |
| 3. Applicable income tax effect. | RIADFT30 | 0 |  |
| b. Disclose component, the gross dollar amount of that component, and its related income tax: |  |  | 3.b. |
| 1. Describe component. | TEXTFT31 | NR | 3.b.1. |
| 2. Amount of component. | RIADFT31 | 0 | 3.b.2. |
| 3. Applicable income tax effect. | RIADFT32 | 0 | 3.b.3. |
| 4. Cumulative effect of changes in accounting principles and corrections of material accounting errors (from Schedule RI-A, item 2) (itemize and describe all such effects): |  |  | 4. |
| a. Effect of adoption of Current Expected Credit Losses Methodology - ASU 2016-13 ${ }^{1}$.................................... | RIADJJ26 | NR | 4.a. |
| b. Not applicable |  |  | 4.b. |
| c. Disclose component and the dollar amount of that component: |  |  | 4.c. |
| 1. Describe component. | TEXTB526 | Click here for value | 4.c.1. |
| 2. Amount of component................................................................................................................... | RIADB526 | 451,000 | 4.c.2. |
| d. Disclose component and the dollar amount of that component: |  |  | 4.d. |
| 1. Describe component. | TEXTB527 | NR | 4.d.1. |
| 2. Amount of component... | RIADB527 |  | 4.d.2. |
| 5. Other transactions with stockholders (including a parent holding company) (from Schedule RI-A, item 11) (itemize and describe all such transactions): |  |  | 5. |
| a. Disclose component and the dollar amount of that component: |  |  | 5.a. |
| 1. Describe component. | TEXT4498 | Click here for value | 5.a.1. |
| 2. Amount of component.. | RIAD4498 | 12,000 | 5.a.2. |
| b. Disclose component and the dollar amount of that component: |  |  | 5.b. |
| 1. Describe component. | TEXT4499 | NR | 5.b.1. |
| 2. Amount of component.. | RIAD4499 |  | 5.b.2. |
| 6. Adjustments to allowances for credit losses (from Schedule RI-B, part II, item 6) (itemize and describe all adjustments): ${ }^{3}$ |  |  | 6. |
| a. Initial allowances for credit losses recognized upon the acquisition of purchased credit-deteriorated assets on or after the effective date of ASU 2016-13 ${ }^{1}$ | RIADJJ27 | NR | 6.a. |
| b. Effect of adoption of current expected credit losses methodology on allowances for credit losses ${ }^{1}$. | RIADJJ28 | NR | 6.b. |
| c. Disclose component and the dollar amount of that component: |  |  | 6.c. |
| 1. Describe component... | TEXT4521 | Click here for value | 6.c.1. |
| 2. Amount of component. | RIAD4521 | -587,000 | 6.c.2. |
| d. Disclose component and the dollar amount of that component: |  |  | 6.d. |
| 1. Describe component. | TEXT4522 | NR | 6.d.1. |
| 2. Amount of component. | RIAD4522 | 0 | 6.d.2. |
| 7. Other explanations (the space below is provided for the bank to briefly describe, at its option, any other significant items affecting the Report of Income): |  |  | 7. |
| a. Comments?....................................................................................................................................... | RIAD4769 | Yes | 7.a. |
| b. Other explanations............................................................................................................................ | TEXT4769 | Click here for value | 7.b. |

(TEXT4461) Net change in fair values of nontrading financial instruments accounted for under a fair value option
(TEXT4462) Bargain purchase gain associated with First Republic acquisition

## (TEXT4463) Other Credit Card Related Fees

## (TEXT4464) Brokerage and Clearing Expenses

(TEXT4498) Equity capital transfer from Bank to Corp Chain

[^63](TEXT4521) Effect of adopting ASU 2022-02 reported in Schedule RI-B
(TEXT4769) a. Operating and Financing Leases - 1,470,000
(TEXTB526) Effect of adopting ASU 2022-02 reported in Schedule RI-A

## Schedule RC - Balance Sheet(Form Type - 031)

All schedules are to be reported in thousands of dollars. Unless otherwise indicated, report the amount outstanding as of the last business day of the quarter.

| Dollar amounts in thousands |  |  | 1. |
| :---: | :---: | :---: | :---: |
| 1. Cash and balances due from depository institutions (from Schedule RC-A): |  |  |  |
| a. Noninterest-bearing balances and currency and coin ${ }^{1}$.. | RCFD0081 | 25,783,000 | 1.a. |
| b. Interest-bearing balances ${ }^{2}$. | RCFD0071 | 469,895,000 | 1.b. |
| 2. Securities: |  |  | 2. |
| a. Held-to-maturity securities (from Schedule RC-B, column A) ${ }^{3}$. | RCFDJJ34 | 408,941,000 | 2.a. |
| b. Available-for-sale debt securities (from Schedule RC-B, column D). | RCFD1773 | 203,191,000 | 2.b. |
| c. Equity securities with readily determinable fair values not held for trading ${ }^{4}$. | RCFDJA22 | 913,000 | 2.c. |
| 3. Federal funds sold and securities purchased under agreements to resell: |  |  | 3. |
| a. Federal funds sold in domestic offices. | RCONB987 | 70,000 | 3.a. |
| b. Securities purchased under agreements to resell ${ }^{5}$. | RCFDB989 | 316,586,000 | 3.b. |
| 4. Loans and lease financing receivables (from Schedule RC-C): |  |  | 4. |
| a. Loans and leases held for sale. | RCFD5369 | 22,290,000 | 4.a. |
| b. Loans and leases held for investment. | RCFDB528 | 1,286,062,000 | 4.b. |
| c. LESS: Allowance for loan and lease losses ${ }^{7}$ | RCFD3123 | 21,919,000 | 4.c. |
| d. Loans and leases held for investment, net of allowance (item 4.b minus 4.c)................................................ | RCFDB529 | 1,264,143,000 | 4.d. |
| 5. Trading assets (from Schedule RC-D). | RCFD3545 | 401,476,000 | 5. |
| 6. Premises and fixed assets (including capitalized leases). | RCFD2145 | 24,624,000 | 6. |
| 7. Other real estate owned (from Schedule RC-M). | RCFD2150 | 252,000 | 7. |
| 8. Investments in unconsolidated subsidiaries and associated companies. | RCFD2130 | 11,305,000 | 8. |
| 9. Direct and indirect investments in real estate ventures. | RCFD3656 | 15,615,000 | 9. |
| 10. Intangible assets (from Schedule RC-M)... | RCFD2143 | 50,257,000 | 10. |
| 11. Other assets (from Schedule RC-F) ${ }^{6}$. | RCFD2160 | 166,854,000 | 11. |
| 12. Total assets (sum of items 1 through 11). | RCFD2170 | 3,382,195,000 | 12. |
| 13. Deposits: |  |  | 13. |
| a. In domestic offices (sum of totals of columns A and C from Schedule RC-E, part I). | RCON2200 | 2,068,042,000 | 13.a. |
| 1. Noninterest-bearing ${ }^{8}$.. | RCON6631 | 661,020,000 | 13.a.1. |
| 2. Interest-bearing.. | RCON6636 | 1,407,022,000 | 13.a.2. |
| b. In foreign offices, Edge and Agreement subsidiaries, and IBFs (from Schedule RC-E, part II)......................... | RCFN2200 | 437,608,000 | 13.b. |
| 1. Noninterest-bearing. | RCFN6631 | 25,774,000 | 13.b.1. |
| 2. Interest-bearing. | RCFN6636 | 411,834,000 | 13.b.2. |
| 14. Federal funds purchased and securities sold under agreements to repurchase: |  |  | 14. |
| a. Federal funds purchased in domestic offices ${ }^{9}$.............................................. | RCONB993 | 1,783,000 | 14.a. |
| b. Securities sold under agreements to repurchase ${ }^{10}$............................................................................... | RCFDB995 | 98,143,000 | 14.b. |
| 15. Trading liabilities (from Schedule RC-D).. | RCFD3548 | 123,267,000 | 15. |
| 16. Other borrowed money (includes mortgage indebtedness and obligations under capitalized leases) (from Schedule RC-M). | RCFD3190 | 180,114,000 | 16. |
| 17. Not applicable |  |  | 17. |
| 18. Not applicable |  |  | 18. |
| 19. Subordinated notes and debentures ${ }^{1}$. | RCFD3200 | 258,000 | 19. |

[^64]Dollar amounts in thousands

| 20. Other liabilities (from Schedule RC-G)....................................................................................................... | RCFD2930 | 157,573,000 | 20. |
| :---: | :---: | :---: | :---: |
| 21. Total liabilities (sum of items 13 through 20). | RCFD2948 | 3,066,788,000 | 21. |
| 22. Not applicable |  |  | 22. |
| 23. Perpetual preferred stock and related surplus........................................................................................... | RCFD3838 | 0 | 23. |
| 24. Common stock. | RCFD3230 | 2,028,000 | 24. |
| 25. Surplus (exclude all surplus related to preferred stock). | RCFD3839 | 118,335,000 | 25. |
| 26. Not available |  |  | 26. |
| a. Retained earnings. | RCFD3632 | 209,397,000 | 26.a. |
| b. Accumulated other comprehensive income ${ }^{2}$. | RCFDB530 | -14,391,000 | 26.b. |
| c. Other equity capital components ${ }^{3}$.. | RCFDA130 | 0 | 26.c. |
| 27. Not available |  |  | 27. |
| a. Total bank equity capital (sum of items 23 through 26.c)........................................................................... | RCFD3210 | 315,369,000 | 27.a. |
| b. Noncontrolling (minority) interests in consolidated subsidiaries. | RCFD3000 | 38,000 | 27.b. |
| 28. Total equity capital (sum of items 27.a and 27.b).......................................................................................... | RCFDG105 | 315,407,000 | 28. |
| 29. Total liabilities and equity capital (sum of items 21 and 28)............................................................................ | RCFD3300 | 3,382,195,000 | 29. |
| 1. Indicate in the box at the right the number of the statement below that best describes the most comprehensive level of auditing work performed for the bank by independent external auditors as of any date during 2022. | RCFD6724 | NR | M.1. |
| 2. Bank's fiscal year-end date (report the date in MMDD format)........................................................................ | RCON8678 | NR | M.2. |

## Schedule RC-A - Cash and Balances Due From Depository Institutions(Form Type 031)

Exclude assets held for trading.

| Dollar amounts in thousands | (Column A) Consolidated Bank |  | (Column B) Domestic Offices |  |
| :---: | :---: | :---: | :---: | :---: |
| 1. Cash items in process of collection, unposted debits, and currency and coin... | RCFD0022 | 19,335,000 |  |  |
| a. Cash items in process of collection and unposted debits |  |  | RCON0020 | 9,573,000 |
| b. Currency and coin. |  |  | RCON0080 | 9,724,000 |
| 2. Balances due from depository institutions in the U.S. | RCFD0082 | 493,000 | RCON0082 | 481,000 |
| 3. Balances due from banks in foreign countries and foreign central banks........................... | RCFD0070 | 222,498,000 | RCON0070 | 570,000 |
| 4. Balances due from Federal Reserve Banks. | RCFD0090 | 253,352,000 | RCON0090 | 253,352,000 |
| 5. Total... | RCFD0010 | 495,678,000 | RCON0010 | 273,700,000 |

[^65]
## Schedule RC-B - Securities(Form Type - 031)

Exclude assets held for trading.

| Dollar amounts in thousands | (Column A) Held-to-maturity Amortized Cost |  | (Column B) Held-to-maturity Fair Value |  | (Column C) <br> Available-for-sale Amortized Cost |  | (Column D) <br> Available-for-sale Fair <br> Value |  | 1. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. U.S. Treasury securities | RCFD0211 | 202,655,000 | RCFD0213 | 185,830,000 | RCFD1286 | 63,949,000 | RCFD1287 | 62,688,000 |  |
| 2. U.S. Government agency and sponsored agency obligations (exclude mortgage-backed securities) ${ }^{1}$ $\qquad$ | RCFDHT50 | 0 | RCFDHT51 | 0 | RCFDHT52 | 49,000 | RCFDHT53 | 49,000 | 2. |
| 3. Securities issued by states and political subdivisions in the U.S. | RCFD8496 | 11,654,000 | RCFD8497 | 10,903,000 | RCFD8498 | 24,250,000 | RCFD8499 | 23,994,000 | 3. |
| 4. Mortgage-backed securities (MBS): |  |  |  |  |  |  |  |  | 4. |
| a. Residential mortgage pass-through securities: |  |  |  |  |  |  |  |  | 4.a. |
| 1. Guaranteed by GNMA. | RCFDG300 | 31,684,000 | RCFDG301 | 28,383,000 | RCFDG302 | 54,482,000 | RCFDG303 | 51,324,000 | 4.a.1. |
| 2. Issued by FNMA and FHLMC.. | RCFDG304 | 62,588,000 | RCFDG305 | 54,613,000 | RCFDG306 | 15,520,000 | RCFDG307 | 13,941,000 | 4.a2. |
| 3. Other pass-through securities. | RCFDG308 | 0 | RCFDG309 | 0 | RCFDG310 | 0 | RCFDG311 | 0 | 4.a3. |
| b. Other residential mortgage-backed securities (include CMOs, REMICs, and stripped MBS): |  |  |  |  |  |  |  |  | 4.b. |
| 1. Issued or guaranteed by U.S. Government agencies or sponsored agencies ${ }^{1}$ | RCFDG312 | 28,000 | RCFDG313 | 26,000 | RCFDG314 | 508,000 | RCFDG315 | 491,000 | 4.b.1. |
| 2. Collateralized by MBS issued or guaranteed by U.S. Government agencies or sponsored agencies ${ }^{1}$ | RCFDG316 | 0 | RCFDG317 | 0 | RCFDG318 | 0 | RCFDG319 | 0 | 4.b.2. |
| 3. All other residential MBS | RCFDG320 | 10,293,000 | RCFDG321 | 9,090,000 | RCFDG322 | 3,665,000 | RCFDG323 | 3,545,000 | 4.b.3. |
| c. Commercial MBS: |  |  |  |  |  |  |  |  | 4. |
| 1. Commercial mortgage pass-through securities: |  |  |  |  |  |  |  |  | 4.c.1. |
| a. Issued or guaranteed by FNMA, FHLMC, or GNMA. | RCFDK142 | 15,822,000 | RCFDK143 | 13,963,000 | RCFDK144 | 8,716,000 | RCFDK145 | 8,614,000 | 4cia |
| b. Other pass-through securities........................... | RCFDK146 | 0 | RCFDK147 | 0 | RCFDK148 | 0 | RCFDK149 | 0 | 4c1b |
| 2. Other commercial MBS: |  |  |  |  |  |  |  |  | 4.c |
| a. Issued or guaranteed by U.S. Government agencies or sponsored agencies ${ }^{1}$ | RCFDK150 | 396,000 | RCFDK151 | 359,000 | RCFDK152 | 5,522,000 | RCFDK153 | 5,397,000 | 4c2a |
| b. All other commercial MBS. | RCFDK154 | 10,748,000 | RCFDK155 | 9,977,000 | RCFDK156 | 2,223,000 | RCFDK157 | 2,056,000 | 4 c 2 b |
| 5. Asset-backed securities and structured financial products: |  |  |  |  |  |  |  |  | 5. |
| a. Asset-backed securities (ABS).............................. | RCFDC026 | 2,052,000 | RCFDC988 | 1,968,000 | RCFDC989 | 3,155,000 | RCFDC027 | 3,100,000 | 5.a. |
| b. Structured financial products.......................................... | RCFDHT58 | 61,095,000 | RCFDHT59 | 60,187,000 | RCFDHT60 | 5,660,000 | RCFDHT61 | 5,591,000 | 5.b. |
| 6. Other debt securities: |  |  |  |  |  |  |  |  | 6. |
| a. Other domestic debt securities. | RCFD1737 | 0 | RCFD1738 | 0 | RCFD1739 | 14,000 | RCFD1741 | 13,000 | 6.a. |
| b. Other foreign debt securities.......................................... | RCFD1742 | 0 | RCFD1743 | 0 | RCFD1744 | 22,940,000 | RCFD1746 | 22,388,000 | 6.b. |
| 7. Unallocated portfolio layer fair value hedge basis adjustments... |  |  |  |  | RCFDMG95 | -865,000 |  |  | 7. |
| 8. Total (sum of items 1 through 7) ${ }^{2}$.......................................... | RCFD1754 | 409,015,000 | RCFD1771 | 375,299,000 | RCFD1772 | 209,788,000 | RCFD1773 | 203,191,000 | 8. |

Dollar amounts in thousands

| 1. Pledged securities ${ }^{1}$ | RCFD0416 | 121,919,000 | M.1. |
| :---: | :---: | :---: | :---: |
| 2. Maturity and repricing data for debt securities (excluding those in nonaccrual status): ${ }^{1}$ |  |  | M.2. |
| a. Securities issued by the U.S. Treasury, U.S. Government agencies, and states and political subdivisions in the U.S.; other non-mortgage debt securities; and mortgage pass-through securities other than those backed by closed-end first lien 1-4 family residential mortgages with a remaining maturity or next repricing date of: ${ }^{2}$ |  |  | M.2.a. |
| 1. Three months or less | RCFDA549 | 85,893,000 | M.2.a.1 |
| 2. Over three months through 12 months | RCFDA550 | 67,465,000 | M.2.a.2. |
| 3. Over one year through three years | RCFDA551 | 79,443,000 | M.2.a.3. |
| 4. Over three years through five years | RCFDA552 | 60,923,000 | M.2.a.4 |
| 5. Over five years through 15 years. | RCFDA553 | 89,688,000 | M.2.a.5. |
| 6. Over 15 years. | RCFDA554 | 36,304,000 | M.2.a.6. |
| b. Mortgage pass-through securities backed by closed-end first lien 1-4 family residential mortgages with a remaining maturity or next repricing date of: ${ }^{2}$ |  |  | M.2.b. |
| 1. Three months or less | RCFDA555 | 154,000 | M.2.b.1. |
| 2. Over three months through 12 months | RCFDA556 | 2,081,000 | M.2.b.2. |
| 3. Over one year through three years | RCFDA557 | 483,000 | M.2.b.3. |
| 4. Over three years through five years | RCFDA558 | 921,000 | M.2.b.4 |
| 5. Over five years through 15 years. | RCFDA559 | 2,120,000 | M.2.b.5. |
| 6. Over 15 years. | RCFDA560 | 153,776,000 | M.2.b.6. |
| c. Other mortgage-backed securities (include CMOs, REMICs, and stripped MBS; exclude mortgage pass-through securities) with an expected average life of: ${ }^{5}$ |  |  | M.2.c. |
| 1. Three years or less.. | RCFDA561 | 9,148,000 | M.2.c.1. |
| 2. Over three years. | RCFDA562 | 23,806,000 | M.2.c.2. |
| d. Debt securities with a REMAINING MATURITY of one year or less (included in Memorandum items 2.a through 2.c above). | RCFDA248 | 81,872,000 | M.2.d. |
| Memorandum item 3 is to be completed semiannually in the June and December reports only. <br> 3. Amortized cost of held-to-maturity securities sold or transferred to available-for-sale or trading securities during the calendar year-to-date (report the amortized cost at date of sale or transfer). $\qquad$ | RCFD1778 | 7,090,000 | M.3. |
| 4. Structured notes (included in the held-to-maturity and available-for-sale accounts in Schedule RC-B, items 2, 3, 5, and 6): |  |  | M.4. |
| a. Amortized cost.. | RCFD8782 | 0 | M.4.a. |
| b. Fair value... | RCFD8783 | 0 | M.4.b. |

[^66]

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# JPMORGAN CHASE BANK, NATIONAL ASSOCIATION 

## Schedule RC-C Part I - Loans and Leases(Form Type - 031)

Do not deduct the allowance for loan and lease losses or the allocated transfer risk reserve from amounts reported in this schedule. Report (1) loans and leases held for sale at the lower of cost or fair value, (2) loans and leases held for investment, net of unearned income, and (3) loans and leases accounted for at fair value under a fair value option. Exclude assets held for trading and commercial paper.

## Dollar amounts in thousands

1. Loans secured by real estate ${ }^{2}$.
a. Construction, land development, and other land loans:
2. 1-4 family residential construction loans.
3. Other construction loans and all land development and other land loans.
b. Secured by farmland (including farm residential and other improvements).
c. Secured by 1-4 family residential properties:
4. Revolving, open-end loans secured by 1-4 family residential properties and extended under lines of credit.
5. Closed-end loans secured by 1-4 family residential properties:
a. Secured by first liens.
b. Secured by junior liens.
d. Secured by multifamily (5 or more) residential properties.
e. Secured by nonfarm nonresidential properties:
6. Loans secured by owner-occupied nonfarm nonresidential properties.
7. Loans secured by other nonfarm nonresidential properties
8. Loans to depository institutions and acceptances of other banks:
a. To commercial banks in the U.S.
9. To U.S. branches and agencies of foreign banks.
10. To other commercial banks in the U.S.
b. To other depository institutions in the U.S.
c. To banks in foreign countries
11. To foreign branches of other U.S. banks.
12. To other banks in foreign countries.
13. Loans to finance agricultural production and other loans to farmers.
14. Commercial and industrial loans:
a. To U.S. addressees (domicile).
b. To non-U.S. addressees (domicile)
15. Not applicable
16. Loans to individuals for household, family, and other personal expenditures (i.e., consumer loans) (includes purchased paper):
a. Credit cards.
b. Other revolving credit plans.
c. Automobile loans.
d. Other consumer loans (includes single payment and installment loans other than automobile loans, and all student loans).
17. Loans to foreign governments and official institutions (including foreign central banks).
18. Obligations (other than securities and leases) of states and political subdivisions in the
U.S..
19. Loans to nondepository financial institutions and other loans.
a. Loans to nondepository financial institutions.
b. Other loans:
20. Loans for purchasing or carrying securities (secured and unsecured)
21. All other loans (exclude consumer loans)..
22. Lease financing receivables (net of unearned income)
a. Leases to individuals for household, family, and other personal expenditures (i.e.,
consumer leases).
b. All other leases.
23. LESS: Any unearned income on loans reflected in items 1-9 above
24. Total loans and leases held for investment and held for sale (item 12, column A must equal Schedule RC, sum of items 4.a and 4.b).


# JPMORGAN CHASE BANK, NATIONAL ASSOCIATION 

Dollar amounts in thousands

1. Loans restructured in troubled debt restructurings that are in compliance with their modified terms (included in Schedule RC-C, part 1, and not reported as past due or nonaccrual in Schedule RC-N, Memorandum item 1):
a. Construction, land development, and other land loans in domestic offices:
2. 1-4 family residential construction loans.
3. Other construction loans and all land development and other land loans.
b. Loans secured by 1-4 family residential properties in domestic offices.
c. Secured by multifamily ( 5 or more) residential properties in domestic offices
d. Secured by nonfarm nonresidential properties in domestic offices:
4. Loans secured by owner-occupied nonfarm nonresidential properties.
5. Loans secured by other nonfarm nonresidential properties
e. Commercial and industrial loans:
6. To U.S. addressees (domicile).
7. To non-U.S. addressees (domicile)
f. All other loans (include loans to individuals for household, family, and other personal expenditures)

Itemize loan categories included in Memorandum item 1.f, above that exceed 10 percent of total loans restructured in troubled debt restructurings that are in compliance with their modified terms (sum of Memorandum items 1.a through 1.f):

1. Loans secured by farmland in domestic offices.

## 2. Not applicable

3. Loans to finance agricultural production and other loans to farmers.
4. Loans to individuals for household, family, and other personal expenditures:
a. Credit cards.
b. Automobile loans
c. Other (includes revolving credit plans other than credit cards and other consumer loans)
g. Total loans restructured in troubled debt restructurings that are in compliance with their modified terms (sum of Memorandum items 1.a.(1) through 1.f).
5. Maturity and repricing data for loans and leases (excluding those in nonaccrual status):
a. Closed-end loans secured by first liens on 1-4 family residential properties in domestic offices (reported in

Schedule RC-C, part I, item 1.c.(2)(a), column B) with a remaining maturity or next repricing date of:

## 1. Three months or less.

2. Over three months through 12 months.
3. Over one year through three years.
4. Over three years through five years.
5. Over five years through 15 years.
6. Over 15 years.
b. All loans and leases (reported in Schedule RC-C, part I, items 1 through 10, column A) EXCLUDING closed-end loans secured by first liens on 1-4 family residential properties in domestic offices (reported in Schedule RC-C, part I, item 1.c.(2)(a), column B) with a remaining maturity or next repricing date of:
7. Three months or less.
8. Over three months through 12 months.
9. Over one year through three years.
10. Over three years through five years.
11. Over five years through 15 years.
12. Over 15 years.
c. Loans and leases (reported in Schedule RC-C, part I, items 1 through 10, column A) with a REMAINING MATURITY of one year or less (excluding those in nonaccrual status).
13. Loans to finance commercial real estate, construction, and land development activities (not secured by real estate) included in Schedule RC-C, part I, items 4 and 9, column A ${ }^{4}$.
14. Adjustable rate closed-end loans secured by first liens on 1-4 family residential properties in domestic offices (included in Schedule RC-C, part I, item 1.c.(2)(a), column B).
15. Loans secured by real estate to non-U.S. addressees (domicile) (included in Schedule RC-C, Part I, item 1, column A, or Schedule RC-C, Part I, items 1.a.(1) through 1.e.(2), column A, as appropriate).
Memorandum item 6 is to be completed by banks that (1) together with affiliated institutions, have outstanding credit card receivables (as defined in the instructions) that exceed $\$ 500$ million as of the report date, or (2) are credit card specialty banks as defined for Uniform Bank Performance Report purposes.
16. Outstanding credit card fees and finance charges included in Schedule RC-C, part I, item 6.a, column A.

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## Dollar amounts in thousands



Dollar amounts in thousands
9. Loans secured by 1-4 family residential properties in domestic offices in process of foreclosure (included in Schedule RC-C, part I, items 1.c.(1), 1.c.(2)(a), and 1.c.(2)(b)).

| RCONF577 | 949,000 |
| :--- | ---: |

## Dollar amounts in thousands

| 10. Not applicable | M.10. <br> 11. Not applicable |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |



## Dollar amounts in thousands

| Memoranda item 13 is to be completed by banks that had construction, land development, and other land loans in domestic offices (as reported in Schedule RC-C, Part I, item 1.a., column B) that exceeded 100 percent of the sum of tier 1 capital (as reported in Schedule RC-R, Part I, item 26) plus the allowance for loan and lease losses or the allowance for credit losses on loans and leases, as applicable (as reported in Schedule RC, item 4.c) as of December 31, 2021. |  |  | M.13. |
| :---: | :---: | :---: | :---: |
|  |  |  |  |
| a. Amount of loans that provide for the use of interest reserves (included in Schedule RC-C, part I, item 1.a, column B). $\qquad$ | RCONG376 | 0 | M.13.a. |
| b. Amount of interest capitalized from interest reserves on construction, land development, and other land loans that is included in interest and fee income on loans during the quarter (included in Schedule RI, item 1.a.(1)(a)(2)). | RIADG377 | 0 | M.13.b. |
| Memorandum item 14 is to be completed by all banks. <br> 14. Pledged loans and leases. $\qquad$ | RCFDG378 | 690,067,000 | M.14. |
| Memorandum item 15 is to be completed for the December report only. 15. Reverse mortgages in domestic offices: |  |  | M. 15. |
| a. Reverse mortgages outstanding that are held for investment (included in Schedule RC-C, item 1.c, above): |  |  | M.15.a. |
| 1. Home Equity Conversion Mortgage (HECM) reverse mortgages | RCONJ466 | NR | M.15.a.1. |
| 2. Proprietary reverse mortgages.. | RCONJ467 | NR | M.15.a.2. |
| b. Estimated number of reverse mortgage loan referrals to other lenders during the year from whom compensation has been received for services performed in connection with the origination of the reverse mortgages: |  |  | M.15.b. |
| 1. Home Equity Conversion Mortgage (HECM) reverse mortgages | RCONJ468 | NR | M.15.b.1. |
| 2. Proprietary reverse mortgages. | RCONJ469 | NR | M.15.b.2. |
| c. Principal amount of reverse mortgage originations that have been sold during the year: |  |  | M.15.c. |
| 1. Home Equity Conversion Mortgage (HECM) reverse mortgages | RCONJ470 | NR | M.15.c.1. |
| 2. Proprietary reverse mortgages. | RCONJ471 | NR | M.15.c.2. |
| Memorandum item 16 is to be completed by all banks. |  |  |  |
| 16. Revolving, open-end loans secured by 1-4 family residential properties and extended under lines of credit in domestic offices that have converted to non-revolving closed-end status (included in item 1.c.(1) above). | RCONLE75 | 9,269,000 | M.16. |
| Amounts reported in Memorandum items 17.a and 17.b will not be made available to the public on an individual institution basis. 17. Eligible loan modifications under Section 4013, Temporary Relief from Troubled Debt Restructurings, of the 2020 Coronavirus Aid, Relief, and Economic Security Act: |  |  | M. 17. |
| a. Number of Section 4013 loans outstanding | RCONLG24 | CONF | M.17.a. |
| b. Outstanding balance of Section 4013 loans... | RCONLG25 | CONF | M.17.b. |

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## Schedule RC-C Part II - Loans to Small Businesses and Small Farms(Form Type - 031)

Report the number and amount currently outstanding as of the report date of business loans with "original amounts" of \$1,000,000 or less and farm loans with "original amounts" of $\$ 500,000$ or less. The following guidelines should be used to determine the "original amount" of a loan:
(1) For loans drawn down under lines of credit or loan commitments, the "original amount" of the loan is the size of the line of credit or loan commitment when the line of credit or loan commitment was most recently approved, extended, or renewed prior to the report date. However, if the amount currently outstanding as of the report date exceeds this size, the "original amount" is the amount currently outstanding on the report date. (2) For loan participations and syndications, the "original amount" of the loan participation or syndication is the entire amount of the credit originated by the lead lender. (3) For all other loans, the "original amount" is the total amount of the loan at origination or the amount currently outstanding as of the report date, whichever is larger.


| Dollar amounts in thousands | (Column A) Number of Loans |  | (Column B) Amount Currently Outstanding |  |
| :---: | :---: | :---: | :---: | :---: |
| 3. Number and amount currently outstanding of "Loans secured by nonfarm nonresidential properties" in domestic offices reported in Schedule RC-C, part I, items 1.e.(1) and 1.e.(2), column B: |  |  |  |  |
| a. With original amounts of \$100,000 or less. | RCON5564 | 494 | RCON5565 | 16,000 |
| b. With original amounts of more than \$100,000 through \$250,000... | RCON5566 | 2350 | RCON5567 | 251,000 |
| c. With original amounts of more than \$250,000 through \$1,000,000... | RCON5568 | 8937 | RCON5569 | 3,882,000 |
| 4. Number and amount currently outstanding of "Commercial and industrial loans to U.S. addressees" in domestic offices reported in Schedule RC-C, part I, item 4.a, column B: |  |  |  |  |
| a. With original amounts of \$100,000 or less.. | RCON5570 | 2899186 | RCON5571 | 24,023,000 |
| b. With original amounts of more than \$100,000 through \$250,000.. | RCON5572 | 57596 | RCON5573 | 3,519,000 |
| c. With original amounts of more than \$250,000 through \$1,000,000............................ | RCON5574 | 14945 | RCON5575 | 2,259,000 |

Dollar amounts in thousands
5. Not applicable
6. Not applicable


| Dollar amounts in thousands | (Column A) Number of Loans |  | (Column B) Amount Currently Outstanding |  |
| :---: | :---: | :---: | :---: | :---: |
| 7. Number and amount currently outstanding of "Loans secured by farmland (including farm residential and other improvements)" in domestic offices reported in Schedule RC-C, part I, item 1.b, column B: |  |  |  |  |
| a. With original amounts of \$100,000 or less. | RCON5578 | 5 | RCON5579 | 0 |
| b. With original amounts of more than \$100,000 through \$250,000. | RCON5580 | 14 | RCON5581 | 1,000 |
| c. With original amounts of more than \$250,000 through \$500,000.. | RCON5582 | 19 | RCON5583 | 4,000 |
| 8. Number and amount currently outstanding of "Loans to finance agricultural production and other loans to farmers" in domestic offices reported in Schedule RC-C, part I, item 3, column B: |  |  |  |  |
| a. With original amounts of \$100,000 or less.. | RCON5584 | 47851 | RCON5585 | 323,000 |
| b. With original amounts of more than \$100,000 through \$250,000.. | RCON5586 | 291 | RCON5587 | 15,000 |
| c. With original amounts of more than \$250,000 through \$500,000............................... | RCON5588 | 24 | RCON5589 | 3,000 |

## Schedule RC-D - Trading Assets and Liabilities(Form Type - 031)

Schedule RC-D is to be completed by banks that reported total trading assets of $\$ 10$ million or more in any of the four preceding calendar quarters, and all banks meeting the FDIC's definition of a large or highly complex institution for deposit insurance assessment purposes.

| Dollar amounts in thousands | Consolidated Bank |  |  |
| :---: | :---: | :---: | :---: |
| 1. U.S. Treasury securities.. | RCFD3531 | 26,889,000 | 1. |
| 2. U.S. Government agency obligations (exclude mortgage-backed securities)... | RCFD3532 | 0 | 2. |
| 3. Securities issued by states and political subdivisions in the U.S.. | RCFD3533 | 948,000 | 3. |
| 4. Mortgage-backed securities (MBS): |  |  | 4. |
| a. Residential mortgage pass-through securities issued or guaranteed by FNMA, FHLMC, or GNMA.. | RCFDG379 | 23,881,000 | 4.a. |
| b. Other residential MBS issued or guaranteed by U.S. Government agencies or sponsored agencies (include CMOs, REMICs, and stripped MBS) ${ }^{1}$ | RCFDG380 | 706,000 | 4.b. |
| c. All other residential MBS.. | RCFDG381 | 1,021,000 | 4.c. |
| d. Commercial MBS issued or guaranteed by U.S. Government agencies or sponsored agencies ${ }^{1}$.. | RCFDK197 | 0 | 4.d. |
| e. All other commercial MBS.. | RCFDK198 | 324,000 | 4.e. |
| 5. Other debt securities: |  |  | 5. |
| a. Structured financial products.. | RCFDHT62 | 4,200,000 | 5.a. |
| b. All other debt securities... | RCFDG386 | 132,040,000 | 5.b. |
| 6. Loans: |  |  | 6. |
| a. Loans secured by real estate |  |  | 6.a. |
| 1. Loans secured by 1-4 family residential properties.. | RCFDHT63 | 0 | 6.a.1. |
| 2. All other loans secured by real estate.. | RCFDHT64 | 112,000 | 6.a.2. |
| b. Commercial and industrial loans.. | RCFDF614 | 6,730,000 | 6.b. |
| c. Loans to individuals for household, family, and other personal expenditures (i.e., consumer loans) (includes purchased paper). | RCFDHT65 | 0 | 6.c. |
| d. Other loans... | RCFDF618 | 1,059,000 | 6.d. |
| 7. Not appliable |  |  | 7. |
| 8. Not applicable |  |  | 8. |
| 9. Other trading assets... | RCFD3541 | 139,865,000 | 9. |
| 10. Not applicable |  |  | 10. |
| 11. Derivatives with a positive fair value.. | RCFD3543 | 63,701,000 | 11. |
| 12. Total trading assets (sum of items 1 through 11) (total of column A must equal Schedule RC, item 5).. | RCFD3545 | 401,476,000 | 12. |
| 13. Not available |  |  | 13. |
| a. Liability for short positions.... | RCFD3546 | 80,158,000 | 13.a. |
| b. Other trading liabilities.. | RCFDF624 | 115,000 | 13.b. |
| 14. Derivatives with a negative fair value. | RCFD3547 | 42,994,000 | 14. |
| 15. Total trading liabilities (sum of items 13.a through 14) (total of column A must equal Schedule RC, item 15)... | RCFD3548 | 123,267,000 | 15. |
| 1. Unpaid principal balance of loans measured at fair value (reported in Schedule RC-D, items 6.a through 6.d): |  |  | M.1. |
| a. Loans secured by real estate |  |  | M.1.a. |
| 1. Loans secured by 1-4 family residential properties... | RCFDHT66 | 0 | M.1.a. |
| 2. All other loans secured by real estate.. | RCFDHT67 | 140,000 | M.1.a.2 |
| b. Commercial and industrial loans... | RCFDF632 | 9,052,000 | M.1.b. |
| c. Loans to individuals for household, family, and other personal expenditures (i.e., consumer loans) (includes purchased paper). | RCFDHT68 | 0 | M.1.c. |
| d. Other loans. | RCFDF636 | 1,675,000 | M.1.d. |
| Memorandum items 2 through 10 are to be completed by banks with $\$ 10$ billion or more in total trading assets. <br> 2. Loans measured at fair value that are past due 90 days or more: ${ }^{1}$ |  |  | M.2. |
| a. Fair value........................................................ | RCFDF639 | 272,000 | M.2.a. |
| b. Unpaid principal balance.............. | RCFDF640 | 1,750,000 | M.2.b. |

[^70]| Dollar amounts in thousands | Consolidated Bank |  | M.3. |
| :---: | :---: | :---: | :---: |
| Memorandum items 3 through 10 are to be completed by banks with $\$ 10$ billion or more in total trading assets. <br> 3. Structured financial products by underlying collateral or reference assets (for each column, sum of Memorandum items 3.a through 3.g must equal Schedule RC-D, sum of items 5.a.(1) through (3)): |  |  |  |
| a. Trust preferred securities issued by financial institutions. | RCFDG299 | 3,979,000 | м.з.а. |
| b. Trust preferred securities issued by real estate investment trusts.. | RCFDG332 | 0 | M.3.b. |
| c. Corporate and similar loans. | RCFDG333 | 221,000 | M.3.c. |
| d. 1-4 family residential MBS issued or guaranteed by U.S. government-sponsored enterprises (GSEs).............. | RCFDG334 | 0 | M.3.d. |
| e. 1-4 family residential MBS not issued or guaranteed by GSEs........................................................... | RCFDG335 | 0 | M.3.e. |
| f. Diversified (mixed) pools of structured financial products. | RCFDG651 | 0 | M.3.f. |
| g . Other collateral or reference assets. | RCFDG652 | 0 | M.3.g. |
| 4. Pledged trading assets: |  |  | M.4. |
| a. Pledged securities.. | RCFDG387 | 108,239,000 | M.4.a. |
| b. Pledged loans... | RCFDG388 | 228,000 | M.4.b. |

## Dollar amounts in thousands

| 5. Asset-backed securiti |  |  | M.5. <br> M.5.a. |
| :---: | :---: | :---: | :---: |
| a. Credit card receivables... | RCFDF643 | 99,000 |  |
| b. Home equity lines.. | RCFDF644 | 0 | M.5.b. |
| c. Automobile loans. | RCFDF645 | 55,000 | M.5.c. |
| d. Other consumer loans.. | RCFDF646 | 118,000 | M.5.d. |
| e. Commercial and industrial loans... | RCFDF647 | 0 | M.5.e. |
| f. Other... | RCFDF648 | 108,000 | M.5.f. |
| 6. Retained beneficial interests in securitizations (first-loss or equity tranches) |  |  | M.6. |
| 7. Equity securities (included in Schedule RC-D, item 9, above): |  |  | M.7. |
| a. Readily determinable fair values.... | RCFDF652 | 107,330,000 | M.7.a. |
| b. Other.... | RCFDF653 | 1,370,000 | M.7.b. |
| 8. Loans pending securitization... | RCFDF654 | 0 | M.8. |
| 9. Other trading assets (itemize and describe amounts included in Schedule RC-D, item 9, that are greater than $\$ 1,000,000$ and exceed $25 \%$ of the item): ${ }^{1}$ |  |  | M.9. |
| a. Disclose component and the dollar amount of that component: |  |  | M.9.a. |
| 1. Describe component.... | TEXTF655 | NR | M.9.a.1. |
| 2. Amount of component.................................................................................................................. | RCFDF655 | 0 | M.9.a.2. |
| b. Disclose component and the dollar amount of that component: |  |  | M.9.b. |
| (TEXTF656) NR | RCFDF656 | 0 | M.9.b.1. |
| c. Disclose component and the dollar amount of that component: |  |  | M.9.c. |
| (TEXTF657) NR | RCFDF657 | 0 | M.9.c.1. |
| 10. Other trading liabilities (itemize and describe amounts included in Schedule RC-D, item 13.b, that are greater than $\$ 1,000,000$ and exceed $25 \%$ of the item): |  |  | M. 10. |
| a. Disclose component and the dollar amount of that component: |  |  | M.10.a. |
| 1. Describe component..... | TEXTF658 | NR | M.10.a.1. |
| 2. Amount of component.................................................................................................................... | RCFDF658 | 0 | M.10.a.2. |
| b. Disclose component and the dollar amount of that component: |  |  | M.10.b. |
| (TEXTF659) NR | RCFDF659 | 0 | M.10.b.1. |
| c. Disclose component and the dollar amount of that component: |  |  | M.10.c. |
| (TEXTF660) NR | RCFDF660 | 0 | M.10.c.1. |

[^71]
## Schedule RC-E Part I - Deposits in Domestic Offices(Form Type - 031)

| Dollar amounts in thousands | (Column A) Transaction <br> Accounts Total Transaction accounts (including total demand deposits) |  | (Column B) Transaction Accounts Memo: Total demand deposits (included in column A) |  | (Column C) <br> Nontransaction Accounts Total nontransaction accounts (including MMDAs) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Deposits of: |  |  |  |  |  |  |
| 1. Individuals, partnerships, and corporations (include all certified and official checks) | RCONB549 | 437,899,000 |  |  | RCONB550 | 1,500,386,000 |
| 2. U.S. Government. | RCON2202 | 234,000 |  |  | RCON2520 | 7,000 |
| 3. States and political subdivisions in the U.S. | RCON2203 | 7,135,000 |  |  | RCON2530 | 38,277,000 |
| 4. Commercial banks and other depository institutions in the U.S. | RCONB551 | 1,924,000 |  |  | RCONB552 | 4,492,000 |
| 5. Banks in foreign countries..... | RCON2213 | 42,406,000 |  |  | RCON2236 | 17,913,000 |
| 6. Foreign governments and official institutions (including foreign central banks) | RCON2216 | 4,869,000 |  |  | RCON2377 | 12,500,000 |
| 7. Total (sum of items 1 through 6) (sum of columns $A$ and $C$ must equal Schedule RC, item 13.a). | RCON2215 | 494,467,000 | RCON2210 | 440,875,000 | RCON2385 | 1,573,575,000 |

1. Selected components of total deposits (i.e., sum of item 7, columns A and C):
a. Total Individual Retirement Accounts (IRAs) and Keogh Plan accounts.
b. Total brokered deposits
c. Brokered deposits of $\$ 250,000$ or less (fully insured brokered deposits) ${ }^{2}$.
d. Maturity data for brokered deposits:
2. Brokered deposits of $\$ 250,000$ or less with a remaining maturity of one year or less (included in Memorandum item 1.c above).
3. Not applicable
4. Brokered deposits of more than $\$ 250,000$ with a remaining maturity of one year or less (included in Memorandum item 1.b above)
e. Preferred deposits (uninsured deposits of states and political subdivisions in the U.S. reported in item 3 above which are secured or collateralized as required under state law) (to be completed for the December report only). f. Estimated amount of deposits obtained through the use of deposit listing services that are not brokered deposits.
g. Total reciprocal deposits (as of the report date)

Memorandum items 1.h.(1)(a), 1.h.(2)(a), 1.h.(3)(a), and 1.h.(4)(a) are to be completed by banks with $\$ 100$ billion or more in total assets
h. Sweep deposits:

1. Fully insured, affiliate sweep deposits.
a. Fully insured, affiliate, retail sweep deposits
2. Not fully insured, affiliate sweep deposits
a. Not fully insured, affiliate, retail sweep deposits.
3. Fully insured, non-affiliate sweep deposits.
a. Fully insured, non-affiliate, retail sweep deposits
4. Not fully insured, non-affiliate sweep deposits.
a. Not fully insured, non-affiliate, retail sweep deposits
i. Total sweep deposits that are not brokered deposits
5. Components of total nontransaction accounts (sum of Memorandum items 2.a through 2.d must equal item 7, column C above):
a. Savings deposits:
6. Money market deposit accounts (MMDAs)

|  |  | M.1. |
| :---: | :---: | :---: |
| RCON6835 | 14,090,000 | M.1.a. |
| RCON2365 | 90,816,000 | M.1.b. |
| RCONHK05 | 72,626,000 | M.1.c. |
|  |  | M.1.d. |
| RCONHK06 | 60,095,000 | M.1.d.1. |
|  |  | M.1.d.2. |
| RCONK220 | 18,189,000 | M.1.d.3 |
| RCON5590 | NR | M.1.e. |
| RCONK223 | 2,000 | M.1.f. |
| RCONJH83 | 4,421,000 | M.1.g. |
|  |  | M.1.h. |
| RCONMT87 | 17,440,000 | M.1.h.1 |
| RCONMT88 | 17,437,000 | M.1.h.1.a. |
| RCONMT89 | 11,841,000 | M.1.h.2. |
| RCONMT90 | 11,241,000 | M.1.h.2.a. |
| RCONMT91 | 17,032,000 | M.1.h.3 |
| RCONMT92 | 14,560,000 | M.1.h.3.a. |
| RCONMT93 | 0 | M.1.h.4 |
| RCONMT94 | 0 | M.1.h.4.a. |
| RCONMT95 | 33,577,000 | M.1.i. |
|  |  | M.2. |
|  |  | M.2.a. |
| RCON6810 | 890,560,000 | M.2.a.1. |
| RCON0352 | 477,647,000 | M.2.a.2. |
| RCON6648 | 67,133,000 | M.2.b. |
| RCONJ473 | 33,957,000 | M.2.c. |
| RCONJ474 | 104,278,000 | M.2.d. |
| RCONF233 | 360,000 | M.2.e. |
|  |  | M.3. |
|  |  | M.3.a. |
| RCONHK07 | 31,371,000 | M.3.a.1 |
| RCONHK08 | 55,922,000 | М.з.а.2 |
| RCONHK09 | 9,633,000 | М.з.а.з |
| RCONHK10 | 4,164,000 | М.3.a.4. |
| RCONHK11 | 87,292,000 | M.3.b. |
|  |  | M.4. |
|  |  | M.4.a. |
| RCONHK12 | 71,870,000 | M.4.a.1. |
| RCONHK13 | 31,739,000 | M.4.a.2. |
| RCONHK14 | 430,000 | м.4.а.3. |
| RCONHK15 | 239,000 | M.4.a.4. |

[^72]| b. Time deposits of more than $\$ 250,000$ with a REMAINING MATURITY of one year or less (included in Memorandum items 4.a.(1) and 4.a.(2) above) ${ }^{3}$. | RCONK222 | 94,553,000 | M.4.b. |
| :---: | :---: | :---: | :---: |
| 5. Does your institution offer one or more consumer deposit account products, i.e., transaction account or nontransaction savings account deposit products intended primarily for individuals for personal, household, or family use?. | RCONP752 | Yes | M.5. |
| Memorandum items 6 and 7 are to be completed by institutions with $\$ 1$ billion or more in total assets that answered "Yes" to Memorandum item 5 above. <br> 6. Components of total transaction account deposits of individuals, partnerships, and corporations (sum of Memorandum items 6 .a and $6 . b$ must be less than or equal to item 1 , column $A$, above): ${ }^{5}$ |  |  | M.6. |
| a. Total deposits in those noninterest-bearing transaction account deposit products intended primarily for individuals for personal, household, or family use. | RCONP753 | 32,594,000 | M.6.a. |
| b. Total deposits in those interest-bearing transaction account deposit products intended primarily for individuals for personal, household, or family use. | RCONP754 | 66,117,000 | M.6.b. |
| 7. Components of total nontransaction account deposits of individuals, partnerships, and corporations (sum of Memorandum items 7.a.(1), 7.a.(2), 7.b.(1), and 7.b.(2) plus all time deposits of individuals, partnerships, and corporations must equal item 1 , column C , above): |  |  | M.7. |
| a. Money market deposit accounts (MMDAs) of individuals, partnerships, and corporations (sum of Memorandum items 7.a.(1) and 7.a.(2) must be less than or equal to Memorandum item 2.a.(1) above): |  |  | M.7.a. |
| 1. Total deposits in those MMDA deposit products intended primarily for individuals for personal, household, or family use. | RCONP756 | 303,182,000 | M.7.a.1 |
| 2. Deposits in all other MMDAs of individuals, partnerships, and corporation | RCONP757 | 525,873,000 | M.7.a.2 |
| b. Other savings deposit accounts of individuals, partnerships, and corporations (sum of Memorandum items 7.b.(1) and 7.b.(2) must be less than or equal to Memorandum item 2.a.(2) above): |  |  | M.7.b. |
| 1. Total deposits in those other savings deposit account deposit products intended primarily for individuals for personal, household, or family use. | RCONP758 | 384,338,000 | M.7.b.1 |
| 2. Deposits in all other savings deposit accounts of individuals, partnerships, and corporation | RCONP759 | 86,626,000 | M.7.b.2. |

## Schedule RC-E Part II - Deposits in Foreign Offices including Edge and Agreement subsidiaries and IBFs(Form Type - 031)

Dollar amounts in thousands

| D |  |  |
| :---: | :---: | :---: |
| 1. Individuals, partnerships, and corporations (include all certified and official checks). | RCFNB553 | 339,747,000 |
| 2. U.S. banks (including IBFs and foreign branches of U.S. banks) and other U.S. depository institutions...... | RCFNB554 | 1,526,000 |
| 3. Foreign banks (including U.S. branches and agencies of foreign banks, including their IBFs). | RCFN2625 | 51,244,000 |
| 4. Foreign governments and official institutions (including foreign central banks). | RCFN2650 | 45,028,000 |
| 5. U.S. Government and states and political subdivisions in the U.S. | RCFNB555 | 63,000 |
| 6. Total.. | RCFN2200 | 437,608,000 |
| 1. Time deposits with a remaining maturity of one year or less (included in Schedule RC, item 13.b)........................ | RCFNA245 | 84,022,000 |

[^73]
## Schedule RC-F - Other Assets(Form Type - 031)

| Dollar amounts in thousands |  |  | 1. |
| :---: | :---: | :---: | :---: |
| 1. Accrued interest receivable ${ }^{2}$. | RCFDB556 | 11,772,000 |  |
| 2. Net deferred tax assets ${ }^{3}$. | RCFD2148 | 6,776,000 | 2. |
| 3. Interest-only strips receivable (not in the form of a security) ${ }^{4}$....................................................................... | RCFDHT80 | 0 | 3. |
| 4. Equity investments without readily determinable fair values ${ }^{5}$. | RCFD1752 | 5,469,000 | 4. |
| 5. Life insurance assets: |  |  | 5. |
| a. General account life insurance assets. | RCFDK201 | 6,598,000 | 5.a. |
| b. Separate account life insurance assets. | RCFDK202 | 5,722,000 | 5.b. |
| c. Hybrid account life insurance assets. | RCFDK270 | 0 | 5.c. |
| 6. All other assets (itemize and describe amounts greater than \$100,000 that exceed $25 \%$ of this item)................... | RCFD2168 | 130,517,000 | 6. |
| a. Prepaid expenses.. | RCFD2166 | 0 | 6.a. |
| b. Repossessed personal property (including vehicles).. | RCFD1578 | 0 | 6.b. |
| c. Derivatives with a positive fair value held for purposes other than trading.................................................... | RCFDC010 | 0 | 6.c. |
| d. FDIC loss-sharing indemnification assets................................................................................................ | RCFDJ448 | 0 | 6.d. |
| e. Computer software...... | RCFDFT33 | 0 | 6.e. |
| f. Accounts receivable............................................................................................................................. | RCFDFT34 | 56,319,000 | 6.f. |
| g. Receivables from foreclosed government-guaranteed mortgage loans...................................................... | RCFDFT35 | 0 | 6.g. |
| h. Disclose component and the dollar amount of that component: |  |  | 6.h. |
| 1. Describe component...................................................................................................................... | TEXT3549 | NR | 6.h.1. |
| 2. Amount of component................................................................................................................... | RCFD3549 | 0 | 6.h.2. |
| i. Disclose component and the dollar amount of that component: |  |  | 6.i. |
| 1. Describe component...................................................................................................................... | TEXT3550 | NR | 6.i.1. |
| 2. Amount of component.. | RCFD3550 | 0 | 6.i.2. |
| j. Disclose component and the dollar amount of that component: |  |  | 6.j. |
| 1. Describe component..................................................................................................................... | TEXT3551 | NR | 6.j. 1. |
| 2. Amount of component................................................................................................................... | RCFD3551 | 0 | 6.j.2. |
| 7. Total (sum of items 1 through 6) (must equal Schedule RC, item 11)................................................................ | RCFD2160 | 166,854,000 | 7. |

[^74]
## Schedule RC-G - Other Liabilities(Form Type - 031)

| Dollar amounts in thousands |  |  |  |
| :---: | :---: | :---: | :---: |
| 1. Not available |  |  | 1. |
| a. Interest accrued and unpaid on deposits in domestic offices ${ }^{6}$. | RCON3645 | 1,662,000 | 1.a. |
| b. Other expenses accrued and unpaid (includes accrued income taxes payable)............................................. | RCFD3646 | 30,365,000 | 1.b. |
| 2. Net deferred tax liabilities ${ }^{2}$ | RCFD3049 | 0 | 2. |
| 3. Allowance for credit losses on off-balance sheet credit exposures ${ }^{7}$. | RCFDB557 | 2,169,000 | 3. |
| 4. All other liabilities (itemize and describe amounts greater than \$100,000 that exceed 25 percent of this item)......... | RCFD2938 | 123,377,000 | 4. |
| a. Accounts payable.......................................................................................................................... | RCFD3066 | 89,484,000 | 4.a. |
| b. Deferred compensation liabilities.. | RCFDC011 | 0 | 4.b. |
| c. Dividends declared but not yet payable.. | RCFD2932 | 0 | 4.c. |
| d. Derivatives with a negative fair value held for purposes other than trading. | RCFDC012 | 0 | 4.d. |
| e. Operating lease liabilities.. | RCFDLB56 | 0 | 4.e. |
| f. Disclose component and the dollar amount of that component: |  |  | 4.f. |
| 1. Describe component..................................................................................................................... | TEXT3552 | NR | 4.f.1. |
| 2. Amount of component. | RCFD3552 | 0 | 4.f.2. |
| g. Disclose component and the dollar amount of that component: |  |  | 4.9. |
| 1. Describe component..................................................................................................................... | TEXT3553 | NR | 4.g.1. |
| 2. Amount of component.. | RCFD3553 | 0 | 4.g.2. |
| h. Disclose component and the dollar amount of that component: |  |  | 4.h. |
| 1. Describe component.................................................................................................................... | TEXT3554 | NR | 4.h.1. |
| 2. Amount of component. | RCFD3554 | 0 | 4.h.2. |
| 5. Total... | RCFD2930 | 157,573,000 | 5. |

[^75]
## Schedule RC-H - Selected Balance Sheet Items for Domestic Offices(Form Type - 031)

To be completed only by banks with foreign offices.


| Dollar amounts in thousands | (Column A) Amortized Cost of Held-to-Maturity Securities |  | (Column B) Fair Value of Available-for-Sale Securities |  | 10. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 10. U.S. Treasury securities. | RCON0211 | 202,655,000 | RCON1287 | 62,688,000 |  |
| 11. U.S. Government agency obligations (exclude mortgage-backed securities). | RCON8492 | 0 | RCON8495 | 49,000 | 11. |
| 12. Securities issued by states and political subdivisions in the U.S.. | RCON8496 | 11,654,000 | RCON8499 | 23,994,000 | 12. |
| 13. Mortgage-backed securities (MBS): |  |  |  |  | 13. |
| a. Mortgage pass-through securities: |  |  |  |  | 13.a. |
| 1. Issued or guaranteed by FNMA, FHLMC, or GNMA. | RCONG389 | 110,092,000 | RCONG390 | 73,879,000 | 13.a.1. |
| 2. Other mortgage pass-through securities. | RCON1709 | 0 | RCON1713 | 0 | 13.a.2. |
| b. Other mortgage-backed securities (include CMOs, REMICs, and stripped MBS): |  |  |  |  | 13.b. |
| 1. Issued or guaranteed by U.S. Government agencies or sponsored agencies ${ }^{1}$. | RCONG393 | 424,000 | RCONG394 | 5,888,000 | 13.b.1. |
| 2. All other mortgage-backed securities.... | RCON1733 | 21,041,000 | RCON1736 | 3,588,000 | 13.b.2. |
| 14. Other domestic debt securities (include domestic structured financial products and domestic asset-backed securities). $\qquad$ | RCONG397 | 5,371,000 | RCONG398 | 3,140,000 | 14. |
| 15. Other foreign debt securities (include foreign structured financial products and foreign asset-backed securities). | RCONG399 | 46,330,000 | RCONG400 | 4,570,000 | 15. |
| 16. Not applicable. |  |  |  |  | 16. |
| 17. Total held-to-maturity and available-for-sale debt securities (sum of items 10 through 15).. | RCON1754 | 397,567,000 | RCON1773 | 177,796,000 | 17. |

Dollar amounts in thousands
18. Equity investments not held for trading:
a. Equity securities with readily determinable fair values ${ }^{4}$.
b. Equity investments without readily determinable fair values.

Items 19, 20 and 21 are to be completed by banks that reported total trading assets of $\$ 10$ million or more in any of the four preceding calendar quarters and all banks meeting the FDIC's definition of a large or highly complex institution for deposit insurance assessment purposes.
19. Total trading assets.
20. Total trading liabilities.
21. Total loans held for trading
tem 22 is to be completed by banks that: (1) have elected to report financial instruments or servicing assets and liabilities at fair value under a fair value option with changes in fair value recognized in earnings, or (2) are required to complete Schedule RC-D, Trading Assets and Liabilities.
22. Total amount of fair value option loans held for investment and held for sale

|  |  |
| :---: | :---: |
| RCONJA22 | 913,000 |
| RCON1752 | 4,919,000 |
| RCON3545 | 100,667,000 |
| RCON3548 | 18,168,000 |
| RCONHT71 | 4,431,000 |
| RCONJF75 | 26,822,000 |

[^76]
## Schedule RC-I - Assets and Liabilities of IBFs(Form Type - 031)

To be completed only by banks with IBFs and other "foreign" offices.
Dollar amounts in thousands

1. Total IBF assets of the consolidated bank (component of Schedule RC, item 12).....................................................
2. Total IBF liabilities (component of Schedule RC, item 21).

| RCFN2133 | $\mathbf{1 8 2 , 0 0 0}$ | 1. |
| :--- | ---: | :--- |
| RCFN2898 | $\mathbf{3 1 , 7 6 9 , 0 0 0}$ | 2. |

## Schedule RC-K - Quarterly Averages(Form Type - 031)

| Dollar amounts in thousands |  |  | 1. |
| :---: | :---: | :---: | :---: |
| 1. Interest-bearing balances due from depository institutions............................................................................... | RCFD3381 | 494,917,000 |  |
| 2. U.S. Treasury securities and U.S. Government agency obligations (excluding mortgage-backed securities) ${ }^{2}$...... | RCFDB558 | 274,265,000 | 2. |
| 3. Mortgage-backed securities ${ }^{2}$. | RCFDB559 | 219,232,000 | 3. |
| 4. All other debt securities and equity securities with readily determinable fair values not held for trading ${ }^{2}$................. | RCFDB560 | 125,528,000 | 4. |
| 5. Federal funds sold and securities purchased under agreements to resell. | RCFD3365 | 345,875,000 | 5. |
| 6. Loans: |  |  | 6. |
| a. Loans in domestic offices: |  |  | 6.a. |
| 1. Total loans. | RCON3360 | 1,125,283,000 | 6.a.1. |
| 2. Loans secured by real estate: |  |  | 6.a.2. |
| a. Loans secured by 1-4 family residential properties. | RCON3465 | 301,475,000 | 6.a.2.a |
| b. All other loans secured by real estate... | RCON3466 | 159,036,000 | 6.a.2.b. |
| 3. Loans to finance agricultural production and other loans to farmers | RCON3386 | 606,000 | 6.a.3. |
| 4. Commercial and industrial loans. | RCON3387 | 166,987,000 | 6.a.4. |
| 5. Loans to individuals for household, family, and other personal expenditures: |  |  | 6.a.5. |
| a. Credit cards. | RCONB561 | 164,074,000 | 6.a.5.a. |
| b. Other (includes revolving credit plans other than credit cards, automobile loans, and other consumer loans) | RCONB562 | 83,963,000 | 6.a.5.b. |
| b. Total loans in foreign offices, Edge and Agreement subsidiaries, and IBFs................................................... | RCFN3360 | 121,307,000 | 6.b. |
| Item 7 is to be completed by banks with total trading assets of $\$ 10$ million or more in any of the four preceding calendar quarters and all banks meeting the FDIC's definition of a large or highly complex institution for deposit insurance assessment purposes. <br> 7. Trading assets. $\qquad$ | RCFD3401 | 382,292,000 | 7. |
| 8. Lease financing receivables (net of unearned income). | RCFD3484 | 120,000 | 8. |
| 9. Total assets ${ }^{4}$.. | RCFD3368 | 3,356,718,000 | 9. |
| 10. Interest-bearing transaction accounts in domestic offices (interest-bearing demand deposits, NOW accounts, ATS accounts, and telephone and preauthorized transfer accounts). | RCON3485 | 336,711,000 | 10. |
| 11. Nontransaction accounts in domestic offices: |  |  | 11. |
| a. Savings deposits (includes MMDAs).. | RCONB563 | 1,403,247,000 | 11.a. |
| b. Time deposits of \$250,000 or less... | RCONHK16 | 90,466,000 | 11.b. |
| c. Time deposits of more than \$250,000.. | RCONHK17 | 104,263,000 | 11.c. |
| 12. Interest-bearing deposits in foreign offices, EDGE and Agreement subsidiaries, and IBFs. | RCFN3404 | 411,545,000 | 12. |
| 13. Federal funds purchased and securities sold under agreements to repurchase. | RCFD3353 | 107,003,000 | 13. |
| 14. Other borrowed money (includes mortgage indebtedness and obligations under capitalized leases).................... | RCFD3355 | 154,035,000 | 14. |

[^77]
## Schedule RC-L - Derivatives and Off-Balance Sheet Items(Form Type - 031)

Please read carefully the instructions for the preparation of Schedule RC-L. Some of the amounts reported in Schedule RC-L are regarded as volume indicators and not necessarily as measures of risk.

| Dollar amounts in thousands |  |  | 1. |
| :---: | :---: | :---: | :---: |
| 1. Unused commitments: |  |  |  |
| a. Revolving, open-end lines secured by 1-4 family residential properties, i.e., home equity lines. <br> Item 1.a.(1) is to be completed for the December report only. <br> 1. Unused commitments for reverse mortgages outstanding that are held for investment in domestic offices.. <br> b. Credit card lines (Sum of items 1.b.(1) and 1.b.(2) must equal item 1.b). | RCFD3814 | 24,366,000 | 1.a. |
|  | RCONHT72 | NR | 1.a.1. |
|  | RCFD3815 | 881,448,000 | 1.b. |
| Items 1.b.(1) and 1.b.(2) are to be completed by banks with either $\$ 300$ million or more in total assets or $\$ 300$ million or more in credit card lines. (Sum of items 1.b.(1) and 1.b.(2) must equal item 1.b) <br> Items 1.b.(1) and 1.b.(2) are to be completed semiannually in the June and December reports only. <br> 1. Unused consumer credit card lines. | RCFDJ455 | 793,580,000 | 1.b.1. |
| 2. Other unused credit card lines...................................................................................................... | RCFDJ456 | 87,868,000 | 1.b.2. |
| c. Commitments to fund commercial real estate, construction, and land development loans: |  |  | 1.c. |
| 1. Secured by real estate: |  |  | 1.c.1. |
| a. 1-4 family residential construction loan commitments.......... | RCFDF164 | 2,310,000 | 1.c.1.a |
| b. Commercial real estate, other construction loan, and land development loan commitments. | RCFDF165 | 12,608,000 | 1.c.1.b. |
| 2. Not secured by real estate. | RCFD6550 | 13,279,000 | 1.c.2. |
| d. Securities underwriting. | RCFD3817 | 0 | 1.d. |
| e. Other unused commitments: |  |  | 1.e. |
| 1. Commercial and industrial loans. | RCFDJ457 | 321,246,000 | 1.e.1. |
| 2. Loans to financial institutions | RCFDJ458 | 91,353,000 | 1.e.2. |
| 3. All other unused commitments. | RCFDJ459 | 199,230,000 | 1.e.3. |
| 2. Financial standby letters of credit and foreign office guarantees | RCFD3819 | 64,575,000 | 2. |
| Item 2.a is to be completed by banks with $\$ 1$ billion or more in total assets. <br> a. Amount of financial standby letters of credit conveyed to others ${ }^{1}$ $\qquad$ | RCFD3820 | 40,635,000 | 2.a. |
| 3. Performance standby letters of credit and foreign office guarantees | RCFD3821 | 6,200,000 | 3. |
| Item 3.a is to be completed by banks with $\$ 1$ billion or more in total assets. <br> a. Amount of performance standby letters of credit conveyed to others ${ }^{1}$ $\qquad$ | RCFD3822 | 1,307,000 | 3.a. |
| 4. Commercial and similar letters of credit. | RCFD3411 | 3,783,000 | 4. |
| 5. Not applicable |  |  | 5. |
| 6. Securities lent and borrowed: |  |  | 6. |
| a. Securities lent (including customers' securities lent where the customer is indemnified against loss by the reporting bank) | RCFD3433 | 287,536,000 | 6.a. |
| b. Securities borrowed. | RCFD3432 | 168,900,000 | 6.b. |


| Dollar amounts in thousands | (Column A) Sold Protection |  | (Column B) Purchased Protection |  |
| :---: | :---: | :---: | :---: | :---: |
| 7. Credit derivatives: |  |  |  |  |
| a. Notional amounts: |  |  |  |  |
| 1. Credit default swaps... | RCFDC968 | 646,053,000 | RCFDC969 | 679,865,000 |
| 2. Total return swaps... | RCFDC970 | 12,046,000 | RCFDC971 | 35,141,000 |
| 3. Credit options............................................................................................. | RCFDC972 | 52,571,000 | RCFDC973 | 47,551,000 |
| 4. Other credit derivatives... | RCFDC974 | 19,000 | RCFDC975 | 6,413,000 |
| b. Gross fair values: |  |  |  |  |
| 1. Gross positive fair value.............................................................................. | RCFDC219 | 7,042,000 | RCFDC221 | 5,951,000 |
| 2. Gross negative fair value............................................................................. | RCFDC220 | 4,329,000 | RCFDC222 | 9,031,000 |

Dollar amounts in thousands



[^78]| Dollar amounts in thousands |  |  | 8. |
| :---: | :---: | :---: | :---: |
| 8. Spot foreign exchange contracts... | RCFD8765 | 950,552,000 |  |
| 9. All other off-balance sheet liabilities (exclude derivatives) (itemize and describe each component of this item over $25 \%$ of Schedule RC, item 27.a, "Total bank equity capital"). | RCFD3430 | 135,691,000 | 9. |
| a. Not applicable |  |  | 9.a. |
| b. Commitments to purchase when-issued securities.. | RCFD3434 | 0 | 9.b. |
| c. Standby letters of credit issued by another party (e.g., a Federal Home Loan Bank) on the bank's behalf......... | RCFDC978 | 0 | 9.c. |
| d. Disclose component and the dollar amount of that component: |  |  | 9.d. |
| 1. Describe component. | TEXT3555 | Click here for value | 9.d.1. |
| 2. Amount of component.. | RCFD3555 | 86,318,000 | 9.d.2. |
| e. Disclose component and the dollar amount of that component: |  |  | 9.e. |
| 1. Describe component., | TEXT3556 | NR | 9.e.1. |
| 2. Amount of component.. | RCFD3556 | 0 | 9.e.2. |
| f. Disclose component and the dollar amount of that component: |  |  | 9.f. |
| (TEXT3557) NR | RCFD3557 | 0 | 9.f.1. |
| 10. All other off-balance sheet assets (exclude derivatives) (itemize and describe each component of this item over $25 \%$ of Schedule RC, item 27.a, "Total bank equity capital") | RCFD5591 | 0 | 10. |
| a. Commitments to sell when-issued securities. | RCFD3435 | 0 | 10.a. |
| b. Disclose component and the dollar amount of that component: |  |  | 10.b. |
| 1. Describe component. | TEXT5592 | NR | 10.b.1. |
| 2. Amount of component. | RCFD5592 | 0 | 10.b.2. |
| c. Disclose component and the dollar amount of that component: |  |  | 10.c. |
| 1. Describe component. | TEXT5593 | NR | 10.c.1. |
| 2. Amount of component.. | RCFD5593 | 0 | 10.c.2. |
| d. Disclose component and the dollar amount of that component: |  |  | 10.d. |
| 1. Describe component... | TEXT5594 | NR | 10.d.1. |
| 2. Amount of component.. | RCFD5594 | 0 | 10.d.2. |
| e. Disclose component and the dollar amount of that component: |  |  | 10.e. |
| 1. Describe component... | TEXT5595 | NR | 10.e.1. |
| 2. Amount of component. | RCFD5595 | 0 | 10.e.2. |
| Items 11.a and 11.b are to be completed semiannually in the June and December reports only. 11. Year-to-date merchant credit card sales volume: |  |  | 11. |
| a. Sales for which the reporting bank is the acquiring bank. | RCFDC223 | 1,033,595,000 | 11.a. |
| b. Sales for which the reporting bank is the agent bank with risk.................................................................... | RCFDC224 | 0 | 11.b. |

[^79]
## (TEXT3555) Forward Repo agreements

| Dollar amounts in thousands | (Column A) Interest Rate Contracts |  | (Column B) Foreign Exchange Contracts |  | (Column C) Equity Derivative Contracts |  | (Column D) Commodity and Other Contracts |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12. Gross amounts (e.g., notional amounts): |  |  |  |  |  |  |  |  | 12. |
| a. Futures contracts | RCFD8693 | 648,347,000 | RCFD8694 | 67,563,000 | RCFD8695 | 91,271,000 | RCFD8696 | 59,686,000 | 12.a. |
| b. Forward contracts | RCFD8697 | 2,215,933,000 | RCFD8698 | 7,702,167,000 | RCFD8699 | 21,058,000 | RCFD8700 | 80,650,000 | 12.b. |
| c. Exchange-traded option contracts: |  |  |  |  |  |  |  |  |  |
| 1. Written options | RCFD8701 | 221,970,000 | RCFD8702 | 2,352,000 | RCFD8703 | 209,783,000 | RCFD8704 | 62,330,000 |  |
| 2. Purchased options.. | RCFD8705 | 303,466,000 | RCFD8706 | 1,578,000 | RCFD8707 | 238,772,000 | RCFD8708 | 64,256,000 | 12c2 |
| d. Over-the-counter option contracts: |  |  |  |  |  |  |  |  | 12.d. |
| 1. Written options | RCFD8709 | 3,114,264,000 | RCFD8710 | 861,468,000 | RCFD8711 | 429,755,000 | RCFD8712 | 84,242,000 |  |
| 2. Purchased options. | RCFD8713 | 3,102,113,000 | RCFD8714 | 820,933,000 | RCFD8715 | 395,911,000 | RCFD8716 | 53,806,000 | 12d2 |
| e. Swaps. | RCFD3450 | 30,084,983,000 | RCFD3826 | 4,475,665,000 | RCFD8719 | 778,567,000 | RCFD8720 | 297,461,000 | 12.e. |
| 13. Total gross notional amount of derivative contracts held for trading | RCFDA126 | 39,218,194,000 | RCFDA127 | 13,758,748,000 | RCFD8723 | 2,156,387,000 | RCFD8724 | 702,431,000 | 13. |
| 14. Total gross notional amount of derivative contracts held for purposes other than trading | RCFD8725 | 472,882,000 | RCFD8726 | 172,978,000 | RCFD8727 | 8,730,000 | RCFD8728 | 0 | 14. |
| a. Interest rate swaps where the bank has agreed to pay a fixed rate. | RCFDA589 | 237,758,000 |  |  |  |  |  |  | 14.a. |
| 15. Gross fair values of derivative contracts: |  |  |  |  |  |  |  |  | 15. |
| a. Contracts held for trading: |  |  |  |  |  |  |  |  | 15.a. |
| 1. Gross positive fair value... | RCFD8733 | 341,562,000 | RCFD8734 | 228,188,000 | RCFD8735 | 60,702,000 | RCFD8736 | 24,438,000 |  |
| 2. Gross negative fair value. | RCFD8737 | 324,845,000 | RCFD8738 | 225,437,000 | RCFD8739 | 62,356,000 | RCFD8740 | 24,849,000 | 15a2 |
| b. Contracts held for purposes other than trading: |  |  |  |  |  |  |  |  | 15.b. |
| 1. Gross positive fair value.......................................... | RCFD8741 | 2,772,000 | RCFD8742 | 1,113,000 | RCFD8743 | 0 | RCFD8744 | 0 | 15b1. |
| 2. Gross negative fair value......................................... | RCFD8745 | 217,000 | RCFD8746 | 1,026,000 | RCFD8747 | 392,000 | RCFD8748 | 0 | 15b2 |


| Dollar amounts in thousands | (Column A) <br> Banks and Securities Firms | (Column B) | (Column C) Hedge Funds | $\begin{aligned} & \text { (Column D) } \\ & \text { Sovereign } \\ & \text { Governments } \end{aligned}$ | (Column E) Corporations and All Other Counterparties |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Item 16 is to be completed only by banks with total assets of $\$ 10$ billion or more. 16. Over-the counter derivatives: ${ }^{1}$ |  |  |  |  |  |
| a. Net current credit exposure. | $\begin{aligned} & \hline \text { RCFDG418 } \\ & 43,335,000 \end{aligned}$ |  | $\begin{array}{r} \hline \text { RCFDG420 } \\ 3,569,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDG421 } \\ 6,020,000 \end{array}$ | $\begin{array}{c\|} \hline \text { RCFDG422 } \\ 73,659,000 \end{array}$ |
| b. Fair value of collateral: |  |  |  |  |  |
| 1. Cash - U.S. dollar. | $\begin{aligned} & \hline \text { RCFDG423 } \\ & 25,372,000 \end{aligned}$ |  | $\begin{aligned} & \hline \text { RCFDG425 } \\ & 23,229,000 \end{aligned}$ | $\begin{array}{r} \hline \text { RCFDG426 } \\ 603,000 \end{array}$ | $\begin{aligned} & \hline \text { RCFDG427 } \\ & 13,881,000 \end{aligned}$ |
| 2. Cash - Other currencies | $\begin{aligned} & \hline \text { RCFDG428 } \\ & 17,104,000 \end{aligned}$ |  | $\begin{array}{r} \hline \text { RCFDG430 } \\ 1,142,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDG431 } \\ 4,287,000 \end{array}$ | $\begin{aligned} & \hline \text { RCFDG432 } \\ & 14,587,000 \end{aligned}$ |
| 3. U.S. Treasury securities. | $\begin{array}{r} \hline \text { RCFDG433 } \\ 3,276,000 \end{array}$ |  | $\begin{array}{r} \hline \text { RCFDG435 } \\ 3,803,000 \end{array}$ | $\begin{array}{r} \text { RCFDG436 } \\ 97,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDG437 } \\ 5,997,000 \\ \hline \end{array}$ |
| 4. U.S. Government agency and U.S. Government-sponsored agency debt securities. | $\begin{array}{r} \hline \text { RCFDG438 } \\ 107,000 \end{array}$ |  | RCFDG440 | RCFDG441 | $\begin{array}{r} \hline \text { RCFDG442 } \\ 3,000 \end{array}$ |
| 5. Corporate bonds. | $\begin{array}{r} \hline \text { RCFDG443 } \\ 1,744,000 \end{array}$ |  | RCFDG445 | $\begin{array}{r} \hline \text { RCFDG446 } \\ 6,000 \\ \hline \end{array}$ | $\begin{array}{r} \hline \text { RCFDG447 } \\ 5,593,000 \end{array}$ |
| 6. Equity securities......................................................... | RCFDG448 817,000 |  | $\begin{array}{r} \hline \text { RCFDG450 } \\ 307,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDG451 } \\ 19,000 \end{array}$ | RCFDG452 <br> $3,131,000$ |
| 7. All other collateral......................................................... | $\begin{aligned} & \text { RCFDG453 } \\ & 6,404,000 \end{aligned}$ |  | $\begin{aligned} & \hline \text { RCFDG455 } \\ & 901,000 \end{aligned}$ | $\begin{array}{r} \text { RCFDG456 } \\ 920,000 \end{array}$ | $\begin{array}{c\|} \hline \text { RCFDG457 } \\ 17,941,000 \end{array}$ |
| 8. Total fair value of collateral (sum of items 16.b.(1) through <br> (7)). $\qquad$ | $\begin{aligned} & \hline \text { RCFDG458 } \\ & 54,824,000 \end{aligned}$ |  | $\begin{aligned} & \hline \text { RCFDG460 } \\ & 29,382,000 \end{aligned}$ | $\begin{array}{r} \hline \text { RCFDG461 } \\ 5,932,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDG462 } \\ 61,133,000 \end{array}$ |

[^80]
## Schedule RC-M - Memoranda(Form Type - 031)

Dollar amounts in thousands


[^81]Dollar amounts in thousands
b. URLs of all other public-facing Internet Web sites that the reporting institution uses to accept or solicit deposits from the public, if any (Example: www.examplebank.biz): ${ }^{1}$

1. URL 1.
2. URL 5
3. URL 6.
4. URL 7
5. URL 8
6. URL 9
7. URL 10.
c. Trade names other than the reporting institution's legal title used to identify one or more of the institution's physical offices at which deposits are accepted or solicited from the public, if any:
8. Trade name 1
9. Trade name 2
10. Trade name 3
11. Trade name 4
12. Trade name 5
13. Trade name 6

Item 9 is to be completed annually in the December report only.
9. Do any of the bank's Internet Web sites have transactional capability, i.e., allow the bank's customers to execute transactions on their accounts through the Web site?.

## 10. Secured liabilities:

a. Amount of "Federal funds purchased in domestic offices" that are secured (included in Schedule RC, item 14.a).
b. Amount of "Other borrowings" that are secured (included in Schedule RC-M, items 5.b.(1)(a) - (d))
11. Does the bank act as trustee or custodian for Individual Retirement Accounts, Health Savings Accounts, and other similar accounts?.
12. Does the bank provide custody, safekeeping, or other services involving the acceptance of orders for the sale or purchase of securities?
13. Assets covered by loss-sharing agreements with the FDIC:
a. Loans and leases (included in Schedule RC, items 4.a and 4.b):

1. Loans secured by real estate in domestic offices:
a. Construction, land development, and other land loans:
2. 1-4 family residential construction loans
3. Other construction loans and all land development and other land loans.
b. Secured by farmland.
c. Secured by 1-4 family residential properties:
4. Revolving, open-end loans secured by 1-4 family residential properties and extended under lines of credit.
5. Closed-end loans secured by 1-4 family residential properties:
a. Secured by first liens.
b. Secured by junior liens
d. Secured by multifamily (5 or more) residential properties.
e. Secured by nonfarm nonresidential properties:
6. Loans secured by owner-occupied nonfarm nonresidential properties.
7. Loans secured by other nonfarm nonresidential properties.
8. Not applicable
9. Not applicable
10. Not applicable
11. All other loans and all leases.

|  |  | 8.b. |
| :---: | :---: | :---: |
| TE01N528 | Click here for value | 8.b.1. |
| TE02N528 | Click here for value | 8.b.2. |
| TE03N528 | Click here for value | 8.b.3. |
| TE04N528 | NR | 8.b.4. |
| TE05N528 | NR | 8.b.5. |
| TE06N528 | NR | 8.b.6. |
| TE07N528 | NR | 8.b.7. |
| TE08N528 | NR | 8.b.8. |
| TE09N528 | NR | 8.b.9. |
| TE10N528 | NR | 8.b.10. |
|  |  | 8.c. |
| TE01N529 | Chase | 8.c. 1 |
| TE02N529 | J.P.Morgan | 8.c.2. |
| TE03N529 | Click here for value | 8.c.3. |
| TE04N529 | Click here for value | 8.c.4. |
| TE05N529 | Click here for value | 8.c.5. |
| TE06N529 | NR | 8.c.6. |
| RCFD4088 | NR | 9. |
|  |  | 10. |
| RCONF064 | 0 | 10.a. |
| RCFDF065 | 76,331,000 | 10.b. |
| RCONG463 | Yes | 11. |
| RCONG464 | Yes | 12. |
|  |  | 13. |
|  |  | 13.a. |
|  |  | 13.a.1. |
|  |  | 13.a.1.a. |
| RCONK169 | 1,779,000 | 13.a.1.a.1. |
| RCONK170 | 1,792,000 | 13.a.1.a.2. |
| RCONK171 | 110,000 | 13.a.1.b. |
|  |  | 13.a.1.c. |
| RCONK172 | 2,584,000 | 13.a.1.c.1. |
|  |  | 13.a.1.c.2. |
| RCONK173 | 86,095,000 | 13.a1.c2a |
| RCONK174 | 222,000 | 13.a1.c2b |
| RCONK175 | 20,718,000 | 13.a.1.d. |
|  |  | 13.a.1.e. |
| RCONK176 | 1,324,000 | 13.a.1.e.1. |
| RCONK177 | 9,580,000 | 13.a.1.e.2. |
|  |  | 13.a.2. |
|  |  | 13.a.3. |
|  |  | 13.a.4. |
| RCFDK183 | 19,113,000 | 13.a.5. |

[^82]
## Dollar amounts in thousands



## (TE01N528) www.chase.com

 bank.

1. Report information about international electronic transfers of funds offered to consumers in the United States that: (a) are "remittance transfers" as defined by subpart B of Regulation $E$ (12 CFR § 1005.30(e)), or (b) would qualify as "remittance transfers" under subpart B of Regulation E (12 CFR § 1005.30(e)) but are excluded from that definition only because the provider is not providing those transfers in the normal course of its business. See 12 CFR § 1005.30(f). For purposes of this item 16, such trans
 1102 of the 2020 Coronavirus Aid, Relief, and Economic Security Act.
(TE02N528) www.jpmorgan.com
(TE03N528) www.jpmorgan.chase.com
(TE03N529) JPMorgan Chase
(TE04N529) Chase Private Client
(TE05N529) J.P.Morgan Private Bank
(TEXT4087) www.jpmorganchase.com

## Schedule RC-N - Past Due and Nonaccrual Loans Leases and Other Assets(Form Type -031)

| Dollar amounts in thousands | (Column A) Past due 30 through 89 days and still accruing |  | (Column B) Past due 90 days or more and still accruing |  | (Column C) Nonaccrual |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | 1. |
| a. Construction, land development, and other land loans in domestic offices: |  |  |  |  |  |  | a. |
| 1. 1-4 family residential construction loans | RCONF172 | 8,000 | RCONF174 | 0 | RCONF176 | 13,000 | a.1. |
| 2. Other construction loans and all land development and other land loans. | RCONF173 | 65,000 | RCONF175 | 0 | RCONF177 | 279,000 | 1.a.2. |
| b. Secured by farmland in domestic offices. | RCON3493 | 0 | RCON3494 | 0 | RCON3495 | 1,000 | b. |
| Secured by 1-4 family residential properties in domestic offices: |  |  |  |  |  |  | 1.c. |
| 1. Revolving, open-end loans secured by 1-4 family residential properties and extended under lines of credit. | RCON5398 | 119,000 | RCON5399 | 0 | RCON5400 | 956,000 | 1.c.1. |
| 2. Closed-end loans secured by 1-4 family residential properties: |  |  |  |  |  |  | 1.c.2. |
| a. Secured by first liens.. | RCONC236 | 804,000 | RCONC237 | 78,000 | RCONC229 | 3,291,000 | .c2a |
| b. Secured by junior liens | RCONC238 | 3,000 | RCONC239 | 0 | RCONC230 | 47,000 | 1.c.2. |
| d. Secured by multifamily (5 or more) residential properties in domestic offices. | RCON3499 | 30,000 | RCON3500 | 0 | RCON3501 | 56,000 | 1.d. |
| e. Secured by nonfarm nonresidential properties in domestic offices: |  |  |  |  |  |  | 1.e. |
| 1. Loans secured by owner-occupied nonfarm nonresidential properties. | RCONF178 | 39,000 | RCONF180 | 0 | RCONF182 | 68,000 | 1.e.1. |
| 2. Loans secured by other nonfarm nonresidential properties... | RCONF179 | 80,000 | RCONF181 | 0 | RCONF183 | 328,000 | 1.e.2. |
| f. In foreign offices. | RCFNB572 | 1,000 | RCFNB573 | 0 | RCFNB574 | 138,000 | 1.f. |
| 2. Loans to depository institutions and acceptances of other banks: |  |  |  |  |  |  | 2. |
| a. To U.S. banks and other U.S. depository institutions. | RCFD5377 | 0 | RCFD5378 | 0 | RCFD5379 | 0 | 2.a. |
| b. To foreign banks. | RCFD5380 | 17,000 | RCFD5381 | 0 | RCFD5382 | 0 | 2.b. |
| 3. Loans to finance agricultural production and other loans to farmers. | RCFD1594 | 1,000 | RCFD1597 | 1,000 | RCFD1583 | 0 | 3. |
| 4. Commercial and industrial loans: |  |  |  |  |  |  | 4. |
| a. To U.S. addressees (domicile). | RCFD1251 | 1,394,000 | RCFD1252 | 378,000 | RCFD1253 | 962,000 | 4.a. |
| b. To non-U.S. addressees (domicile). | RCFD1254 | 172,000 | RCFD1255 | 15,000 | RCFD1256 | 622,000 | 4.b. |
| 5. Loans to individuals for household, family, and other personal expenditures: |  |  |  |  |  |  | 5. |
| a. Credit cards | RCFDB575 | 1,446,000 | RCFDB576 | 1,421,000 | RCFDB577 | 0 | 5.a. |
| b. Automobile loans.. | RCFDK213 | 576,000 | RCFDK214 | 0 | RCFDK215 | 109,000 | 5.b. |
| c. Other (includes revolving credit plans other than credit cards and other consumer loans). | RCFDK216 | 307,000 | RCFDK217 | 1,000 | RCFDK218 | 40,000 | 5.c. |
| 6. Loans to foreign governments and official institutions. | RCFD5389 | 0 | RCFD5390 | 0 | RCFD5391 | 0 | 6. |
| 7. All other loans | RCFD5459 | 978,000 | RCFD5460 | 120,000 | RCFD5461 | 582,000 | 7. |
| 8. Lease financing receivables: |  |  |  |  |  |  | 8. |
| a. Leases to individuals for household, family, and other personal expenditures. | RCFDF166 | 0 | RCFDF167 | 0 | RCFDF168 | 0 | 8.a. |
| b. All other leases. | RCFDF169 | 0 | RCFDF170 | 0 | RCFDF171 | 0 | 8.b. |
| 9. Total loans and leases (sum of items 1 through 8.b). | RCFD1406 | 6,040,000 | RCFD1407 | 2,014,000 | RCFD1403 | 7,492,000 | 9. |
| 10. Debt securities and other assets (exclude other real estate owned and other repossessed assets). | RCFD3505 | 0 | RCFD3506 | 0 | RCFD3507 | 458,000 | 10. |
| 11. Loans and leases reported in items 1 through 8 above that are wholly or partially guaranteed by the U.S. Government, excluding loans and leases covered by loss-sharing agreements with the FDIC: | RCFDK036 | 105,000 | RCFDK037 | 79,000 | RCFDK038 | 250,000 | 11. |
| a. Guaranteed portion of loans and leases included in item 11 above, excluding rebooked "GNMA loans". | RCFDK039 | 56,000 | RCFDK040 | 1,000 | RCFDK041 | 151,000 | 11.a. |
| b. Rebooked "GNMA loans" that have been repurchased or are eligible for repurchase included in item 11 above. | RCFDK042 | 46,000 | RCFDK043 | 78,000 | RCFDK044 | 91,000 | 11.b. |
| 12. Loans and leases reported in items 1 through 8 above that are covered by loss-sharing agreements with the FDIC: |  |  |  |  |  |  | 12. |
| a. Loans secured by real estate in domestic offices: |  |  |  |  |  |  | 12.a. |
| 1. Construction, land development, and other land loans: |  |  |  |  |  |  | 12.a.1. |
| a. 1-4 family residential construction loans............................. | RCONK045 | 8,000 | RCONK046 | 0 | RCONK047 | 10,000 | 12a1a |


| Dollar amounts in thousands | (Column A) Past due 30 through 89 days and still accruing |  | (Column B) Past due 90 days or more and still accruing |  | (Column C) Nonaccrual |  | 12a1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| b. Other construction loans and all land development and other land loans | RCONK048 | 6,000 | RCONK049 | 0 | RCONK050 | 5,000 |  |
| 2. Secured by farmland.. | RCONK051 | 0 | RCONK052 | 0 | RCONK053 | 0 | 12.a. 2 |
| 3. Secured by 1-4 family residential properties: |  |  |  |  |  |  | 2.a.3. |
| a. Revolving, open-end loans secured by 1-4 family residential properties and extended under lines of credit. | RCONK054 | 17,000 | RCONK055 | 0 | RCONK056 | 13,000 | 12a3a |
| b. Closed-end loans secured by 1-4 family residential properties: |  |  |  |  |  |  | 12а3b |
| 1. Secured by first liens... | RCONK057 | 53,000 | RCONK058 | 0 | RCONK059 | 89,000 | 12331. |
| 2. Secured by junior liens. | RCONK060 | 0 | RCONK061 | 0 | RCONK062 | 3,000 | 2a30 |
| 4. Secured by multifamily (5 or more) residential properties............. | RCONK063 | 21,000 | RCONK064 | 0 | RCONK065 | 0 | 12.a. 4 |
| 5. Secured by nonfarm nonresidential properties: |  |  |  |  |  |  | 12.a.5. |
| a. Loans secured by owner-occupied nonfarm nonresidential properties. | RCONK066 | 1,000 | RCONK067 | 0 | RCONK068 | 0 | 12a5a |
| b. Loans secured by other nonfarm nonresidential properties. | RCONK069 | 20,000 | RCONK070 | 0 | RCONK071 | 20,000 | 12a5b |
| b. Not applicable |  |  |  |  |  |  | 12.b. |
| c. Not applicable |  |  |  |  |  |  | 12.c. |
| d. Not applicable |  |  |  |  |  |  | 12.d. |
| e. All other loans and all leases. | RCFDK087 | 12,000 | RCFDK088 | 0 | RCFDK089 | 2,000 | 12.e. |
| f. Portion of covered loans and leases included in items 12.a through 12.e above that is protected by FDIC loss-sharing agreements. | RCFDK102 | 117,000 | RCFDK103 | 0 | RCFDK104 | 120,000 | 12.f. |
| 1. Loans restructured in troubled debt restructurings included in Schedule RC-N, items 1 through 7, above (and not reported in Schedule RC-C, Part 1, Memorandum item 1): |  |  |  |  |  |  | M.1. |
| a. Construction, land development, and other land loans in domestic offices: |  |  |  |  |  |  | M.1.a |
| 1. 1-4 family residential construction loans | RCONK105 | 0 | RCONK106 | 0 | RCONK107 | 0 | M1a1. |
| 2. Other construction loans and all land development and other land loans. | RCONK108 | 0 | RCONK109 | 0 | RCONK110 | 5,000 | M1a2 |
| b. Loans secured by 1-4 family residential properties in domestic offices.. | RCONF661 | 0 | RCONF662 | 0 | RCONF663 | 88,000 | M.1.b |
| c. Secured by multifamily (5 or more) residential properties in domestic offices. | RCONK111 | 0 | RCONK112 | 0 | RCONK113 | 0 | M.1.c. |
| d. Secured by nonfarm nonresidential properties in domestic offices: |  |  |  |  |  |  | M.1.d. |
| 1. Loans secured by owner-occupied nonfarm nonresidential properties. | RCONK114 | 1,000 | RCONK115 | 0 | RCONK116 | 2,000 | M1.d1 |
| 2. Loans secured by other nonfarm nonresidential properties.......... | RCONK117 | 0 | RCONK118 | 0 | RCONK119 | 0 | M1.d2 |
| e. Commercial and industrial loans: |  |  |  |  |  |  | M.1.e. |
| 1. To U.S. addressees (domicile). | RCFDK120 | 4,000 | RCFDK121 | 5,000 | RCFDK122 | 81,000 | M1.e1. |
| 2. To non-U.S. addressees (domicile). | RCFDK123 | 0 | RCFDK124 | 0 | RCFDK125 | 54,000 | M1.e2 |
| f. All other loans (include loans to individuals for household, family, and other personal expenditures). | RCFDK126 | 34,000 | RCFDK127 | 22,000 | RCFDK128 | 303,000 | M.1.f. |
| Itemize loan categories included in Memorandum item 1.f, above that exceed 10 percent of total loans restructured in troubled debt restructurings that are past due 30 days or more or in nonaccrual status (sum of Memorandum items 1.a through 1.f, columns A through C): <br> 1. Loans secured by farmland in domestic offices. | RCONK130 | 0 | RCONK131 | 0 | RCONK132 | 0 | M.1.f1. |
| 2. Not applicable |  |  |  |  |  |  | M.1.f2 |
| 3. Loans to finance agricultural production and other loans to farmers | RCFDK138 | 0 | RCFDK139 | 0 | RCFDK140 | 0 | M.1.f3 |
| 4. Loans to individuals for household, family, and other personal expenditures: |  |  |  |  |  |  | M.1.f. |
| a. Credit cards.... | RCFDK274 | 0 | RCFDK275 | 0 | RCFDK276 | 0 | M154a |
| b. Automobile loans.... | RCFDK277 | 0 | RCFDK278 | 0 | RCFDK279 | 0 | M1:4b |
| c. Other (includes revolving credit plans other than credit cards and other consumer loans). | RCFDK280 | 0 | RCFDK281 | 0 | RCFDK282 | 0 | M144a |
| g. Total loans restructured in troubled debt restructurings included in Schedule RC-N, items 1 through 7, above and not reported in Schedule RC-C, Part I, Memorandum item 1 (sum of items Memorandum item 1.a.(1) through Memorandum item 1.f) ${ }^{1}$. | RCFDHK26 | 39,000 | RCFDHK27 | 27,000 | RCFDHK28 | 533,000 | M.1.g |

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Dollar amounts in thousands

| Memorandum items 7, 8, 9.a, and 9.b are to be completed semiannually in the June and December reports only. <br> 7. Additions to nonaccrual assets during the previous six months. | RCFDC410 | 2,905,000 | м.7. <br> M. 8. |
| :---: | :---: | :---: | :---: |
| 8. Nonaccrual assets sold during the previous six months. | RCFDC411 | 100,000 |  |


| Dollar amounts in thousands | (Column A) Past due 30 through 89 days and still accruing |  | (Column B) Past due 90 days or more and still accruing |  | (Column C) Nonaccrual |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 9. Purchased credit-impaired loans accounted for in accordance with FASB ASC 310-30 (former AICPA Stament of Position 03-3): ${ }^{2}$ |  |  |  |  |  |  |
| a. Outstanding balance. | RCFDL183 | NR | RCFDL184 | NR | RCFDL185 | NR |
| b. Amount included in Schedule RC-N, items 1 through 7, above.... | RCFDL186 | NR | RCFDL187 | NR | RCFDL188 | NR |

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## Schedule RC-O - Other Data for Deposit Insurance and FICO Assessments(Form Type -031)

All FDIC-insured depository institutions must complete items 1 through 9, 10, and 11, Memorandum item 1, and, if applicable, item 9.a, Memorandum items 2, 3, and 6 through 18 each quarter. Unless otherwise indicated, complete items 1 through 11 and Memorandum items 1 through 3 on an "unconsolidated single FDIC certificate number basis" (see instructions) and complete Memorandum items 6 through 18 on a fully consolidated basis.

Dollar amounts in thousands

1. Total deposit liabilities before exclusions (gross) as defined in Section 3(I) of the Federal Deposit Insurance Act and FDIC regulations.
2. Total allowable exclusions, including interest accrued and unpaid on allowable exclusions (including foreign deposits).
3. Total foreign deposits, including interest accrued and unpaid thereon (included in item 2 above).
4. Average consolidated total assets for the calendar quarter.
a. Averaging method used (for daily averaging, enter 1 ; for weekly averaging, enter 2).
5. Average tangible equity for the calendar quarter ${ }^{1}$
6. Holdings of long-term unsecured debt issued by other FDIC-insured depository institutions.
7. Unsecured "Other borrowings" with a remaining maturity of (sum of items 7. a through 7. d must be less than or equal to Schedule RC-M, items 5.b.(1)(a)-(d) minus item 10.b):
a. One year or less.
b. Over one year through three years.
c. Over three years through five years.
d. Over five years.
8. Subordinated notes and debentures with a remaining maturity of (sum of items 8.a through 8.d must equal Schedule RC, item 19):
a. One year or less
b. Over one year through three years
c. Over three years through five years.
d. Over five years.
9. Brokered reciprocal deposits (included in Schedule RC-E, Part I, Memorandum item 1.b).

Item 9 .a is to be completed on a fully consolidated basis by all institutions that own another insured depository institution.
a. Fully consolidated brokered reciprocal deposits.
10. Banker's bank certification: Does the reporting institution meet both the statutory definition of a banker's bank and the business conduct test set forth in FDIC regulations? If the answer to item 10 is "YES," complete items 10.a and 10.b.

If the answer to item 10 is "YES," complete items 10.a and 10.b.
a. Banker's bank deduction.
b. Banker's bank deduction limit.
11. Custodial bank certification: Does the reporting institution meet the definition of a custodial bank set forth in FDIC regulations? If the answer to item 11 is "YES," complete items 11.a and 11.b..

If the answer to item 11 is "YES," complete items 11.a and 11.b.
a. Custodial bank deduction.
b. Custodial bank deduction limit.

1. Total deposit liabilities of the bank (including related interest accrued and unpaid) less allowable exclusions (including related interest accrued and unpaid) (sum of Memorandum items 1.a.(1), 1.b.(1), 1.c.(1), and 1.d.(1) must equal Schedule RC-O, item 1 less item 2):
a. Deposit accounts (excluding retirement accounts) of $\$ 250,000$ or less: ${ }^{1}$
2. Amount of deposit accounts (excluding retirement accounts) of $\$ 250,000$ or less
3. Number of deposit accounts (excluding retirement accounts) of $\$ 250,000$ or less.
b. Deposit accounts (excluding retirement accounts) of more than $\$ 250,000:^{1}$
4. Amount of deposit accounts (excluding retirement accounts) of more than $\$ 250,000$.
5. Number of deposit accounts (excluding retirement accounts) of more than $\$ 250,000$.
c. Retirement deposit accounts of $\$ 250,000$ or less: ${ }^{1}$
6. Amount of retirement deposit accounts of $\$ 250,000$ or less
7. Number of retirement deposit accounts of $\$ 250,000$ or less.
d. Retirement deposit accounts of more than $\$ 250,000:^{1}$

| RCFDF236 | 2,558,459,000 | 1. |
| :---: | :---: | :---: |
| RCFDF237 | 466,168,000 | 2. |
| RCFNF234 | 466,168,000 | 3. |
| RCFDK652 | 3,388,164,000 | 4. |
| RCFDK653 | 1 | 4.a. |
| RCFDK654 | 274,697,000 | 5. |
| RCFDK655 | 38,000 | 6. |
|  |  | 7. |
| RCFDG465 | 15,874,000 | 7.a. |
| RCFDG466 | 39,233,000 | 7.b. |
| RCFDG467 | 3,921,000 | 7.c. |
| RCFDG468 | 6,336,000 | 7.d. |
|  |  | 8. |
| RCFDG469 | 0 | 8.a. |
| RCFDG470 | 258,000 | 8.b. |
| RCFDG471 | 0 | 8.c. |
| RCFDG472 | 0 | 8.d. |
| RCONG803 | 0 | 9. |
| RCONL190 | NR | 9.a. |
| RCFDK656 | No | 10. |
| RCFDK657 | NR | 10.a. |
| RCFDK658 | NR | 10.b. |
| RCFDK659 | Yes | 11. |
| RCFDK660 | 943,286,000 | 11.a. |
| RCFDK661 | 235,327,000 | 11.b. |
|  |  | M.1. |
|  |  | M.1.a. |
| RCONF049 | 853,680,000 | M.1.a. 1 |
| RCONF050 | 107545091 | M.1.a.2 |
|  |  | M.1.b. |
| RCONF051 | 1,224,521,000 | M.1.b.1 |
| RCONF052 | 770737 | M.1.b.2 |
|  |  | M.1.c. |
| RCONF045 | 10,693,000 | M.1.c.1 |
| RCONF046 | 2030624 | M.1.c.2. |
|  |  | M.1.d. |

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# JPMORGAN CHASE BANK, NATIONAL ASSOCIATION 

Dollar amounts in thousands

| 1. Amount of retirement deposit accounts of more than \$250,000. | RCONF047 | 3,397,000 | M.1.d. 1 |
| :---: | :---: | :---: | :---: |
| 2. Number of retirement deposit accounts of more than \$250,000. | RCONF048 | 4669 | M.1.d.2 |
| Memorandum item 2 is to be completed by banks with $\$ 1$ billion or more in total assets. <br> 2. Estimated amount of uninsured deposits in domestic offices of the bank and in insured branches in Puerto Rico and U.S. territories and possessions, including related interest accrued and unpaid (see instructions) ${ }^{3}$. | RCON5597 | 1,043,331,000 | M.2. |
| 3. Has the reporting institution been consolidated with a parent bank or savings association in that parent bank's or parent savings association's Call Report? If so, report the legal title and FDIC Certificate Number of the parent bank or parent savings association: |  |  | M.3. |
| a. Legal title | TEXTA545 | NR | M.3.a. |
| b. FDIC Certificate Number. | RCONA545 | 0 | M.3.b. |
| 4. Dually payable deposits in the reporting institution's foreign branches | RCFNGW43 | 0 | M.4. |
| Memorandum items 5 through 12 are to be completed by "large institutions" and "highly complex institutions" as defined in FDIC regulations. 5. Applicable portion of the CECL transitional amount or modified CECL transitional amount that has been added to retained earnings for regulatory capital purposes as of the current report date and is attributable to loans and leases held for investment. | RCFDMW53 | 1,154,000 | M.5. |
| 6. Criticized and classified items: |  |  | M.6. |
| a. Special mention. | RCFDK663 | CONF | M.6.a. |
| b. Substandard.. | RCFDK664 | CONF | M.6.b. |
| c. Doubtful. | RCFDK665 | CONF | M.6.c. |
| d. Loss | RCFDK666 | CONF | M.6.d. |
| 7. "Nontraditional 1-4 family residential mortgage loans" as defined for assessment purposes only in FDIC regulations: |  |  | M.7. |
| a. Nontraditional 1-4 family residential mortgage loans | RCFDN025 | CONF | M.7.a. |
| b. Securitizations of nontraditional 1-4 family residential mortgage loans. | RCFDN026 | CONF | M.7.b. |
| 8. "Higher-risk consumer loans" as defined for assessment purposes only in FDIC regulations: |  |  | M.8. |
| a. Higher-risk consumer loans. | RCFDN027 | CONF | M.8.a. |
| b. Securitizations of higher-risk consumer loans | RCFDN028 | CONF | M.8.b. |
| 9. "Higher-risk commercial and industrial loans and securities" as defined for assessment purposes only in FDIC regulations: |  |  | M.9. |
| a. Higher-risk commercial and industrial loans and securities | RCFDN029 | CONF | M.9.a. |
| b. Securitizations of higher-risk commercial and industrial loans and securities | RCFDN030 | CONF | M.9.b. |
| 10. Commitments to fund construction, land development, and other land loans secured by real estate for the consolidated bank: |  |  | M. 10. |
| a. Total unfunded commitments | RCFDK676 | 11,431,000 | M.10.a. |
| b. Portion of unfunded commitments guaranteed or insured by the U.S. government (including the FDIC). | RCFDK677 | 2,820,000 | M.10.b. |
| 11. Amount of other real estate owned recoverable from the U.S. government under guarantee or insurance provisions (excluding FDIC loss-sharing agreements). | RCFDK669 | 9,000 | M.11. |
| 12. Nonbrokered time deposits of more than $\$ 250,000$ in domestic offices (included in Schedule RC-E, Memorandum item 2.d). | RCONK678 | 102,606,000 | M. 12. |
| Memorandum item 13.a is to be completed by "large institutions" and "highly complex institutions" as defined in FDIC regulations. Memorandum items 13.b through $13 . \mathrm{h}$ are to be completed by "large institutions" only. |  |  |  |
| 13. Portion of funded loans and securities in domestic and foreign offices guaranteed or insured by the U.S. government (including FDIC loss-sharing agreements): |  |  | M. 13. |
| a. Construction, land development, and other land loans secured by real estate. | RCFDN177 | 3,174,000 | M.13.a. |
| b. Loans secured by multifamily residential and nonfarm nonresidential properties... | RCFDN178 | 0 | M.13.b. |
| c. Closed-end loans secured by first liens on 1-4 family residential properties.. | RCFDN179 | 0 | M.13.c. |
| d. Closed-end loans secured by junior liens on 1-4 family residential properties and revolving, open-end loans secured by 1-4 family residential properties and extended under lines of credit. | RCFDN180 | 0 | M.13.d. |
| e. Commercial and industrial loans. | RCFDN181 | 0 | M.13.e. |
| f. Credit card loans to individuals for household, family, and other personal expenditures. | RCFDN182 | 0 | M.13.f. |
| g. All other loans to individuals for household, family, and other personal expenditures. | RCFDN183 | 0 | M.13.g. |
| h. Non-agency residential mortgage-backed securities... | RCFDM963 | 0 | M.13.h. |
| Memorandum items 14 and 15 are to be completed by "highly complex institutions" as defined in FDIC regulations. <br> 14. Amount of the institution's largest counterparty exposure. | RCFDK673 | CONF | M. 14. |
| 15. Total amount of the institution's 20 largest counterparty exposures. | RCFDK674 | CONF | M. 15. |

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## Dollar amounts in thousands



| Dollar amounts in thousands | (Column <br> A) <br> Two-Year <br> Probability <br> of Default <br> (PD) <= <br> $1 \%$ | (Column <br> B) <br> Two-Year <br> Probability <br> of Default <br> (PD) <br> $1.01-4 \%$ | (Column <br> C) <br> Two-Year <br> Probability <br> of Default <br> (PD) <br> $4.01-7 \%$ | (Column <br> D) <br> Two-Year <br> Probability <br> of Default <br> (PD) <br> $7.01-10 \%$ | (Column <br> E) <br> Two-Year <br> Probability <br> of Default <br> (PD) <br> $10.01-14 \%$ | (Column <br> F) <br> Two-Year <br> Probability <br> of Default <br> (PD) <br> $14.01-16 \%$ | (Column <br> G) <br> Two-Year <br> Probability <br> of Default <br> (PD) <br> $16.01-18 \%$ | (Column <br> H) <br> Two-Year <br> Probability <br> of Default <br> (PD) <br> $18.01-20 \%$ | (Column I) <br> Two-Year <br> Probability <br> of Default <br> (PD) <br> 20.01-22\% | (Column <br> J) <br> Two-Year <br> Probability <br> of Default <br> (PD) <br> $22.01-26 \%$ | (Column <br> K) <br> Two-Year <br> Probability <br> of Default <br> (PD) <br> $26.01-30 \%$ | (Column <br> L) <br> Two-Year <br> Probability <br> of Default <br> (PD) > <br> $30 \%$ | (Column <br> M) <br> Two-Year <br> Probability <br> of Default <br> (PD) <br> Unscoreable | (Column <br> N) <br> Two-Year <br> Probability <br> of Default <br> (PD) Total | (Column <br> 0) PDs <br> Were <br> Derived Using |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 18. Outstanding balance of 1-4 family residential mortgage loans, consumer loans, and consumer leases by two-year probability of default: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| a. "Nontraditional 1-4 family residential mortgage loans" as defined for assessment purposes only in FDIC regulations.. | RCFDM964 CONF | RCFDM965 CONF | RCFDM966 CONF | RCFDM967 CONF | RCFDM968 CONF | RCFDM969 CONF | RCFDM970 CONF | RCFDM971 CONF | RCFDM972 CONF | RCFDM973 CONF | RCFDM974 CONF | RCFDM975 CONF | RCFDM976 CONF | RCFDM977 CONF | RCFDM978 CONF |
| b. Closed-end loans secured by first liens on 1-4 family residential properties. | $\begin{array}{\|r\|} \hline \text { RCFDM979 } \\ \text { CONF } \end{array}$ | RCFDM980 CONF | RCFDM981 CONF | RCFDM982 CONF | RCFDM983 CONF | RCFDM984 CONF | RCFDM985 CONF | RCFDM986 CONF | RCFDM987 CONF | RCFDM988 CONF | RCFDM989 CONF | RCFDM990 CONF | RCFDM991 | RCFDM992 CONF | RCFDM993 |
| c. Closed-end loans secured by junior liens on 1-4 family residential properties. | RCFDM994 CONF | RCFDM995 CONF | RCFDM996 CONF | RCFDM997 CONF | RCFDM998 CONF | RCFDM999 CONF | RCFDN001 CONF | RCFDN002 CONF | RCFDNOO3 CONF | RCFDN004 CONF | RCFDN005 CONF | RCFDN006 CONF | RCFDN007 CONF | RCFDN008 CONF | RCFDN009 CONF |
| d. Revolving, open-end loans secured by 1-4 family residential properties and extended under lines of credit. | RCFDN010 CONF | RCFDN011 CONF | RCFDN012 CONF | RCFDN013 CONF | RCFDN014 CONF | RCFDN015 CONF | RCFDN016 CONF | RCFDN017 CONF | RCFDN018 CONF | RCFDN019 CONF | RCFDNO20 CONF | RCFDN021 CONF | RCFDN022 CONF | RCFDN023 CONF | RCFDN024 CONF |
| e. Credit card | $\begin{array}{\|r\|} \hline \text { RCFDN040 } \\ \text { CONF } \\ \hline \end{array}$ | RCFDN041 CONF | RCFDN042 CONF | $\begin{array}{r} \text { RCFDN043 } \\ \text { CONF } \end{array}$ | $\begin{array}{r} \text { RCFDN044 } \\ \text { CONF } \end{array}$ | $\begin{array}{r} \text { RCFDN045 } \\ \text { CONF } \end{array}$ | RCFDN046 CONF | RCFDN047 CONF | $\begin{array}{r} \text { RCFDN048 } \\ \text { CONF } \end{array}$ | $\begin{array}{\|r\|} \hline \text { RCFDN049 } \\ \text { CONF } \end{array}$ | $\begin{array}{r} \text { RCFDN050 } \\ \text { CONF } \end{array}$ | $\begin{array}{r} \text { RCFDN051 } \\ \text { CONF } \end{array}$ | RCFDN052 CONF | RCFDN053 CONF | $\begin{array}{r} \text { RCFDN054 } \\ \text { CONF } \\ \hline \end{array}$ |
| f. Automobile loans | $\begin{array}{\|r\|} \hline \text { RCFDN055 } \\ \text { CONF } \end{array}$ | $\begin{array}{r} \text { RCFDN056 } \\ \text { CONF } \end{array}$ | RCFDN057 CONF | $\begin{array}{r} \text { RCFDN058 } \\ \text { CONF } \end{array}$ | $\begin{array}{r} \text { RCFDN059 } \\ \text { CONF } \end{array}$ | $\begin{array}{\|r\|} \hline \text { RCFDN060 } \\ \text { CONF } \end{array}$ | $\begin{array}{r} \text { RCFDN061 } \\ \text { CONF } \end{array}$ | $\begin{array}{r} \text { RCFDN062 } \\ \text { CONF } \end{array}$ | $\text { RCFDN063 } \begin{array}{r} \text { CONF } \end{array}$ | $\begin{array}{\|r\|} \hline \text { RCFDN064 } \\ \text { CONF } \end{array}$ | RCFDN065 CONF | RCFDN066 CONF | $\begin{array}{r} \text { RCFDN067 } \\ \text { CONF } \end{array}$ | $\begin{array}{r} \text { RCFDN068 } \\ \text { CONF } \end{array}$ | $\begin{array}{r} \text { RCFDN069 } \\ \text { CONF } \end{array}$ |
| g. Student loans. | $\begin{array}{\|r\|} \hline \text { RCFDN070 } \\ \text { CONF } \end{array}$ | RCFDN071 CONF | RCFDN072 CONF | RCFDN073 CONF | RCFDN074 | RCFDN075 CONF | RCFDN076 CONF | RCFDN077 CONF | $\begin{array}{r} \text { RCFDN078 } \\ \text { CONF } \end{array}$ | RCFDN079 CONF | RCFDN080 CONF | RCFDN081 CONF | RCFDN082 CONF | RCFDN083 CONF | RCFDN084 CONF |
| h. Other consumer loans and revolving credit plans other than credit cards. | RCFDN085 CONF | RCFDN086 CONF | RCFDN087 CONF | RCFDN088 CONF | RCFDN089 CONF | $\begin{array}{\|r\|} \hline \text { RCFDNO90 } \\ \text { CONF } \end{array}$ | RCFDN091 CONF | RCFDN092 CONF | RCFDN093 CONF | RCFDN094 CONF | RCFDN095 CONF | $\begin{array}{\|r\|} \hline \text { RCFDNO96 } \\ \text { CONF } \end{array}$ | RCFDN097 CONF | RCFDN098 CONF | RCFDN099 CONF |
| i. Consumer leases. | $\begin{array}{\|r\|} \hline \text { RCFDN100 } \\ \text { CONF } \end{array}$ | RCFDN101 CONF | RCFDN102 | RCFDN103 CONF | RCFDN104 CONF | RCFDN105 CONF | RCFDN106 CONF | RCFDN107 CONF | RCFDN108 CONF | RCFDN109 CONF | $\begin{array}{r} \text { RCFDN110 } \\ \text { CONF } \end{array}$ | RCFDN111 CONF | $\begin{array}{r} \text { RCFDN112 } \\ \text { CONF } \end{array}$ | RCFDN113 CONF | RCFDN114 CONF |
| j. Total. | $\begin{array}{\|r\|} \hline \text { RCFDN115 } \\ \text { CONF } \\ \hline \end{array}$ | RCFDN116 CONF | $\begin{array}{r} \text { RCFDN117 } \\ \text { CONF } \end{array}$ | $\begin{array}{r} \text { RCFDN118 } \\ \text { CONF } \end{array}$ | $\begin{array}{r} \text { RCFDN119 } \\ \text { CONF } \end{array}$ | $\begin{array}{\|r\|} \hline \text { RCFDN120 } \\ \text { CONF } \\ \hline \end{array}$ | $\begin{array}{r} \text { RCFDN121 } \\ \text { CONF } \end{array}$ | $\begin{array}{r} \text { RCFDN122 } \\ \text { CONF } \end{array}$ | RCFDN123 CONF | $\begin{array}{r} \text { RCFDN124 } \\ \text { CONF } \end{array}$ | $\begin{array}{r} \text { RCFDN125 } \\ \text { CONF } \end{array}$ | $\begin{array}{\|r\|} \text { RCFDN126 } \\ \text { CONF } \end{array}$ | $\begin{array}{r} \text { RCFDN127 } \\ \text { CONF } \end{array}$ | $\begin{array}{r} \text { RCFDN128 } \\ \text { CONF } \end{array}$ |  |

## Schedule RC-P - 1-4 Family Residential Mortgage Banking Activities in Domestic Offices(Form Type - 031)

Schedule RC-P is to be completed by banks at which either 1-4 family residential mortgage loan originations and purchases for resale from all sources, loan sales, or quarter-end loans held for sale or trading in domestic offices exceed $\$ 10$ million for two consecutive quarters. Dollar amounts in thousands

1. Retail originations during the quarter of 1-4 family residential mortgage loans for sale ${ }^{1}$.
2. Wholesale originations and purchases during the quarter of 1-4 family residential mortgage loans for sale ${ }^{2}$.
3. 1-4 family residential mortgage loans sold during the quarter.
4. 1-4 family residential mortgage loans held for sale or trading at quarter-end (included in Schedule RC, items 4.a and 5)..
5. Noninterest income for the quarter from the sale, securitization, and servicing of 1-4 family residential mortgage loans (included in Schedule RI, items 5.c, 5.f, 5.g, and 5.i).
6. Repurchases and indemnifications of 1-4 family residential mortgage loans during the quarter.
7. Representation and warranty reserves for 1-4 family residential mortgage loans sold:
a. For representations and warranties made to U.S. government agencies and government-sponsored agencies..
b. For representations and warranties made to other parties.
c. Total representation and warranty reserves (sum of items 7.a and 7.b). $\qquad$

| RCONHT81 | 3,971,000 |
| :---: | :---: |
| RCONHT82 | 4,053,000 |
| RCONFT04 | 8,749,000 |
| RCONFT05 | 9,760,000 |
| RIADHT85 | 154,000 |
| RCONHT86 | 38,000 |
| RCONL191 | CONF |
| RCONL192 | CONF |
| RCONM288 | 76,000 |

## Schedule RC-Q - Assets and Liabilities Measured at Fair Value on a Recurring Basis(Form Type - 031)

Schedule RC-Q is to be completed by banks that:
(1) Have elected to report financial instruments or servicing assets and liabilities at fair value under a fair value option with changes in fair value recognized in earnings, or (2) Are required to complete Schedule RC-D, Trading Assets and Liabilities.

| Dollar amounts in thousands | (Column A)Total Fair Value Reported on Schedule RC | (Column B) LESS: Amounts Netted in the Determination of Total Fair Value | (Column C) <br> Level 1 Fair Value Measurements | (Column D) <br> Level 2 Fair Value <br> Measurements | (Column E) <br> Level 3 Fair Value Measurements |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1. Available-for-sale debt securities and equity securities with readily determinable fair values not held for trading ${ }^{1}$. $\qquad$ | $\begin{aligned} & \text { RCFDJA36 } \\ & 204,104,000 \end{aligned}$ | RCFDG474 0 | $\begin{aligned} & \text { RCFDG475 } \\ & 76,086,000 \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { RCFDG476 } \\ & 127,751,000 \end{aligned}$ | $\begin{array}{r} \text { RCFDG477 } \\ 267,000 \\ \hline \end{array}$ |
| 2. Federal funds sold and securities purchased under agreements to resell. | $\begin{aligned} & \hline \text { RCFDG478 } \\ & 230,229,000 \end{aligned}$ | $\begin{gathered} \hline \text { RCFDG479 } \\ 111,384,000 \end{gathered}$ | RCFDG480 | $\begin{aligned} & \hline \text { RCFDG481 } \\ & 341,613,000 \end{aligned}$ | RCFDG482 0 |
| 3. Loans and leases held for sale | $\begin{aligned} & \hline \text { RCFDG483 } \\ & 16,792,000 \end{aligned}$ | RCFDG484 | RCFDG485 | $\begin{array}{r} \hline \text { RCFDG486 } \\ 13,405,000 \end{array}$ | RCFDG487 <br> $3,387,000$ |
| 4. Loans and leases held | $\begin{aligned} & \hline \text { RCFDG488 } \\ & 21,731,000 \end{aligned}$ | RCFDG489 | RCFDG490 | $\begin{aligned} & \hline \text { RCFDG491 } \\ & 21,335,000 \end{aligned}$ | $\begin{array}{r} \hline \text { RCFDG492 } \\ 396,000 \end{array}$ |
| 5. Trading assets: |  |  |  |  |  |
| a. Derivative a | $\begin{aligned} & \hline \text { RCFD3543 } \\ & 63,701,000 \end{aligned}$ | $\begin{aligned} & \hline \text { RCFDG493 } \\ & 604,019,000 \end{aligned}$ | $\begin{array}{\|} \hline \text { RCFDG494 } \\ 816,000 \end{array}$ | $\begin{aligned} & \hline \text { RCFDG495 } \\ & 651,528,000 \end{aligned}$ | $\begin{array}{r\|} \hline \text { RCFDG496 } \\ 15,376,000 \end{array}$ |
| b. Other trading assets. | $\begin{aligned} & \hline \text { RCFDG497 } \\ & 337,775,000 \end{aligned}$ | RCFDG498 | $\begin{gathered} \hline \text { RCFDG499 } \\ 176,541,000 \end{gathered}$ | $\begin{aligned} & \hline \text { RCFDG500 } \\ & 158,659,000 \end{aligned}$ | $\begin{array}{r} \hline \text { RCFDG501 } \\ 2,575,000 \end{array}$ |
| 1. Nontrading securities at fair value with changes in fair value reported in current earnings (included in Schedule RC-Q, item 5.b, above). | RCFDF240 | RCFDF684 | RCFDF692 | RCFDF241 | RCFDF242 |
| 6. All other assets | $\begin{aligned} & \hline \text { RCFDG391 } \\ & 22,089,000 \end{aligned}$ | $\begin{array}{r} \hline \text { RCFDG392 } \\ 193,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDG395 } \\ 8,807,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDG396 } \\ 5,073,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDG804 } \\ 8,402,000 \\ \hline \end{array}$ |
| 7. Total assets measured at fair value on a recurring basis (sum of items 1 through 5.b plus item 6). | $\begin{aligned} & \hline \text { RCFDG502 } \\ & 896,421,000 \end{aligned}$ | $\begin{aligned} & \hline \text { RCFDG503 } \\ & 715,596,000 \end{aligned}$ | $\begin{aligned} & \hline \text { RCFDG504 } \\ & 262,250,000 \end{aligned}$ | $\begin{array}{l\|} \hline \text { RCFDG505 } \\ 1,319,364,000 \end{array}$ | $\begin{aligned} & \hline \text { RCFDG506 } \\ & 30,403,000 \end{aligned}$ |
| 8. Deposits.............................................................................. | $\begin{array}{r} \hline \text { RCFDF252 } \\ 51,711,000 \end{array}$ | RCFDF686 | RCFDF694 | $\begin{array}{r} \hline \text { RCFDF253 } \\ 49,656,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDF254 } \\ 2,055,000 \end{array}$ |
| 9. Federal funds purchased and securities sold under agreements to repurchase. | $\begin{aligned} & \hline \text { RCFDG507 } \\ & 87,283,000 \end{aligned}$ | $\begin{gathered} \hline \text { RCFDG508 } \\ 123,237,000 \end{gathered}$ | RCFDG509 | $\begin{array}{r} \hline \text { RCFDG510 } \\ 210,520,000 \end{array}$ | RCFDG511 |
| 10. Trading liabilities: |  |  |  |  |  |
| a. Derivative liabilities.. | $\begin{array}{r\|} \hline \text { RCFD3547 } \\ 42,994,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDG512 } \\ 607,392,000 \end{array}$ | $\begin{array}{r} \text { RCFDG513 } \\ 625,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDG514 } \\ 632,197,000 \end{array}$ | $\begin{array}{c\|} \hline \text { RCFDG515 } \\ 17,564,000 \end{array}$ |
| b. Other trading liabilities....................................................... | $\begin{array}{r} \hline \text { RCFDG516 } \\ 80,273,000 \end{array}$ | RCFDG517 | $\begin{array}{r} \hline \text { RCFDG518 } \\ 56,240,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDG519 } \\ 23,981,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDG520 } \\ 52,000 \\ \hline \end{array}$ |

[^87]

Dollar amounts in thousands

| Dollar amounts in thousands |  |  |
| :---: | :---: | :---: |
| c. Disclose component and the dollar amount of that component: |  |  |
| 1. Describe component.. | TEXTG546 | Click here for value |

## (TEXTG546) Securities Provided as Collateral

| Dollar amounts in thousands | (Column A)Total <br> Fair Value <br> Reported on <br> Schedule RC | (Column B) LESS: Amounts Netted in the Determination of Total Fair Value | (Column C) <br> Level 1 Fair Value <br> Measurements | (Column D) <br> Level 2 Fair Value <br> Measurements | (Column E) <br> Level 3 Fair Value Measurements |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2. Amount of component.. | $\begin{array}{r} \hline \text { RCFDG546 } \\ 7,738,000 \end{array}$ | RCFDG547 | $\begin{array}{r} \hline \text { RCFDG548 } \\ 7,185,000 \end{array}$ | RCFDG549 553,000 | RCFDG550 |

Dollar amounts in thousands


| Dollar amounts in thousands | (Column A)Total <br> Fair Value Reported on Schedule RC | (Column B) LESS: Amounts Netted in the Determination of Total Fair Value | (Column C) <br> Level 1 Fair Value <br> Measurements | (Column D) Level 2 Fair Value Measurements | (Column E) Level 3 Fair Value Measurements |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2. Amount of component.. | RCFDG551 | RCFDG552 0 | RCFDG553 0 | RCFDG554 0 | RCFDG555 |

Dollar amounts in thousands

| e. Disclose component and the dollar amount of that component: |
| :--- |
| 1. Describe component................................................................................................................................................ |
| TEXTG556 |


| Dollar amounts in thousands | $\begin{array}{\|c\|} \hline \text { (Column A)Total } \\ \text { Fair Value } \\ \text { Reported on } \\ \text { Schedule RC } \\ \hline \end{array}$ | (Column B) LESS: Amounts Netted in the Determination of Total Fair Value | (Column C) <br> Level 1 Fair Value <br> Measurements | (Column D) <br> Level 2 Fair Value <br> Measurements | (Column E) Level 3 Fair Value Measurements |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2. Amount of component. | RCFDG556 | RCFDG557 | RCFDG558 | RCFDG559 | RCFDG560 |

Dollar amounts in thousands

| Dolar amounts in thousands |
| :--- |
| f. Disclose component and the dollar amount of that component: <br> 1. Describe component................................................................................................................................................ <br> TEXTG561 |


| Dollar amounts in thousands | (Column A) Total Fair Value Reported on Schedule RC | (Column B) LESS: Amounts Netted in the Determination of Total Fair Value | (Column C) Level 1 Fair Value Measurements | (Column D) Level 2 Fair Value Measurements | (Column E) Level 3 Fair Value Measurements |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2. Amount of component.............................................................. | RCFDG561 | RCFDG562 | RCFDG563 | RCFDG564 | RCFDG565 | M.1.f.2. |
| 2. All other liabilities (itemize and describe amounts included in Schedule RC-Q, item 13 , that are greater than $\$ 100,000$ and exceed $25 \%$ of item 13): |  |  |  |  |  | M.2. |
| a. Loan commitments (not accounted for as derivatives).............. | RCFDF261 | RCFDF689 | RCFDF697 | RCFDF262 | RCFDF263 | M.2.a. |
| b. Nontrading derivative liabilities.............................................. | RCFDG566 | RCFDG567 | RCFDG568 | RCFDG569 | RCFDG570 | M.2.b. |

Dollar amounts in thousands

| c. Disclose component and the dollar amount of that component: |  |  | M.2.c. <br> M.2.c.1 |
| :---: | :---: | :---: | :---: |
| 1. Describe component.. | TEXTG571 | Click here for value |  |

(TEXTG571) Obligation to Return Securities as Collateral

| Dollar amounts in thousands | (Column A)Total Fair Value Reported on Schedule RC | (Column B) LESS: Amounts Netted in the Determination of Total Fair Value | (Column C) <br> Level 1 Fair Value Measurements | (Column D) <br> Level 2 Fair Value <br> Measurements | (Column E) <br> Level 3 Fair Value Measurements |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2. Amount of component.. | $\begin{array}{r} \hline \text { RCFDG571 } \\ 7,905,000 \end{array}$ | RCFDG572 | $\begin{aligned} & \hline \text { RCFDG573 } \\ & 7,185,000 \end{aligned}$ | $\begin{array}{r} \hline \text { RCFDG574 } \\ 720,000 \end{array}$ | RCFDG575 |

Dollar amounts in thousands


Dollar amounts in thousands

| e. Disclose component and the dollar amount of that component: |
| :--- |
| 1. Describe component................................................................................................................................................. |
| TEXTG581 |


| Dollar amounts in thousands | (Column A)Total Fair Value Reported on Schedule RC | (Column B) LESS: Amounts Netted in the Determination of Total Fair Value | (Column C) <br> Level 1 Fair Value Measurements | (Column D) Level 2 Fair Value Measurements | (Column E) Level 3 Fair Value Measurements |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2. Amount of component. | RCFDG581 | RCFDG582 | RCFDG583 | RCFDG584 | RCFDG585 |

Dollar amounts in thousands

| D. Dollar amounts in thousands |
| :--- |
| f. Disclose component and the dollar amount of that component: |
| 1. Describe component |
| (TEXTG586) NR |


| Dollar amounts in thousands | (Column A)Total <br> Fair Value <br> Reported on <br> Schedule RC | (Column B) LESS: Amounts Netted in the Determination of Total Fair Value | (Column C) <br> Level 1 Fair Value <br> Measurements | (Column D) <br> Level 2 Fair Value <br> Measurements | (Column E) <br> Level 3 Fair Value <br> Measurements |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2. Amount of component. | $\begin{array}{ll} \hline \text { RCFDG586 } & 0 \\ \hline \end{array}$ | RCFDG587 | RCFDG588 $0$ | RCFDG589 | RCFDG590 |


| Dollar amounts in thousands | Consolidated Bank |  | M.3. |
| :---: | :---: | :---: | :---: |
| 3. Loans measured at fair value (included in Schedule RC-C, Part I, items 1 through |  |  |  |
| a. Loans secured by real estate: |  |  | M.3.a. |
| 1. Secured by 1-4 family residential properties. | RCFDHT87 | 10,015,000 | M.3.a.1 |
| 2. All other loans secured by real estate. | RCFDHT88 | 7,308,000 | M.3.a.2 |
| b. Commercial and industrial loans. | RCFDF585 | 3,540,000 | M.3.b. |
| c. Loans to individuals for household, family, and other personal expenditures (i.e., consumer loans) (includes purchased paper). | RCFDHT89 | 199,000 | M.3.c. |
| d. Other loans.. | RCFDF589 | 17,461,000 | M.3.d. |
| 4. Unpaid principal balance of loans measured at fair value (reported in Schedule RC-Q, Memorandum item 3): |  |  | M.4. |
| a. Loans secured by real estate: |  |  | M.4.a. |
| 1. Secured by 1-4 family residential properties. | RCFDHT91 | 10,703,000 | M.4.a.1. |
| 2. All other loans secured by real estate... | RCFDHT92 | 7,450,000 | M.4.a.2 |
| b. Commercial and industrial loans.. | RCFDF597 | 3,508,000 | M.4.b. |
| c. Loans to individuals for household, family, and other personal expenditures (i.e., consumer loans) (includes purchased paper) | RCFDHT93 | 203,000 | M.4.c. |
| d. Other loans.. | RCFDF601 | 18,815,000 | M.4.d. |

## Schedule RC-R Part I-Regulatory Capital Components and Ratios(Form Type - 031)

Part I is to be completed on a consolidated basis.

| Dollar amounts in thousands |  |  |  |
| :---: | :---: | :---: | :---: |
| 1. Common stock plus related surplus, net of treasury stock and unearned employee stock ownership plan (ESOP) shares. | RCFAP742 | 120,363,000 | 1. |
| 2. Retained earnings ${ }^{1}$ | RCFAKW00 | 210,853,000 | 2. |
| To be completed only by institutions that have adopted ASU 2016-13: <br> a. Does your institution have a CECL transition election in effect as of the quarter-end report date? (enter " 0 " for No; enter "1" for Yes with a 3-year CECL transition election; enter "2" for Yes with a 5-year 2020 CECL transition election.). | RCOAJJ29 | 2 | 2.a. |
| 3. Accumulated other comprehensive income (AOC) | RCFAB530 | -14,391,000 | 3. |
| a. AOCI opt-out election (enter "1" for Yes; enter "0" for No.) (Advanced approaches institutions must enter "0" for No.) | RCOAP838 | 0 | 3.a. |
| 4. Common equity tier 1 minority interest includable in common equity tier 1 capital | RCFAP839 | 0 | 4. |
| 5. Common equity tier 1 capital before adjustments and deductions (sum of items 1 through 4) | RCFAP840 | 316,825,000 | 5. |
| 6. LESS: Goodwill net of associated deferred tax liabilities (DTLs) | RCFAP841 | 40,960,000 | 6. |
| 7. LESS: Intangible assets (other than goodwill and mortgage servicing assets (MSAs)), net of associated DTLs | RCFAP842 | 1,146,000 | 7. |
| 8. LESS: Deferred tax assets (DTAs) that arise from net operating loss and tax credit carryforwards, net of any related valuation allowances and net of DTLs. | RCFAP843 | 19,000 | 8. |
| 9. AOCI-related adjustments (items 9.a through 9.e are effective January 1, 2015) (if entered "1" for Yes in item 3.a, complete only items 9.a through 9.e; if entered "0" for No in item 3.a, complete only item 9.f): |  |  | 9. |
| a. LESS: Net unrealized gains (losses) on available-for-sale debt securities (if a gain, report as a positive value; if a loss, report as a negative value). | RCFAP844 | NR | 9.a. |
| b. Not applicable. |  |  | 9.b. |
| c. LESS: Accumulated net gains (losses) on cash flow hedges (if a gain, report as a positive value; if a loss, report as a negative value). | RCFAP846 | NR | 9.c. |
| d. LESS: Amounts recorded in AOCI attributed to defined benefit postretirement plans resulting from the initial and subsequent application of the relevant GAAP standards that pertain to such plans (if a gain, report as a positive value; if a loss, report as a negative value). | RCFAP847 | NR | 9.d. |
| e. LESS: Net unrealized gains (losses) on held-to-maturity securities that are included in AOCI (if a gain, report as a positive value; if a loss, report as a negative value). | RCFAP848 | NR | 9.e. |
| f. LESS: Accumulated net gain (loss) on cash flow hedges included in AOCI, net of applicable income taxes, that relate to the hedging of items that are not recognized at fair value on the balance sheet (if a gain, report as a positive value; if a loss, report as a negative value) (To be completed only by institutions that entered " 0 " for No in item 3.a). | RCFAP849 | -5,354,000 | 9.f. |
| 10. Other deductions from (additions to) common equity tier 1 capital before threshold-based deductions: |  |  | 10. |
| a. LESS: Unrealized net gain (loss) related to changes in the fair value of liabilities that are due to changes in own credit risk (if a gain, report as a positive value; if a loss, report as a negative value). | RCFAQ258 | 338,000 | 10.a |
| b. LESS: All other deductions from (additions to) common equity tier 1 capital before threshold-based deductions. | RCFAP850 | 483,000 | 10.b |


| Dollar amounts in thousands | (Column A) Non-advanced Approaches Institutions |  | (Column B) Advanced Approaches Institutions |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 11. LESS: Non-significant investments in the capital of unconsolidated financial institutions in the form of common stock that exceed the 10 percent threshold for non-significant investments. |  |  | RCFWP851 | 0 | 11. |
| 12. Subtotal (for column A, item 5 minus items 6 through $10 . \mathrm{b}$; for column $B$, item 5 minus items 6 through 11). | RCFAP852 | NR | RCFWP852 | 279,233,000 | 12. |
| 13. Not available |  |  |  |  | 13. |
| a. LESS: Investments in the capital of unconsolidated financial institutions, net of associated DTLs, that exceed 25 percent of item 12. | RCFALB58 | NR |  |  | 13.a. |
| b. LESS: Significant investments in the capital of unconsolidated financial institutions in the form of common stock, net of associated DTLs, that exceed the 10 percent common equity tier 1 capital deduction threshold. |  |  | RCFWP853 | 0 | 13.b. |
| 14. Not available |  |  |  |  | 14. |
| a. LESS: MSAs, net of associated DTLs, that exceed 25 percent of item 12 | RCFALB59 | NR |  |  | 14.a. |
| b. LESS: MSAs, net of associated DTLs, that exceed the 10 percent common equity tier 1 capital deduction threshold. |  |  | RCFWP854 | 0 | 14.b. |
| 15. Not available |  |  |  |  | 15. |
| a. LESS: DTAs arising from temporary differences that could not be realized through net operating loss carrybacks, net of related valuation allowances and net of DTLs, that exceed 25 percent of item 12. | RCFALB60 | NR |  |  | 15.a |
| b. LESS: DTAs arising from temporary differences that could not be realized through net operating loss carrybacks, net of related valuation allowances and net of DTLs, that exceed the 10 percent common equity tier 1 capital deduction threshold...................................... |  |  | RCFWP855 | 0 | 15.b |
| 16. LESS: Amount of significant investments in the capital of unconsolidated financial institutions in the form of common stock, net of associated DTLs; MSAs, net of associated DTLs; and DTAs arising from temporary differences that could not be realized through net operating loss carrybacks, net of related valuation allowances and net of DTLs; that exceeds the 15 percent common equity tier 1 capital deduction threshold.. |  |  | RCFWP856 | 0 | 16. |
| 17. LESS: Deductions applied to common equity tier 1 capital due to insufficient amounts of additional tier 1 capital and tier 2 capital to cover deductions. | RCFAP857 | NR | RCFWP857 | 0 | 17. |
| 18. Total adjustments and deductions for common equity tier 1 capital ${ }^{3}$ | RCFAP858 | NR | RCFWP858 | 0 | 18. |
| 19. Common equity tier 1 capital (item 12 minus item 18).................................................. | RCFAP859 | NR | RCFWP859 | 279,233,000 | 19. |

Dollar amounts in thousands

| 20 | RCFAP860 | 0 | 20. |
| :---: | :---: | :---: | :---: |
| 21. Non-qualifying capital instruments subject to phase out from additional tier 1 capital | RCFAP861 | 0 | 21. |
| 22. Tier 1 minority interest not included in common equity tier 1 capita | RCFAP862 | 3,000 | 22. |
| 23. Additional tier 1 capital before deductions (sum of items 20, 21, and 22) | RCFAP863 | 3,000 | 23. |
| 24. LESS: Additional tier 1 capital deductions | RCFAP864 | 0 | 24. |
| 25. Additional tier 1 capital (greater of item 23 minus item 24 , or zero) | RCFAP865 | 3,000 | 25. |
| 26. Tier 1 capital ${ }^{1}$. | RCFA8274 | 279,236,000 | 26. |
| 27. Average total consolidated assets ${ }^{2}$ | RCFAKW03 | 3,358,117,000 | 27. |
| 28. LESS: Deductions from common equity tier 1 capital and additional tier 1 capital (sum of items $6,7,8,10 . b, 13$ through 15, 17, and certain elements of item 24 -see instructions) ${ }^{3}$ | RCFAP875 | 42,608,000 | 28. |
| 29. LESS: Other deductions from (additions to) assets for leverage ratio purposes | RCFAB596 | 7,031,000 | 29. |
| 30. Total assets for the leverage ratio (item 27 minus items 28 and 29) | RCFAA224 | 3,308,478,000 | 30. |
| 31. Leverage ratio (item 26 divided by 30 )... | RCFA7204 | 8.4400\% | 31. |
| a. Does your institution have a community bank leverage ratio (CBLR) framework election in effect as of the quarter-end report date? (enter "1" for Yes; enter "0" for No).. | RCOALE74 | 0 | 31.a. |
| Item 31.b is to be completed only by non-advanced approaches institutions that elect to use the Standardized Approach for Counterparty Credit Risk (SA-CCR) for purposes of the standardized approach and supplementary leverage ratio. <br> b. Standardized Approach for Counterparty Credit Risk opt-in election (enter "1" for Yes; leave blank for No.) ${ }^{4}$...... | RCOANC99 | NR | 31.b. |

[^88]| Dollar amounts in thousands | (Column A) Amount |  | (Column B) Percentage |  |
| :---: | :---: | :---: | :---: | :---: |
| 32. Total assets (Schedule RC, item 12); (must be less than \$10 billion).. | RCFA2170 | NR |  |  |
| 33. Trading assets and trading liabilities (Schedule RC, sum of items 5 and 15). Report as a dollar amount in Column A and as a percentage of total assets ( $5 \%$ limit) in Column B. | RCFAKX77 | NR | RCFAKX78 | NR |
| 34. Off-balance sheet exposures: |  |  |  |  |
| a. Unused portion of conditionally cancellable commitments. | RCFAKX79 | NR |  |  |
| b. Securities lent and borrowed (Schedule RC-L, sum of items 6.a and 6.b)... | RCFAKX80 | NR |  |  |
| c. Other off-balance sheet exposures... | RCFAKX81 | NR |  |  |
| d. Total off-balance sheet exposures (sum of items 34.a through 34.c). Report as a dollar amount in Column A and as a percentage of total assets ( $25 \%$ limit) in Column B.. | RCFAKX82 | NR | RCFAKX83 | NR |

Dollar amounts in thousands

| 35. Unconditionally cancellable commitments.. | RCFAS540 | NR | 35. |
| :---: | :---: | :---: | :---: |
| 36. Investments in the tier 2 capital of unconsolidated financial institutions. | RCFALB61 | NR | 36. |
| 37. Allocated transfer risk reserve | RCFA3128 | NR | 37. |
| 38. Amount of allowances for credit losses on purchased credit-deteriorated assets: ${ }^{1}$ |  |  | 38. |
| a. Loans and leases held for investment | RCFAJJ30 | NR | 38.a. |
| b. Held-to-maturity debt securities. | RCFAJJ31 | NR | 38.b. |
| c. Other financial assets measured at amortized cost. | RCFAJJ32 | NR | 38.c. |
| 39. Tier 2 capital instruments plus related surplus | RCFAP866 | 52,000 | 39. |
| 40. Non-qualifying capital instruments subject to phase-out from tier 2 capital. | RCFAP867 | 0 | 40. |
| 41. Total capital minority interest that is not included in tier 1 capital.. | RCFAP868 | 1,000 | 41. |
| 42. Allowance for loan and lease losses and eligible credit reserves includable in tier 2 capital |  |  | 42. |
| a. Allowance for loan and lease losses includable in tier 2 capital ${ }^{3}$. | RCFA5310 | 19,758,000 | 42.a. |
| b. (Advanced approaches institutions that exit parallel run only): Eligible credit reserves includable in tier 2 capital. | RCFW5310 | 6,676,000 | 42.b. |
| 43. Not applicable. |  |  | 43. |
| 44. Tier 2 capital before deductions |  |  | 44. |
| a. Tier 2 capital before deductions (sum of items 39 through 42). | RCFAP870 | 19,811,000 | 44.a. |
| b. (Advanced approaches institutions that exit parallel run only): Tier 2 capital before deductions (sum of items 39 through 41, plus item 42.b). | RCFWP870 | 6,729,000 | 44.b. |
| 45. LESS: Tier 2 capital deductions. | RCFAP872 | 465,000 | 45. |
| 46. Tier 2 capital |  |  | 46. |
| a. Tier 2 capital (greater of item 44.a minus item 45, or zero). | RCFA5311 | 19,346,000 | 46.a. |
| b. (Advanced approaches institutions that exit parallel run only): Tier 2 capital (greater of item $44 . \mathrm{b}$ minus item 45, or zero). | RCFW5311 | 6,264,000 | 46.b. |
| 47. Total capital |  |  | 47. |
| a. Total capital (sum of items 26 and 46.a). | RCFA3792 | 298,582,000 | 47.a. |
| b. (Advanced approaches institutions that exit parallel run only): Total capital (sum of items 26 and 46.b)........... | RCFW3792 | 285,500,000 | 47.b. |
| 48. Total risk-weighted assets |  |  | 48. |
| a. Total risk-weighted assets (from Schedule RC-R, Part II, item 31)... | RCFAA223 | 1,642,804,465 | 48.a. |
| b. (Advanced approaches institutions that exit parallel run only): Total risk-weighted assets using advanced approaches rule (from FFIEC 101 Schedule A, item 60). | RCFWA223 | 1,541,700,000 | 48.b. |

[^89]| Dollar amounts in thousands | (Column A) Percentage |  | (Column B) Percentage |  |
| :---: | :---: | :---: | :---: | :---: |
| 49. Common equity tier 1 capital ratio (Column A: item 19, column A or B, as applicable, divided by item 48.a) (Advanced approaches institutions that exit parallel run only: Column B: item 19, column B, divided by item 48.b). | RCFAP793 | 16.9973\% | RCFWP793 | 18.1120\% |
| 50. Tier 1 capital ratio (Column A: item 26 divided by item 48.a) (Advanced approaches institutions that exit parallel run only: Column B: item 26 divided by item 48.b).. | RCFA7206 | 16.9975\% | RCFW7206 | 18.1122\% |
| 51. Total capital ratio (Column A: item 47.a divided by item 48.a) (Advanced approaches institutions that exit parallel run only: Column B: item 47. b divided by item 48.b). | RCFA7205 | 18.1751\% | RCFW7205 | 18.5185\% |

## Dollar amounts in thousands

| Doliar amounts in thousands |  |  |  |
| :---: | :---: | :---: | :---: |
| 52. Institution-specific capital buffer necessary to avoid limitations on distributions and discretionary bonus payments: |  |  | $\begin{aligned} & 52 . \\ & \text { 52.a. } \end{aligned}$ |
| a. Capital conservation buffer.. | RCFAH311 | 10.1751\% |  |
| b. Advanced approaches institutions and institutions subject to Category III capital standards only:Total applicable capital buffer. | RCFWH312 | 2.5000\% | 52.b. |
| 53. Eligible retained income ${ }^{1}$. | RCFAH313 | NR | 53. |
| 54. Distributions and discretionary bonus payments during the quarter ${ }^{2}$. | RCFAH314 | NR | 54. |
| 55. Advanced approaches institutions and institutions subject to Category III capital standards only: Supplementary leverage ratio information: |  |  | 55. |
| a. Total leverage exposure ${ }^{3}$. | RCFAH015 | 3,993,500,000 | 55.a. |
| b. Supplementary leverage ratio................................................................................................................ | RCFAH036 | 6.9923\% | 55.b. |

[^90]
## Schedule RC-R Part II - Risk-Weighted Assets(Form Type - 031)



| Dollar amounts in thousands | $\begin{aligned} & \hline \text { (Column A) } \\ & \text { Totals from } \\ & \text { Schedule RC } \end{aligned}$ | (Column B) Adjustments to Totals Reported in Column A | (Column C) Allocation by Risk-Weight Category 0\% | (Column D) Allocation by Risk-Weight Category 2\% | (Column E) Allocation by Risk-Weight Category 4\% | (Column F) Allocation by Risk-Weight Category 10\% | (Column G) Allocation by Risk-Weight Category 20\% | (Column H) Allocation by Risk-Weight Category 50\% | (Column I) Allocation by Risk-Weight Category 100\% | (Column J) Allocation by Risk-Weight Category 150\% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. Cash and balances due from depository institutions. | $\begin{array}{c\|} \hline \text { RCFDD957 } \\ 495,679,000 \end{array}$ | $\begin{array}{r\|} \hline \text { RCFDS396 } \\ 1,934,000 \end{array}$ | RCFDD958 $449,240,000$ |  |  |  | $\begin{aligned} & \hline \text { RCFDD959 } \\ & 33,941,000 \end{aligned}$ | $\begin{array}{r} \hline \text { RCFDS397 } \\ 5,637,000 \end{array}$ | $\begin{array}{r\|} \hline \text { RCFDD960 } \\ 3,541,000 \end{array}$ | $\begin{array}{r\|} \hline \text { RCFDS398 } \\ 1,386,000 \end{array}$ |
| 2. Securities: |  |  |  |  |  |  |  |  |  |  |
| a. Held-to-maturity securities ${ }^{3}$. | $\begin{array}{c\|} \hline \text { RCFDD961 } \\ 324,789,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDS399 } \\ -37,000 \\ \hline \end{array}$ | $\begin{array}{c\|} \hline \text { RCFDD962 } \\ 234,338,000 \end{array}$ | RCFDHJ74 0 | RCFDHJ75 0 |  | $\begin{aligned} & \text { RCFDD963 } \\ & 85,738,000 \end{aligned}$ | $\begin{gathered} \hline \text { RCFDD964 } \\ 4,750,000 \end{gathered}$ | RCFDD965 0 | RCFDS400 |
| b. Available-for-sale debt securities and equity securities with readily determinable fair values not held for trading. | $\begin{aligned} & \text { RCFDJA21 } \\ & 189,965,000 \end{aligned}$ | RCFDS402 $-1,000$ | $\begin{array}{c\|} \text { RCFDD967 } \\ \hline 141,192,000 \\ \hline \end{array}$ | RCFDHJ76 0 | RCFDHJ77 0 |  | $\begin{aligned} & \text { RCFDD968 } \\ & 33,639,000 \end{aligned}$ | $\begin{gathered} \text { RCFDD969 } \\ 13,859,000 \end{gathered}$ | $\begin{array}{r} \text { RCFDD970 } \\ 363,000 \end{array}$ | RCFDS 403 |
| 3. Federal funds sold and securities purchased under agreements to resell: |  |  |  |  |  |  |  |  |  |  |
| a. Federal funds sold in domestic offices. | $\begin{array}{r} \hline \text { RCOND971 } \\ 69,000 \end{array}$ |  | RCOND972 0 |  |  |  | $\begin{array}{r} \hline \text { RCOND973 } \\ 64,000 \end{array}$ | RCONS410 0 | $\begin{array}{r} \hline \text { RCOND974 } \\ 5,000 \\ \hline \end{array}$ | RCONS411 0 |
| b. Securities purchased under agreements to resell. | $\begin{array}{c\|} \hline \text { RCFDH171 } \\ 316,586,000 \end{array}$ | $\begin{array}{c\|} \hline \text { RCFDH172 } \\ 316,586,000 \end{array}$ |  |  |  |  |  |  |  |  |
| 4. Loans and leases held for sale: |  |  |  |  |  |  |  |  |  |  |
| a. Residential mortgage exposures............................. | $\begin{gathered} \hline \text { RCFDS413 } \\ 9,871,000 \end{gathered}$ | RCFDS414 ${ }_{0}$ | $\begin{array}{ll} \text { RCFDH173 } & \\ & 0 \end{array}$ |  |  |  | $\begin{array}{r} \text { RCFDS415 } \\ 715,000 \end{array}$ | $\begin{gathered} \hline \text { RCFDS416 } \\ 6,924,000 \end{gathered}$ | $\begin{aligned} & \hline \text { RCFDS417 } \\ & 2,232,000 \end{aligned}$ |  |
| b. High volatility commercial real estate exposures......... | RCFDS419 0 | RCFDS420 | RCFDH174 ${ }^{0}$ |  |  |  | RCFDH175 0 | RCFDH176 0 | RCFDH177 0 | RCFDS421 0 |
| c. Exposures past due 90 days or more or on nonaccrual ${ }^{3}$ | $\begin{gathered} \text { RCFDS423 } \\ 74,000 \\ \hline \end{gathered}$ | RCFDS424 0 | RCFDS425 0 | RCFDHJ78 0 | RCFDHJ79 0 |  | RCFDS426 0 | RCFDS427 0 | RCFDS428 0 | $\begin{gathered} \text { RCFDS429 } \\ 74,000 \\ \hline \end{gathered}$ |


| Dollar amounts in thousands | (Column K) <br> Allocation by <br> Risk-Weight <br> Category 250\% | (Column L) Allocation by Risk-Weight Category 300\% | (Column M) Allocation by Risk-Weight Category 400\% | (Column N) Allocation by Risk-Weight Category 600\% | (Column O) Allocation by Risk-Weight Category 625\% | (Column P) Allocation by Risk-Weight Category 937.5\% | (Column Q) Allocation by Risk-Weight Category 1,250\% | (Column R) Application of Other Risk-Weighting Approaches Exposure Amount | (Column S) <br> Application of <br> Other <br> Risk-Weighting <br> Approaches <br> Risk-Weighted <br> Asset Amount |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. Cash and balances due from depository institutions |  |  |  |  |  |  |  |  |  |
| 2. Securities: |  |  |  |  |  |  |  |  |  |
| a. Held-to-maturity securities |  |  |  |  |  |  |  |  |  |
| b. Available-for-sale debt securities and equity securities with readily determinable fair values not held for trading. | RCFDH270 0 | RCFDS405 |  | RCFDS406 0 |  |  |  | $\begin{aligned} & \hline \text { RCFDH271 } \\ & 913,000 \end{aligned}$ | $\begin{array}{r} \hline \text { RCFDH272 } \\ 539,000 \end{array}$ |
| 3. Federal funds sold and securities purchased under agreements to resell: |  |  |  |  |  |  |  |  |  |
| a. Federal funds sold in domestic offices |  |  |  |  |  |  |  |  |  |

[^91]| Dollar amounts in thousands | (Column K) <br> Allocation by <br> Risk-Weight <br> Category 250\% | (Column L) Allocation by Risk-Weight Category 300\% | (Column M) Allocation by Risk-Weight Category 400\% | (Column N) <br> Allocation by <br> Risk-Weight <br> Category 600\% | (Column O) <br> Allocation by <br> Risk-Weight <br> Category 625\% | (Column P) Allocation by Risk-Weight Category 937.5\% | (Column Q) Allocation by Risk-Weight Category 1,250\% | (Column R) <br> Application of <br> Other <br> Risk-Weighting <br> Approaches <br> Exposure <br> Amount | (Column S) <br> Application of <br> Other <br> Risk-Weighting <br> Approaches <br> Risk-Weighted <br> Asset Amount |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| b. Securities purchased under agreements to resell |  |  |  |  |  |  |  |  |  |
| 4. Loans and leases held for sale: |  |  |  |  |  |  |  |  |  |
| a. Residential mortgage exposures.................................... |  |  |  |  |  |  |  | RCFDH273 0 | RCFDH274 0 |
| b. High volatility commercial real estate exposures |  |  |  |  |  |  |  | RCFDH275 0 | RCFDH276 |


| Dollar amounts in thousands | (Column K) <br> Allocation by <br> Risk-Weight <br> Category 250\% | (Column L) <br> Allocation by <br> Risk-Weight <br> Category 300\% | (Column M) <br> Allocation by <br> Risk-Weight <br> Category 400\% | (Column N) <br> Allocation by <br> Risk-Weight <br> Category 600\% | (Column O) Allocation by Risk-Weight Category 625\% | (Column P) Allocation by Risk-Weight Category 937.5\% | $\begin{gathered} \text { (Column Q) } \\ \text { Allocation by } \\ \text { Risk-Weight } \\ \text { Category } \\ \text { 1,250\% } \end{gathered}$ | (Column R) <br> Application of <br> Other <br> Risk-Weighting <br> Approaches <br> Exposure <br> Amount | (Column S) Application of Other Risk-Weighting Approaches Risk-Weighted Asset Amount |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| c. Exposures past due 90 days or more or on nonaccrual ${ }^{6}$..... |  |  |  |  |  |  |  | RCFDH277 0 | RCFDH278 0 |


| Dollar amounts in thousands | (Column A) Totals from Schedule RC | (Column B) <br> Adjustments to Totals Reported in Column A | (Column C) Allocation by Risk-Weight Category 0\% | (Column D) Allocation by Risk-Weight Category 2\% | (Column E) Allocation by Risk-Weight Category 4\% | (Column F) Allocation by Risk-Weight Category 10\% | (Column G) Allocation by Risk-Weight Category 20\% | (Column H) Allocation by Risk-Weight Category 50\% | (Column I) <br> Allocation by Risk-Weight Category 100\% | (Column J) Allocation by Risk-Weight Category 150\% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4. Loans and leases held for sale (continued): |  |  |  |  |  |  |  |  |  |  |
| d. All other exposures | $\begin{array}{l\|} \hline \text { RCFDS431 } \\ 10,703,000 \\ \hline \end{array}$ | $\begin{array}{r\|} \hline \text { RCFDS432 } \\ -288,000 \end{array}$ | $\begin{array}{c\|} \hline \text { RCFDS433 } \\ 893,000 \\ \hline \end{array}$ | RCFDHJ80 0 | $\begin{array}{r} \hline \text { RCFDHJ81 } \\ \\ \hline \end{array}$ |  | $\begin{array}{r} \hline \text { RCFDS434 } \\ 567,000 \\ \hline \end{array}$ | RCFDS435 0 | $\begin{aligned} & \hline \text { RCFDS436 } \\ & 9,354,000 \end{aligned}$ | $\begin{array}{c\|} \hline \text { RCFDS437 } \\ 177,000 \\ \hline \end{array}$ |
| 5. Loans and leases held for investment: |  |  |  |  |  |  |  |  |  |  |
| a. Residential mortgage exposures... | $\begin{aligned} & \hline \text { RCFDS439 } \\ & 389,303,000 \end{aligned}$ | $\begin{array}{r} \hline \text { RCFDS440 } \\ 410,000 \end{array}$ | RCFDH178 0 |  |  |  | $\begin{aligned} & \hline \text { RCFDS441 } \\ & 84,983,000 \end{aligned}$ | $\begin{aligned} & \hline \text { RCFDS442 } \\ & 277,431,000 \end{aligned}$ | $\begin{aligned} & \hline \text { RCFDS443 } \\ & 26,479,000 \end{aligned}$ |  |
| b. High volatility commercial real estate exposures... | $\begin{array}{r} \hline \text { RCFDS445 } \\ 114,000 \end{array}$ | RCFDS446 0 | RCFDH179 ${ }^{0}$ |  |  |  | RCFDH180 0 | RCFDH181 0 | RCFDH182 0 | $\begin{array}{r\|} \hline \text { RCFDS447 } \\ 114,000 \end{array}$ |
| c. Exposures past due 90 days or more or on nonaccrual ${ }^{7}$. | RCFDS449 5,012,000 | $\begin{array}{r} \text { RCFDS450 } \\ -55,000 \end{array}$ | RCFDS451 46,000 | RCFDHJ82 0 | RCFDHJ83 0 |  | RCFDS452 19,000 | RCFDS453 0 | RCFDS454 | $\begin{gathered} \text { RCFDS455 } \\ 5,002,000 \end{gathered}$ |
| d. All other exposures. | $\begin{array}{l\|} \hline \text { RCFDS457 } \\ 779,901,000 \end{array}$ | $\begin{array}{c\|} \hline \text { RCFDS458 } \\ 63,581,000 \end{array}$ | $\begin{array}{c\|} \hline \text { RCFDS459 } \\ 10,786,000 \end{array}$ | $\begin{array}{r} \text { RCFDHJ84 } \\ 125,000 \end{array}$ | RCFDHJ85 0 |  | $\begin{aligned} & \text { RCFDS460 } \\ & 62,502,000 \end{aligned}$ | $\begin{aligned} & \hline \text { RCFDS461 } \\ & 20,639,000 \end{aligned}$ | $\begin{array}{c\|} \hline \text { RCFDS462 } \\ 620,913,000 \end{array}$ | $\begin{array}{c\|} \hline \text { RCFDS463 } \\ 1,355,000 \end{array}$ |
| 6. LESS: Allowance for loan and lease losses | $\begin{array}{c\|} \hline \text { RCFD3123 } \\ 21,919,000 \\ \hline \end{array}$ | $\begin{array}{c\|} \hline \text { RCFD3123 } \\ 21,919,000 \\ \hline \end{array}$ |  |  |  |  |  |  |  |  |
| 7. Trading assets. | $\begin{aligned} & \text { RCFDD976 } \\ & 399,791,000 \end{aligned}$ | $\begin{aligned} & \hline \text { RCFDS466 } \\ & 385,440,000 \end{aligned}$ | $\begin{array}{r\|} \hline \text { RCFDD977 } \\ 2,747,000 \end{array}$ | $\begin{aligned} & \text { RCFDHJ86 } \\ & 969,000 \end{aligned}$ | RCFDHJ87 ${ }_{0}$ |  | $\begin{array}{r} \hline \text { RCFDD978 } \\ 1,317,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDD979 } \\ 5,286,000 \end{array}$ | $\begin{array}{r\|} \hline \text { RCFDD980 } \\ 3,880,000 \end{array}$ | $\begin{array}{r\|} \hline \text { RCFDS467 } \\ 20,000 \end{array}$ |
| 8. All other assets ${ }^{8}$. | $\begin{array}{l\|} \hline \text { RCFDD981 } \\ 264,628,000 \end{array}$ | $\begin{array}{c\|} \hline \text { RCFDS469 } \\ 90,511,000 \end{array}$ | $\begin{gathered} \hline \text { RCFDD982 } \\ 7,763,000 \end{gathered}$ | RCFDHJ88 0 | $\begin{array}{r} \hline \text { RCFDHJ89 } \\ 8,782,000 \end{array}$ |  | $\begin{array}{r} \hline \text { RCFDD983 } \\ 3,149,000 \end{array}$ | $\begin{aligned} & \hline \text { RCFDD984 } \\ & 1,772,000 \end{aligned}$ | $\begin{array}{c\|} \hline \text { RCFDD985 } \\ 125,224,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDH185 } \\ 2,814,000 \end{array}$ |
| a. Separate account bank-owned life insurance |  |  |  |  |  |  |  |  |  |  |
| b. Default fund contributions to central counterparties |  |  |  |  |  |  |  |  |  |  |


| Dollar amounts in thousands | (Column K) Allocation by Risk-Weight Category 250\% | (Column L) <br> Allocation by <br> Risk-Weight <br> Category 300\% | (Column M) <br> Allocation by <br> Risk-Weight <br> Category 400\% | (Column N) <br> Allocation by <br> Risk-Weight <br> Category 600\% | (Column O) Allocation by Risk-Weight Category 625\% | (Column P) <br> Allocation by Risk-Weight Category 937.5\% | (Column Q) Allocation by Risk-Weight Category 1,250\% |  | (Column S) <br> Application of <br> Other <br> Risk-Weighting <br> Approaches <br> Risk-Weighted <br> Asset Amount |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4. Loans and leases held for sale (continued): |  |  |  |  |  |  |  |  |  |
| d. All other exposures. |  |  |  |  |  |  |  | RCFDH279 0 | RCFDH280 0 |
| 5. Loans and leases held for investment: |  |  |  |  |  |  |  |  |  |
| a. Residential mortgage exposures.. |  |  |  |  |  |  |  | RCFDH281 0 | RCFDH282 0 |
| b. High volatility commercial real estate exposures........... |  |  |  |  |  |  |  | RCFDH283 0 | RCFDH284 0 |
| c. Exposures past due 90 days or more or on nonaccrual ${ }^{11}$.. |  |  |  |  |  |  |  | RCFDH285 0 | RCFDH286 0 |
| d. All other exposures. |  |  |  |  |  |  |  | RCFDH287 0 | RCFDH2888 |
| 6. LESS: Allowance for loan and lease losses |  |  |  |  |  |  |  |  |  |
| 7. Trading assets.. | RCFDH289 0 | $\begin{array}{r} \hline \text { RCFDH186 } \\ \hline \end{array}$ | RCFDH290 0 | RCFDH187 |  |  |  | $\begin{array}{r} \hline \text { RCFDH291 } \\ 132,000 \end{array}$ | $\begin{gathered} \hline \text { RCFDH292 } \\ 106,000 \end{gathered}$ |
| 8. All other assets ${ }^{12}$. | $\begin{aligned} & \hline \text { RCFDH293 } \\ & 10,984,000 \end{aligned}$ | RCFDH188 | RCFDS470 | $\begin{array}{r} \hline \text { RCFDS471 } \\ 1,000 \end{array}$ |  |  |  | $\begin{array}{r} \hline \text { RCFDH294 } \\ 4,025,000 \\ \hline \end{array}$ | $\begin{array}{c\|} \hline \text { RCFDH295 } \\ 3,503,000 \\ \hline \end{array}$ |
| a. Separate account bank-owned life insurance.................... |  |  |  |  |  |  |  | $\begin{array}{r\|} \hline \text { RCFDH296 } \\ 5,726,000 \\ \hline \end{array}$ | $\begin{array}{r} \hline \text { RCFDH297 } \\ \mathbf{2 , 2 4 1 , 0 0 0} \\ \hline \end{array}$ |
| b. Default fund contributions to central counterparties........... |  |  |  |  |  |  |  | $\begin{array}{r} \hline \text { RCFDH298 } \\ 3,877,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDH299 } \\ 1,567,000 \end{array}$ |

[^92]| Dollar amounts in thousands | $\begin{gathered} \text { (Column A) } \\ \text { Totals } \end{gathered}$ | (Column B) Adjustments to Totals Reported in Column A | (Column Q) <br> Exposure <br> Amount 1,250\% | (Column T) Total Risk-Weighted Asset Amount by Calculation Methodology SSFA | (Column U) Total Risk-Weighted Asset Amount by Calculation Methodology Gross-Up |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 9. On-balance sheet securitization exposures: |  |  |  |  |  |
| a. Held-to-maturity securities................................................. | $\begin{aligned} & \hline \text { RCFDS475 } \\ & 84,152,000 \end{aligned}$ | $\begin{aligned} & \hline \text { RCFDS476 } \\ & 84,152,000 \end{aligned}$ | RCFDS477 | $\begin{aligned} & \hline \text { RCFDS478 } \\ & 16,838,000 \end{aligned}$ | RCFDS479 |
| b. Available-for-sale securities. | $\begin{array}{r} \hline \text { RCFDS480 } \\ 14,139,000 \end{array}$ | $\begin{array}{r} \text { RCFDS481 } \\ 14,139,000 \end{array}$ | RCFDS482 0 | $\begin{array}{r\|} \hline \text { RCFDS483 } \\ 2,834,000 \end{array}$ | RCFDS484 |
| c. Trading assets................................................................... | $\begin{array}{r} \hline \text { RCFDS485 } \\ 1,685,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDS486 } \\ 1,681,000 \end{array}$ | RCFDS487 $4,000$ | $\begin{array}{r} \hline \text { RCFDS488 } \\ 16,000 \end{array}$ | RCFDS489 |
| d. All other on-balance sheet securitization exposures................. | $\begin{array}{r\|} \hline \text { RCFDS490 } \\ 117,653,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDS491 } \\ 117,646,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDS492 } \\ 7,000 \end{array}$ | $\begin{array}{r\|} \hline \text { RCFDS493 } \\ 23,332,000 \end{array}$ | RCFDS494 |
| 10. Off-balance sheet securitization exposures................................. | $\begin{aligned} & \hline \text { RCFDS495 } \\ & 58,576,000 \end{aligned}$ | $\begin{aligned} & \hline \text { RCFDS496 } \\ & 58,494,000 \end{aligned}$ | $\begin{array}{r} \hline \text { RCFDS497 } \\ 82,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDS498 } \\ 4,678,000 \end{array}$ | RCFDS499 |


| Dollar amounts in thousands | (Column A) Totals From Schedule RC | (Column B) Adjustments to Totals Reported in Column A | (Column C) Allocation by Risk-Weight Category 0\% | (Column D) Allocation by Risk-Weight Category 2\% | (Column E) Allocation by Risk-Weight Category 4\% | (Column F) Allocation by Risk-Weight Category 10\% | (Column G) Allocation by Risk-Weight Category 20\% | (Column H) Allocation by Risk-Weight Category 50\% | (Column I) Allocation by Risk-Weight Category 100\% | $\begin{gathered} \text { (Column J) } \\ \text { Allocation by } \\ \text { Risk-Weight } \\ \text { Category } \\ 150 \% \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 11. Total balance sheet assets ${ }^{14}$. | $\begin{array}{l\|} \hline \text { RCFD2170 } \\ 3,382,195,000 \end{array}$ | $\begin{array}{l\|} \hline \text { RCFDS500 } \\ 1,053,780,000 \end{array}$ | $\begin{array}{c\|} \hline \text { RCFDD987 } \\ 847,005,000 \end{array}$ | $\begin{gathered} \hline \text { RCFDHJ90 } \\ 1,094,000 \end{gathered}$ | $\begin{array}{c\|} \hline \text { RCFDHJ91 } \\ 8,782,000 \\ \hline \end{array}$ |  | $\begin{array}{c\|} \hline \text { RCFDD988 } \\ 306,634,000 \end{array}$ | $\begin{array}{c\|} \hline \text { RCFDD989 } \\ 336,298,000 \end{array}$ | $\begin{array}{c\|} \hline \text { RCFDD990 } \\ 791,991,000 \end{array}$ | $\begin{array}{c\|} \hline \text { RCFDS503 } \\ 10,942,000 \end{array}$ |


| Dollar amounts in thousands | (Column K) Allocation by Risk-Weight Category 250\% | (Column L) Allocation by Risk-Weight Category 300\% | (Column M) Allocation by Risk-Weight Category 400\% | (Column N) Allocation by Risk-Weight Category 600\% | (Column O) Allocation by Risk-Weight Category 625\% | (Column P) Allocation by Risk-Weight Category 937.5\% | (Column Q) <br> Allocation by <br> Risk-Weight <br> Category 1,250\% | (Column R) <br> Application of Other <br> Risk-Weighting Approaches Exposure Amount |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 11. Total balance sheet assets ${ }^{14}$. | $\begin{aligned} & \hline \text { RCFDS504 } \\ & 10,984,000 \end{aligned}$ | RCFDS505 | RCFDS506 | $\begin{array}{r} \hline \text { RCFDS507 } \\ 1,000 \end{array}$ |  |  | $\begin{array}{r} \hline \text { RCFDS510 } \\ 11,000 \end{array}$ | $\begin{aligned} & \hline \text { RCFDH300 } \\ & 14,673,000 \end{aligned}$ |


| Dollar amounts in thousands | (Column A) Face, Notional, or Other Amount | (Column B) Credit Equivalent Amount | (Column C) Allocation by Risk-Weight Category 0\% | (Column D) Allocation by Risk-Weight Category 2\% | (Column E) Allocation by Risk-Weight Category 4\% | (Column F) Allocation by Risk-Weight Category 10\% | (Column G) <br> Allocation by <br> Risk-Weight <br> Category 20\% | (Column H) <br> Allocation by <br> Risk-Weight <br> Category 50\% | (Column I) <br> Allocation by <br> Risk-Weight <br> Category <br> $100 \%$ | (Column J) Allocation by Risk-Weight Category $150 \%$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12. Financial standby letters of cred | $\begin{array}{c\|} \hline \text { RCFDD991 } \\ 29,322,000 \end{array}$ | $\begin{array}{c\|} \hline \text { RCFDD992 } \\ 29,322,000 \end{array}$ | $\begin{array}{r\|} \hline \text { RCFDD993 } \\ 442,000 \end{array}$ | $\begin{array}{r\|} \hline \text { RCFDHJ92 } \\ 102,000 \end{array}$ | RCFDHJ93 0 |  | $\begin{array}{r\|} \hline \text { RCFDD994 } \\ 7,127,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDD995 } \\ 2,985,000 \end{array}$ | $\begin{array}{c\|} \hline \text { RCFDD996 } \\ 18,457,000 \end{array}$ | $\begin{array}{r\|} \hline \text { RCFDS511 } \\ 209,000 \end{array}$ |
| 13. Performance standby letters of credit and transaction-related contingent items.. | $\begin{gathered} \hline \text { RCFDD997 } \\ 7,356,000 \end{gathered}$ | $\begin{gathered} \hline \text { RCFDD998 } \\ 3,678,000 \end{gathered}$ | $\begin{array}{c\|} \hline \text { RCFDD999 } \\ 182,000 \\ \hline \end{array}$ |  |  |  | $\begin{gathered} \hline \text { RCFDG603 } \\ 691,000 \end{gathered}$ | $\begin{gathered} \hline \text { RCFDG604 } \\ 175,000 \end{gathered}$ | $\begin{gathered} \hline \text { RCFDG605 } \\ 2,444,000 \end{gathered}$ | $\begin{array}{c\|} \hline \text { RCFDS512 } \\ 186,000 \\ \hline \end{array}$ |
| 14. Commercial and similar letters of credit with an original maturity of one year or less. | $\begin{gathered} \hline \text { RCFDG606 } \\ 2,570,000 \end{gathered}$ | $\begin{gathered} \hline \text { RCFDG607 } \\ 514,000 \end{gathered}$ | RCFDG608 23,000 | RCFDHJ94 0 | RCFDHJ95 0 |  | RCFDG609 151,000 | RCFDG610 49,000 | RCFDG611 194,000 | RCFDS513 97,000 |
| 15. Retained recourse on small business obligations sold with recourse. | RCFDG612 0 | RCFDG613 0 | RCFDG614 ${ }^{0}$ |  |  |  | RCFDG615 0 | RCFDG616 0 | RCFDG617 ${ }^{0}$ | RCFDS514 |


| Dollar amounts in thousands | (Column A) Face, Notional, or Other Amount | (Column B) Credit Equivalent Amount | (Column C) Allocation by Risk-Weight Category 0\% | (Column D) Allocation by Risk-Weight Category 2\% | (Column E) Allocation by Risk-Weight Category 4\% | (Column F) Allocation by Risk-Weight Category 10\% | (Column G) Allocation by Risk-Weight Category 20\% | (Column H) Allocation by Risk-Weight Category 50\% | (Column I) Allocation by Risk-Weight Category 100\% | (Column J) <br> Allocation by Risk-Weight Category 150\% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 16. Repo-style transactions ${ }^{21}$. | $\begin{array}{c\|} \hline \text { RCFDS515 } \\ 98,510,000 \end{array}$ | $\begin{array}{c\|} \hline \text { RCFDS516 } \\ 98,510,000 \end{array}$ | $\begin{aligned} & \hline \text { RCFDS517 } \\ & 13,003,000 \end{aligned}$ | $\begin{aligned} & \hline \text { RCFDS518 } \\ & 9,050,000 \end{aligned}$ | RCFDS519 0 |  | $\begin{array}{r} \hline \text { RCFDS520 } \\ 23,765,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDS521 } \\ 1,228,000 \end{array}$ | $\begin{aligned} & \hline \text { RCFDS522 } \\ & 49,956,000 \end{aligned}$ | $\begin{array}{c\|} \hline \text { RCFDS523 } \\ 1,508,000 \end{array}$ |
| 17. All other off-balance sheet liabilities.. | $\begin{array}{r} \hline \text { RCFDG618 } \\ 959,000 \end{array}$ | $\begin{aligned} & \hline \text { RCFDG619 } \\ & 959,000 \end{aligned}$ | RCFDG620 0 |  |  |  | $\begin{gathered} \hline \text { RCFDG621 } \\ 391,000 \end{gathered}$ | $\begin{array}{r} \hline \text { RCFDG622 } \\ 2,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDG623 } \\ 566,000 \\ \hline \end{array}$ | RCFDS524 |
| 18. Unused commitments:* |  |  |  |  |  |  |  |  |  |  |
| a. Original maturity of one year or less......................... | $\begin{array}{c\|} \hline \text { RCFDS525 } \\ 90,190,000 \\ \hline \end{array}$ | $\begin{array}{l\|} \hline \text { RCFDS526 } \\ 18,038,000 \\ \hline \end{array}$ | $\begin{array}{r\|} \hline \text { RCFDS527 } \\ 512,000 \\ \hline \end{array}$ | $\begin{array}{r} \hline \text { RCFDHJ96 } \\ 362,000 \\ \hline \end{array}$ | RCFDHJ97 0 |  | $\begin{array}{r} \hline \text { RCFDS528 } \\ 3,678,000 \\ \hline \end{array}$ | $\begin{array}{r} \hline \text { RCFDS529 } \\ 1,650,000 \end{array}$ | $\begin{aligned} & \hline \text { RCFDS530 } \\ & 11,824,000 \end{aligned}$ | $\begin{array}{r\|} \hline \text { RCFDS531 } \\ 12,000 \\ \hline \end{array}$ |

[^93]| Dollar amounts in thousands | (Column A) <br> Face, <br> Notional, or <br> Other Amount | (Column B) Credit Equivalent Amount | (Column C) Allocation by Risk-Weight Category 0\% | (Column D) Allocation by Risk-Weight Category 2\% | (Column E) Allocation by Risk-Weight Category 4\% | (Column F) Allocation by Risk-Weight Category 10\% | (Column G) Allocation by Risk-Weight Category 20\% | (Column H) Allocation by Risk-Weight Category 50\% | (Column I) Allocation by Risk-Weight Category 100\% | (Column J) Allocation by Risk-Weight Category 150\% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| b. Original maturity exceeding one year.... | $\begin{array}{c\|} \hline \text { RCFDG624 } \\ 449,704,000 \end{array}$ | $\begin{array}{c\|} \hline \text { RCFDG625 } \\ 224,852,000 \end{array}$ | $\begin{gathered} \hline \text { RCFDG626 } \\ 1,698,000 \end{gathered}$ | $\begin{aligned} & \text { RCFDHJ98 } \\ & 6,301,000 \end{aligned}$ | RCFDHJ99 0 |  | $\begin{aligned} & \hline \text { RCFDG627 } \\ & 38,300,000 \end{aligned}$ | $\begin{gathered} \hline \text { RCFDG628 } \\ 6,270,000 \end{gathered}$ | $\begin{aligned} & \hline \text { RCFDG629 } \\ & 172,106,000 \end{aligned}$ | $\begin{array}{c\|} \hline \text { RCFDS539 } \\ 177,000 \end{array}$ |
| 19. Unconditionally cancelable commitments. | $\begin{gathered} \hline \text { RCFDS540 } \\ 923,266,000 \end{gathered}$ | $\begin{array}{ll} \hline \text { RCFDS541 } & 0 \\ & 0 \end{array}$ |  |  |  |  |  |  |  |  |
| 20. Over-the-counter derivatives |  | $\begin{array}{c\|} \hline \text { RCFDS542 } \\ 237,546,000 \end{array}$ | $\begin{array}{c\|} \hline \text { RCFDS543 } \\ 23,401,000 \end{array}$ | RCFDHK00 0 | $\begin{array}{r} \text { RCFDHK01 } \\ \\ 0 \end{array}$ | $\mathrm{RCFDS544}_{0}$ | $\begin{aligned} & \text { RCFDS545 } \\ & 52,196,000 \end{aligned}$ | $\begin{gathered} \hline \text { RCFDS546 } \\ 4,990,000 \end{gathered}$ | $\begin{aligned} & \hline \text { RCFDS547 } \\ & 155,379,000 \end{aligned}$ | $\begin{array}{c\|} \hline \text { RCFDS548 } \\ 1,580,000 \\ \hline \end{array}$ |
| 21. Centrally cleared derivatives................ |  | $\begin{gathered} \hline \text { RCFDS549 } \\ 90,557,000 \end{gathered}$ | RCFDS550 0 | $\begin{array}{r} \hline \text { RCFDS551 } \\ 85,295,000 \end{array}$ | $\begin{array}{c\|} \hline \text { RCFDS552 } \\ 747,000 \end{array}$ |  | RCFDS554 0 | RCFDS555 0 | $\begin{array}{r} \hline \text { RCFDS556 } \\ 4,515,000 \end{array}$ | RCFDS557 0 |
| 22. Unsettled transactions (failed trades) ${ }^{22}$......................... | $\begin{array}{r\|} \hline \text { RCFDH191 } \\ 294,000 \end{array}$ |  | $\begin{array}{c\|} \hline \text { RCFDH193 } \\ 118,000 \end{array}$ |  |  |  | $\begin{array}{r} \hline \text { RCFDH194 } \\ 90,000 \end{array}$ | RCFDH195 0 | $\begin{array}{r} \hline \text { RCFDH196 } \\ 47,000 \end{array}$ | RCFDH197 |

[^94]| Dollar amounts in thousands | (Column O) Allocation by Risk-Weight Category 625\% | (Column P) <br> Allocation by <br> Risk-Weight <br> Category 937.5\% | (Column Q) <br> Allocation by <br> Risk-Weight <br> Category 1,250\% | (Column R) Application of Other Risk-Weighting Approaches Credit Equivalent Amount | (Column S) Application of Other Risk-Weighting Approaches Risk-Weighted Asset Amount |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 16. Repo-style transactions ${ }^{24}$. |  |  |  | RCFDH301 | RCFDH302 |
| 17. All other off-balance sheet liabilities |  |  |  |  |  |
| 18. Unused commitments:* |  |  |  |  |  |
| a. Original maturity of one year or less... |  |  |  | RCFDH303 | RCFDH304 0 |
| b. Original maturity exceeding one year..................................... |  |  |  | RCFDH307 | RCFDH308 |
| 19. Unconditionally cancelable commitments |  |  |  |  |  |
| 20. Over-the-counter derivatives................................................... |  |  |  | RCFDH309 | RCFDH310 |
| 21. Centrally cleared derivatives |  |  |  |  |  |
| 22. Unsettled transactions (failed trades) ${ }^{25}$...................................... | RCFDH198 1,000 | RCFDH199 1,000 | $\begin{array}{r} \hline \text { RCFDH200 } \\ 37,000 \end{array}$ |  |  |

[^95]| Dollar amounts in thousands | (Column C) Allocation by Risk-Weight Category 0\% | (Column D) Allocation by Risk-Weight Category 2\% | (Column E) Allocation by Risk-Weight Category 4\% | (Column F) Allocation by Risk-Weight Category 10\% | (Column G) Allocation by Risk-Weight Category 20\% | (Column H) Allocation by Risk-Weight Category 50\% | (Column I) Allocation by Risk-Weight Category 100\% | (Column J) Allocation by Risk-Weight Category 150\% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 23. Total assets, derivatives, off-balance sheet items, and other items subject to risk weighting by risk-weight category (for each of columns C through P, sum of items 11 through 22; for column $Q$, sum of items 10 through 22). | $\begin{aligned} & \text { RCFDG630 } \\ & 886,384,000 \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { RCFDS558 } \\ & \text { 102,204,000 } \end{aligned}$ | $\begin{array}{r} \text { RCFDS559 } \\ 9,529,000 \\ \hline \end{array}$ | RCFDS560 | $\begin{aligned} & \text { RCFDG631 } \\ & 433,023,000 \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { RCFDG632 } \\ & 353,647,000 \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { RCFDG633 } \\ & \mathbf{1 , 2 0 7 , 4 7 9 , 0 0 0} \\ & \hline \end{aligned}$ | $\begin{array}{r} \text { RCFDS561 } \\ 14,711,000 \\ \hline \end{array}$ |
| 24. Risk weight factor |  |  |  |  |  |  |  |  |
| 25. Risk-weighted assets by risk-weight category (for each column, item 23 multiplied by item 24). | RCFDG634 | $\begin{aligned} & \hline \text { RCFDS569 } \\ & 2,044,080 \end{aligned}$ | $\begin{array}{r} \hline \text { RCFDS570 } \\ 381,160 \end{array}$ | RCFDS571 | $\begin{array}{r} \hline \text { RCFDG635 } \\ 86,604,600 \end{array}$ | $\begin{aligned} & \hline \text { RCFDG636 } \\ & 176,823,500 \end{aligned}$ | $\begin{array}{l\|} \hline \text { RCFDG637 } \\ 1,207,479,000 \end{array}$ | $\begin{array}{r\|} \hline \text { RCFDS572 } \\ 22,066,500 \end{array}$ |


| Dollar amounts in thousands | (Column K) Allocation by Risk-Weight Category 250\% | (Column L) Allocation by Risk-Weight Category 300\% | (Column M) Allocation by Risk-Weight Category 400\% | (Column N) Allocation by Risk-Weight Category 600\% | (Column O) Allocation by Risk-Weight Category 625\% | (Column P) Allocation by Risk-Weight Category 937.5\% | (Column Q) Allocation by Risk-Weight Category 1,250\% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 23. Total assets, derivatives, off-balance sheet items, and other items subject to risk weighting by risk-weight category (for each of columns C through P, sum of items 11 through 22 ; for column $Q$, sum of items 10 through 22).. | $\begin{aligned} & \text { RCFDS562 } \\ & 10,984,000 \\ & \hline \end{aligned}$ | RCFDS563 | RCFDS564 | RCFDS565 1,000 | RCFDS566 1,000 | RCFDS567 1,000 | $\begin{array}{r}\text { RCFDS568 } \\ 130,000 \\ \hline\end{array}$ |
| 24. Risk weight factor |  |  |  |  |  |  |  |
| 25. Risk-weighted assets by risk-weight category (for each column, item 23 multiplied by item 24). | $\begin{aligned} & \text { RCFDS573 } \\ & 27,460,000 \end{aligned}$ | RCFDS574 | RCFDS575 | RCFDS576 6,000 | RCFDS577 6,250 | RCFDS578 9,375 | $\begin{array}{r\|} \hline \text { RCFDS579 } \\ 1,625,000 \\ \hline \end{array}$ |

Dollar amounts in thousands



Dollar amounts in thousands

| 4. Amount of allowances for credit losses on purchased credit-deteriorated assets: ${ }^{1}$ a. Loans and leases held for investment. |  | 355,000 |
| :---: | :---: | :---: |
|  | RCFDJJ30 |  |
| b. Held-to-maturity debt securities. | RCFDJJ31 | 0 |
| c. Other financial assets measured at amortized cost | RCFDJJ32 | 0 |

[^96]
## Schedule RC-S - Servicing Securitization and Asset Sale Activities(Form Type - 031)

| Dollar amounts in thousands | (Column A) 1-4 Family Residential Loans | (Column B) Home Equity Lines | (Column C) Credit Card Receivables | (Column D) Auto Loans | (Column E) Other Consumer Loans | (Column F) Commercial and Industrial Loans | (Column G) All Other Loans, All Leases, and All Other Assets |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. Outstanding principal balance of assets sold and securitized by the reporting bank with servicing retained or with recourse or other seller-provided credit enhancements | RCFDB705 $33,375,000$ | RCFDB706 | RCFDB707 0 | RCFDB708 362,000 | RCFDB709 372,000 | RCFDB710 | RCFDB711 $15,671,000$ |
| 2. Maximum amount of credit exposure arising from recourse or other seller-provided credit enhancements provided to structures reported in item 1. $\qquad$ | RCFDHU09 489,000 | RCFDHU10 | RCFDHU11 0 | $\begin{array}{r}\text { RCFDHU12 } \\ \mathbf{1 2 , 0 0 0} \\ \hline\end{array}$ | RCFDHU13 | RCFDHU14 | $\begin{array}{r}\text { RCFDHU15 } \\ 1,849,000 \\ \hline\end{array}$ |
| Item 3 is to be completed by banks with $\$ 100$ billion or more in total assets. <br> 3. Reporting bank's unused commitments to provide liquidity to structures reported in item $1^{1}$. $\qquad$ | RCFDB726 | RCFDB727 | RCFDB728 | RCFDB729 | RCFDB730 | RCFDB731 | $\begin{array}{r}\text { RCFDB732 } \\ 5,000 \\ \hline\end{array}$ |
| 4. Past due loan amounts included in item |  |  |  |  |  |  |  |
| a. 30-89 days past due.. | $\begin{array}{r} \hline \text { RCFDB733 } \\ 297,000 \end{array}$ | RCFDB734 0 | RCFDB735 0 | $\begin{array}{r} \hline \text { RCFDB736 } \\ 3,000 \end{array}$ | $\begin{array}{r} \hline \text { RCFDB737 } \\ 18,000 \end{array}$ | RCFDB738 | $\begin{array}{r} \hline \text { RCFDB739 } \\ 324,000 \end{array}$ |
| b. 90 days or more past due. | $\begin{array}{r} \hline \text { RCFDB740 } \\ 307,000 \end{array}$ | RCFDB741 | RCFDB742 | RCFDB743 | $\begin{array}{r} \text { RCFDB744 } \\ 13,000 \end{array}$ | RCFDB745 | $\begin{array}{r} \hline \text { RCFDB746 } \\ 613,000 \end{array}$ |
| 5. Charge-offs and recoveries on assets sold and securitized with servicing retained or with recourse or other seller-provided credit enhancements (calendar year-to-date): |  |  |  |  |  |  |  |
| a. Charge-offs... | $\begin{array}{r} \hline \text { RIADB747 } \\ 9,000 \end{array}$ | RIADB748 | RIADB749 | $\begin{array}{ll} \hline \text { RIADB750 } & 0 \\ \hline \end{array}$ | RIADB751 | $\begin{array}{ll} \hline \text { RIADB752 } & 0 \\ \hline \end{array}$ | RIADB753 |
| b. Recoveries. | $\begin{array}{r} \hline \text { RIADB754 } \\ 2,000 \end{array}$ | RIADB755 | RIADB756 | RIADB757 | RIADB758 | $\begin{array}{ll} \hline \text { RIADB759 } & 0 \\ & \end{array}$ | RIADB760 $\quad 0$ |
| Item 6 is to be completed by banks with $\$ 10$ billion or more in total assets. <br> 6. Total amount of ownership (or seller's) interest carried as securities or loans ${ }^{1}$ $\qquad$ |  | RCFDHU16 0 | RCFDHU17 0 |  |  | RCFDHU18 0 |  |
| 7. Not applicable |  |  |  |  |  |  |  |
| 8. Not applicable |  |  |  |  |  |  |  |
| 9. Maximum amount of credit exposure arising from credit enhancements provided by the reporting bank to other institutions' securitization structures in the form of standby letters of credit, purchased subordinated securities, and other enhancements.. | RCFDB776 $3,967,000$ |  |  | RCFDB779 305,000 | $\begin{aligned} & \text { RCFDB780 } \\ & 178,000 \end{aligned}$ | RCFDB781 196,000 | $\begin{array}{r} \text { RCFDB782 } \\ 8,704,000 \end{array}$ |
| Item 10 is to be completed by banks with $\$ 10$ billion or more in total assets. 10. Reporting bank's unused commitments to provide liquidity to other institutions' securitization structures ${ }^{1}$ $\qquad$ | RCFDB783 103,000 |  |  | RCFDB786 | RCFDB787 | RCFDB788 0 | RCFDB789 |
| 11. Assets sold with recourse or other seller-provided credit enhancements and not securitized by the reporting bank. | $\begin{array}{r} \text { RCFDB790 } \\ 128,000 \end{array}$ |  |  |  |  |  | $\begin{array}{r} \hline \text { RCFDB796 } \\ 463,000 \end{array}$ |
| 12. Maximum amount of credit exposure arising from recourse or other seller-provided credit enhancements provided to assets reported in item 11.... | $\begin{aligned} & \text { RCFDB797 } \\ & 127,000 \end{aligned}$ |  |  |  |  |  | $\begin{array}{r\|} \hline \text { RCFDB803 } \\ 132,000 \\ \hline \end{array}$ |

[^97]| diar amounts in thousan |  |  | M.1. |
| :---: | :---: | :---: | :---: |
| 1. Not applicable |  |  |  |
| 2. Outstanding principal balance of assets serviced for others (includes participations serviced for others): |  |  | M.2. |
| a. Closed-end 1-4 family residential mortgages serviced with recourse or other servicer-provided credit enhancements. | RCFDB804 | 5,082,000 | M.2.a. |
| b. Closed-end 1-4 family residential mortgages serviced with no recourse or other servicer-provided credit enhancements. | RCFDB805 | 602,716,000 | M.2.b. |
| c. Other financial assets (includes home equity lines) ${ }^{1}$. | RCFDA591 | 685,461,000 | M.2.c. |
| d. 1-4 family residential mortgages serviced for others that are in process of foreclosure at quarter-end (includes closed-end and open-end loans). | RCFDF699 | 695,000 | M.2.d. |
| Memorandum item 3 is to be completed by banks with \$ 10 billion or more in total assets. |  |  | M.3. |
| 3. Asset-backed commercial paper conduits: ${ }^{2}$ |  |  |  |
| a. Maximum amount of credit exposure arising from credit enhancements provided to conduit structures in the form of standby letters of credit, subordinated securities, and other enhancements: |  |  | M.3.a. |
| 1. Conduits sponsored by the bank, a bank affiliate, or the bank's holding company. | RCFDB806 | 3,000,000 | M.3.a.1 |
| 2. Conduits sponsored by other unrelated institutions.. | RCFDB807 | 0 | M.3.a.2. |
| b. Unused commitments to provide liquidity to conduit structures: |  |  | M.3.b. |
| 1. Conduits sponsored by the bank, a bank affiliate, or the bank's holding company. | RCFDB808 | 43,427,000 | M.3.b.1 |
| 2. Conduits sponsored by other unrelated institutions.. | RCFDB809 | 0 | M.3.b.2. |
| 4. Outstanding credit card fees and finance charges included in Schedule RC-S, item 1, column $\mathrm{C}^{2}$. | RCFDC407 | 0 | M.4. |

## Schedule RC-T - Fiduciary and Related Services(Form Type - 031)

Dollar amounts in thousands

| 1. Does the institution have fiduciary powers? (If "NO," do not complete Schedule RC-T.). | RCFDA345 | Yes |
| :---: | :---: | :---: |
| 2. Does the institution exercise the fiduciary powers it has been granted?. | RCFDA346 | Yes |
| 3. Does the institution have any fiduciary or related activity (in the form of assets or accounts) to report in this schedule? <br> (If "NO," do not complete the rest of Schedule RC-T.). | RCFDB867 | Yes |


| Dollar amounts in thousands | (Column A) ManagedAssets |  | (Column B)Non-Managed Assets |  | (Column C) Number of Managed Accounts |  | $\begin{gathered} \text { (Column D) Number of } \\ \text { Non-Managed } \\ \text { Accounts } \\ \hline \end{gathered}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4. Personal trust and agency accounts. | RCFDB868 | 44,893,000 | RCFDB869 | 31,992,000 | RCFDB870 | 13076 | RCFDB871 | 1635 |
| 5. Employee benefit and retirement-related trust and agency accounts: |  |  |  |  |  |  |  |  |
| a. Employee benefit - defined contribution. | RCFDB872 | 495,000 | RCFDB873 | 156,631,000 | RCFDB874 | 64 | RCFDB875 | 465 |
| b. Employee benefit - defined benefit | RCFDB876 | 4,870,000 | RCFDB877 | 278,029,000 | RCFDB878 | 36 | RCFDB879 | 719 |
| c. Other employee benefit and retirement-related accounts..... | RCFDB880 | 12,349,000 | RCFDB881 | 7,421,000 | RCFDB882 | 14383 | RCFDB883 | 212 |
| 6. Corporate trust and agency accounts. | RCFDB884 | 0 | RCFDB885 | 375,000 | RCFDC001 | 0 | RCFDC002 | 1630 |
| 7. Investment management and investment advisory agency accounts. | RCFDB886 | 442,723,000 | RCFDJ253 | 241,350,000 | RCFDB888 | 91817 | RCFDJ254 | 41023 |
| 8. Foundation and endowment trust and agency accounts | RCFDJ255 | 42,568,000 | RCFDJ256 | 2,218,000 | RCFDJ257 | 4313 | RCFDJ258 | 236 |
| 9. Other fiduciary accounts. | RCFDB890 | 45,000 | RCFDB891 | 162,218,000 | RCFDB892 | 2 | RCFDB893 | 439 |
| 10. Total fiduciary accounts (sum of items 4 through 9)................ | RCFDB894 | 547,943,000 | RCFDB895 | 880,234,000 | RCFDB896 | 123691 | RCFDB897 | 46359 |
| 11. Custody and safekeeping accounts.. |  |  | RCFDB898 | 29,563,394,000 |  |  | RCFDB899 | 604757 |
| 12. Fiduciary accounts held in foreign offices (included in items 10 and 11) | RCFNB900 | 129,555,000 | RCFNB901 | 6,592,308,000 | RCFNB902 | 10979 | RCFNB903 | 353506 |
| 13. Individual Retirement Accounts, Health Savings Accounts, and other similar accounts (included in items 5.c and 11). | RCFDJ259 | 12,251,000 | RCFDJ260 | 20,121,000 | RCFDJ261 | 14358 | RCFDJ262 | 30355 |

[^98]| 14. Personal trust and agency accounts.. | RIADB904 | 143,000 | 14. |
| :---: | :---: | :---: | :---: |
| 15. Employee benefit and retirement-related trust and agency accounts: |  |  | 15. |
| a. Employee benefit - defined contribution.. | RIADB905 | 77,000 | 15.a |
| b. Employee benefit - defined benefit. | RIADB906 | 102,000 | 15.b |
| c. Other employee benefit and retirement-related accounts.. | RIADB907 | 25,000 | 15. |
| 16. Corporate trust and agency accounts.. | RIADA479 | 29,000 | 16. |
| 17. Investment management and investment advisory agency accounts.. | RIADJ315 | 778,000 | 17. |
| 18. Foundation and endowment trust and agency accounts. | RIADJ316 | 85,000 | 18. |
| 19. Other fiduciary accounts... | RIADA480 | 5,000 | 19. |
| 20. Custody and safekeeping accounts. | RIADB909 | 918,000 | 20. |
| 21. Other fiduciary and related services income. | RIADB910 | 38,000 | 21. |
| 22. Total gross fiduciary and related services income (sum of items 14 through 21) (must equal Schedule RI, item 5.a). | RIAD4070 | 2,200,000 | 22. |
| a. Fiduciary and related services income - foreign offices (included in item 22).. | RIADB912 | 827,000 | 22.a |
| 23. Less: Expenses.. | RIADC058 | NR | 23. |
| 24. Less: Net losses from fiduciary and related services.. | RIADA488 | NR | 24. |
| 25. Plus: Intracompany income credits for fiduciary and related services.. | RIADB911 | NR | 25. |
| 26. Net fiduciary and related services income.................... | RIADA491 | NR | 26. |



| Dollar amounts in thousands | (Column A) Managed Assets |  | (Column B) Number of Managed Accounts |  |
| :---: | :---: | :---: | :---: | :---: |
| q. Investments of managed fiduciary accounts in advised or sponsored mutual funds............ | RCFDJ311 | NR | RCFDJ312 | NR |


| Dollar amounts in thousands | (Column A) Number of Issues |  | (Column B) Principal Amount Outstanding |  |
| :---: | :---: | :---: | :---: | :---: |
| 2. Corporate trust and agency accounts: |  |  |  |  |
| a. Corporate and municipal trusteeships.... | RCFDB927 | NR | RCFDB928 | NR |
| 1. Issues reported in Memorandum item 2.a that are in default.............................. | RCFDJ313 | NR | RCFDJ314 | NR |
| b. Transfer agent, registrar, paying agent, and other corporate agency... | RCFDB929 | NR |  |  |


| Dollar amounts in thousands | (Column A) Number of Funds |  | (Column B) Market Value of Fund Assets |  |
| :---: | :---: | :---: | :---: | :---: |
| Memoranda items 3.a through 3.g are to be completed by banks with collective investment funds and common trust funds with a total market value of $\$ 1$ billion or more as of the preceding December 31. <br> 3. Collective investment funds and common trust funds: |  |  |  |  |
| a. Domestic equity.. | RCFDB931 | 16 | RCFDB932 | 37,873,000 |
| b. International/Global equity... | RCFDB933 | 15 | RCFDB934 | 21,799,000 |
| c. Stock/Bond blend.. | RCFDB935 | 49 | RCFDB936 | 58,450,000 |
| d. Taxable bond.. | RCFDB937 | 23 | RCFDB938 | 29,546,000 |
| e. Municipal bond. | RCFDB939 | 0 | RCFDB940 | 0 |
| f. Short term investments/Money market... | RCFDB941 | 1 | RCFDB942 | 8,953,000 |
| g. Specialty/Other.................................................................................................. | RCFDB943 | 6 | RCFDB944 | 37,743,000 |
| h. Total collective investment funds (sum of Memorandum items 3.a through 3.g)........... | RCFDB945 | 110 | RCFDB946 | 194,364,000 |


| Dollar amounts in thousands | (Column A) Gross Losses Managed Accounts |  | (Column B) Gross Losses Non-Managed Accounts |  | (Column C) Recoveries |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4. Fiduciary settlements, surcharges, and other losses: |  |  |  |  |  |  |
| a. Personal trust and agency accounts........ | RIADB947 | NR | RIADB948 | NR | RIADB949 | NR |
| b. Employee benefit and retirement-related trust and agency accounts..... | RIADB950 | NR | RIADB951 | NR | RIADB952 | NR |
| c. Investment management agency accounts...................... | RIADB953 | NR | RIADB954 | NR | RIADB955 | NR |
| d. Other fiduciary accounts and related services... | RIADB956 | NR | RIADB957 | NR | RIADB958 | NR |
| e. Total fiduciary settlements, surcharges, and other losses (sum of Memorandum items 4.a through 4.d) (sum of columns A and B minus column C must equal Schedule RC-T, item 24). | RIADB959 | NR | RIADB960 | NR | RIADB961 | NR |

## Schedule RC-V - Variable Interest Entities(Form Type - 031)



Dollar amounts in thousands

| 5. Total assets of asset-backed commercial paper (ABCP) conduit VIEs. | RCFDJF77 | 28,768,000 |
| :---: | :---: | :---: |
| 6. Total liabilities of ABCP conduit VIEs. | RCFDJF78 | 16,430,000 |

## Optional Narrative Statement Concerning the Amounts Reported in the Consolidated Reports of Condition and Income(Form Type - 031)

| Dollar amounts in thousands |  |  |  |
| :---: | :---: | :---: | :---: |
| 1. Comments?... | .... | RCON6979 | No |
| 2. Bank Management Statement. |  | TEXT6980 | NR |

## FDIC COVERAGE RATE

J.P. Morgan charges a balance based charge (BBC), which is a monthly administrative fee assessed to address various regulatory and other charges affecting the bank. The rate is set by the bank and subject to periodic review and adjustment.

The following formula is used to calculate the BBC:

Balance-based charge calculation (monthly)
Average positive ledger balance $x$ charge rate $x$ number of calendar days in the month
Actual number of days in the year

Since January 2, 2010, our BBC rate has been $0.13 \%$.
As with other eligible fees, the monthly Balance Based Charge may be offset by earnings credit provided by J.P. Morgan. This charge is included in the monthly account analysis statements.


Greater Chicago is more than a place where we do business. ${ }^{5}$ It is home to our customers, clients, employees and community partners. The strength of our company allows us to leverage our resources, expertise, and data insights to help bolster communities and create a more inclusive economy for all.

## Business Growth and Entrepreneurship

Provided over $\$ 6.6 \mathrm{M}$ in philanthropic capital to the Entrepreneurs of Color Fund to provide minority-owned small businesses and real estate projects with flexible, lowinterest loans, technical assistance and other critical resources.
\$1.6M new markets tax credit equity investment to support the acquisition and construction of Culver's, a sit-down restaurant in Chicago's far South Side neighborhood of Pullman. The project created 70 jobs, most of which were filled by local residents.

## Careers and Skills

\$2.4M new markets tax credit equity investment to establish the North Lawndale Employment Network's (NLEN) new headquarters in North Lawndale and provided \$1M in philanthropic capital to NLEN to expand job training, alleviate the stigma of criminal records and improve wages.

Provided $\mathbf{\$ 3 5 2 K}$ in philanthropic capital to Working Credit to expand financial coaching and credit so students with college debt can continue to take courses while they complete financial empowerment services for debt forgiveness.

180 fellows sponsored since 2014 as part of The Fellowship Initiative (TFI), a program that supports young men of color through high school and college.

JPMorgan Chase is committed to honoring those who have served. We have hired more than $\mathbf{1 K}$ veterans in Illinois since 2014. ${ }^{6}$

## Community Development

Committed $\$ 7.2 \mathrm{M}$ to the Resurrection Project to provide financial support for homebuyers, renovation funds for homeowners, mortgage products for first-time homeowners, and innovation projects to lower the cost of housing.

Provided $\$ 2.5 \mathrm{M}$ in philanthropic capital to the Chicago Neighborhood Initiative for Reclaiming Chicago to build or rehab 1,000 homes on the South Side and West Side of Chicago.

Committed $\$ \mathbf{6 0 0}$ M to increase homeownership and originate approximately 3,000 home purchase loans for Black, Hispanic and Latino families by 2025.

## Financial Health and Wealth Creation

Provided $\$ 200 \mathrm{~K}$ in philanthropic capital to Capital Good Fund, a nonprofit offering low-cost, short-term lending alternatives to payday loans.

Deepening relationships and expanding our presence with 16 community branches, including the Stony Island Community Center branch, and our Community Managers, Community Home Lending, Advisors and Senior Business Consultants.

Hosted more than 975 free financial health events since 2021 supporting customers, community members and employees.?

## Did You Know?

The firm's total business and philanthropic investments toward underserved communities in Chicago will reach $\mathbf{\$ 8 0 0 M}$ by 2025.

# PUBLIC DISCLOSURE 

March 2, 2020

# COMMUNITY REINVESTMENT ACT PERFORMANCE EVALUATION 

JPMorgan Chase Bank, N.A.<br>Charter Number: Charter \#8<br>1111 Polaris Parkway<br>Columbus, OH 43240<br>Office of the Comptroller of the Currency<br>Large Bank Supervision<br>Constitution Center<br>400 7th Street, S.W.

NOTE: This document is an evaluation of this institution's record of meeting the credit needs of its entire community, including low- and moderate-income neighborhoods, consistent with safe and sound operation of the institution. This evaluation is not, and should not be construed as, an assessment of the financial condition of this institution. The rating assigned to this institution does not represent an analysis, conclusion, or opinion of the federal financial supervisory agency concerning the safety and soundness of this financial institution.

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## Overall Community Reinvestment Act (CRA) Rating

## Institution's CRA Rating: This institution is rated Satisfactory

The following table indicates the performance level of JPMorgan Chase Bank, N.A. (Chase or bank) with respect to the Lending, Investment, and Service Tests:

| Performance Levels | JPMorgan Chase, N.A. <br> Performance Tests |  |  |
| :--- | :---: | :---: | :---: |
|  | Lending Test* | Investment Test | Service Test |
|  |  |  |  |
| High Satisfactory | X | X | X |
| Low Satisfactory |  |  |  |
| Needs to Improve |  |  |  |
| Substantial Noncompliance |  |  |  |

* The Lending Test is weighted more heavily than the Investment and Service Tests when arriving at an overall rating.

The major factors that support this rating include:

## Lending Test

- Chase's overall lending performance is rated High Satisfactory based on good lending performance in 17 of the 30 rated areas, which included two of the bank's most significant markets. Lending performance was excellent in 10 rated areas and adequate in the three remaining rated areas.
- The bank achieved excellent or good distribution of loans to borrowers and small businesses of different income levels in all 30 rating areas. Distribution of loans to borrowers in different geographies was excellent or good in 18 of the bank's rating areas, including a majority of the markets where the bank has the most significant presence.
- Chase's lending levels reflect excellent responsiveness to the credit needs in the majority of assessment areas (AAs). In a majority of AAs, the bank's lending market share, as measured by its ranking or percentage, exceeds its ranking or percentage market share of deposits.
- The institution is a leader in making community development (CD) loans. Chase's volume and nature of CD lending has a significantly positive influence on the Lending Test performance. CD lending has a significantly positive influence on 12 of the 30 rating areas and a positive influence on 7 of the 30 rating areas.
- The institution makes significant use of innovative and/or flexible loan products to meet the AA's credit needs.


## Investment Test

- Chase's overall investment performance is rated High Satisfactory based on excellent investment performance in 20 of the 30 rated areas. Investment performance was good in the 9 of the 30 rated areas.


## Service Test

- Chase's overall service performance is rated High Satisfactory based on excellent service performance in 14 of the 30 rated areas and good service in 13 of the 30 rated areas.
- Retail delivery systems are readily accessible in a majority of the rating areas.
- In a majority of the rating areas, Chase provides banking services through a number of alternative delivery systems (ADS), including full-service deposit-taking ATMs, mobile banking, telephone banking, and online banking.
- In 21 of 30 rating areas including the largest rating areas, the bank is a leader in providing CD services. In the other rating areas, CD services are good or adequate.


## Description of Institution

JPMorgan Chase Bank, N.A. is a national bank with its main office in Columbus, Ohio, and headquarters in New York City. Chase is a multistate financial institution and the lead banking subsidiary of JPMorgan Chase \& Co. (JPMCC), a global financial holding company also headquartered in New York City. JPMCC has bank and non-bank subsidiaries in investment banking, financial services for consumers, small business, commercial banking, financial transaction processing, asset management, and private equity products and services. On December 31, 2019, JPMCC held $\$ 2.7$ trillion in total assets and domestic deposits of $\$ 1.4$ trillion. JPMCC provides global financial services to millions of consumers and businesses in the United States (U.S.) as well as prominent corporate, institutional and government clients in 60 countries globally under the JPMorgan and Chase brands.

Chase is a full-service, interstate commercial bank with over $\$ 2.4$ trillion in total assets as of December 31, 2019. The bank provides a full suite of consumer and commercial banking services in 38 states and Washington, DC through a branch network of 4,975 branches and 16,475 automated teller machines (ATMs). All 16,475 ATMs are deposit-taking and offer a full range of services, including but not limited to: (i) cash withdrawals from a checking or savings account; (ii) cash advances from a credit card; (iii) cash and check deposits; (iv) account transfers; (v) payments (e.g., Chase credit card); (vi) view account balances and transactions. The bank's lending products include commercial lending, small business loans, consumer loans, residential real estate loans, Small Business Administration (SBA) guaranteed loans and other specialized lending programs. Deposit products include business and personal checking, money market, savings, time deposit and individual retirement accounts. Chase retail products and services are also available through call centers and mobile or internet access on a 24 hour basis.

For this analysis, the bank's geographic footprint is the District of Columbia and 31 states including: Arizona, California, Colorado, Connecticut, Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Nevada, New Jersey, New York, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Utah, Virginia, Washington, West Virginia, and Wisconsin. Recent geographic expansion of the branch network has been almost entirely comprised of de novo branching, with no material external mergers or acquisitions over the evaluation period. In May 2019, JPMorgan Chase Bank, N.A and Chase Bank USA, N.A. (Chase USA) merged, with JPMorgan Chase Bank, N.A. being the surviving bank. This was a consolidation of the bank's corporate structure and did not involve an external acquisition.

Chase entered seven AAs at the latter part of the current examination period which are therefore considered as performance context for these recent market entries. These seven AAs are summarized in the table below:

| Assessment Area Name (OMB Naming) | Entry Date |
| :--- | ---: |
| Washington-Arlington-Alexandria, DC-VA-MD-WV MD | $9 / 4 / 2018$ |
| Philadelphia, PA MD | $10 / 17 / 2018$ |
| Pittsfield, MA MSA | $3 / 19 / 2019$ |
| Worcester, MA-CT MSA | $3 / 20 / 2019$ |
| Springfield, MA MSA | $3 / 20 / 2019$ |
| Cambridge-Newton-Framingham, MA MD | $3 / 21 / 2019$ |
| Frederick-Gaithersburg-Rockville, MD | $4 / 30 / 2019$ |

In 2019, the bank's net loans comprised 40.6 percent of total assets. Domestic loans were distributed as follows: residential real estate 28 percent, commercial 15.9 percent, consumer (excluding credit card) 6.6 percent, commercial real estate 14 percent, credit card 17.4 percent, and other loans 18.1 percent. Total deposits at year-end 2019 were $\$ 1.65$ trillion, including $\$ 296$ billion held in foreign branches, or 17.9 percent of total deposits. Foreign deposits are not Federal Deposit Insurance Corporation (FDIC)insured and are held in non-U.S. branches. The impact of foreign deposits on the bank's lending and investment capacity was considered in the analysis of community development (CD) loans and investments. On December 31, 2019, JPMCC held tier 1 capital of $\$ 207$ billion and adjusted tier 1 capital of $\$ 170$ billion.

JPMCC's principal nonbank subsidiary is J.P. Morgan Securities LLC, the domestic investment-banking firm. JPMCC and the bank have numerous other significant affiliates that deal with venture capital, asset management, insurance, and other financial services. JPMCC operates domestically and globally through subsidiaries, affiliates, joint ventures, representative offices, international branches, and subsidiary foreign banks.

Bank subsidiaries include trust operations, property management companies and leasing companies. The bank also operates through affiliates and joint ventures. Chase requested that the activities, loans, and services of certain affiliates, subsidiaries, and joint ventures be considered in this evaluation. Applicable loans originated by these parties within Chase AAs were included in the review. Chase also requested consideration for grants made by its affiliated JPMorgan Chase Foundation. Please see appendix A: Scope of Evaluation, for detail about affiliates, subsidiaries and joint ventures and their products reviewed for each entity.

Chase has no subsidiaries that negatively impacted the bank's capacity to lend or invest in its communities. Neither the bank nor any of its affiliates were constrained by legal or financial impediments that would hamper its ability to help meet the credit needs of its communities during the evaluation period.

Chase's business strategy is to provide an extensive range of financial services in the U.S. and globally. The organizational structure contains four business segments as well as a Corporate segment. The four business segments are categorized as follows: Consumer and Community Banking, Corporate and Investment Banking, Commercial Banking and Asset and Wealth Management.

Chase received a Satisfactory rating in its previous CRA evaluation, for the evaluation period of January 1, 2011 through December 31, 2013.

## Scope of the Evaluation

## Evaluation Period/Products Evaluated

The bank's CRA performance evaluation (PE) was evaluated using Large Institution CRA Examination Procedures. The evaluation covers the bank's CRA-related activities from January 1, 2014, through December 31, 2019. With an evaluation period end date of December 31, 2019, qualifying activities performed in response to the significant impact of the coronavirus pandemic across the United States are not addressed in this evaluation. Bank qualifying activities related to COVID-19 will be considered in the subsequent evaluation. The Office of the Comptroller of the Currency (OCC) considered Chase's Home Mortgage Disclosure Act (HMDA)-reportable loans (home mortgage lending consisting of home purchase, home improvement and home refinance) and small business lending (including business credit cards), small farm lending, CD lending grants, donations, and other investments for CRA purposes. The OCC also considered any other loan data such as letters of credit used to support CD activities. Management did not request consideration for its consumer lending, which includes automobile loans and consumer credit cards; therefore, this lending is not presented herein.

The lending test evaluation period covers calendar years 2014-2019 and is based on the 2010 Census data changes beginning on January 1, 2012, as well as the Office of Management and Budget (OMB) Metropolitan Area (MA) geographic boundary changes beginning on January 1, 2014. Analysis of data related to calendar years 2014 to 2016 is based on 2010 Census data, 2013 OMB MA boundaries, 20142016 Federal Financial Institutions Examination Council (FFIEC) estimated median family income (MFI) for borrower analysis, and the 2010 American Community Survey (ACS) MFI (updated to reflect 2013 OMB MA boundaries for geographic analysis of CRA performance). For CRA purposes, the ACS replaced the decennial census. Analysis of data related to calendar years 2017-2019 is based on 2015 ACS data, 2013 OMB MA boundaries (2019 is evaluated separately from 2017-2018 if impacted by MA boundaries changes), 2017 FFIEC-estimated MFI for borrower analysis, and the 2015 ACS MFI for geographic analysis of CRA performance.

Since the lending test evaluation period is January 1, 2014 through December 31, 2019, there could be up to three separate analyses for an AA lending performance. The chart below shows when two analyses are required versus three.

| Evaluation Period Years Breakdown | 2010 Census/ACS Data, <br> 2014-2016 FFIEC MFI, <br> and 2010 ACS MFI | 2015 ACS data, 2017 <br> FFIEC MFI, and 2015 <br> ACS MFI |  |  |
| :--- | :---: | :---: | :---: | :---: |
|  | $\mathbf{2 0 1 4 - 2 0 1 6}$ | $\mathbf{2 0 1 7 - 2 0 1 8}$ | $\mathbf{2 0 1 9}$ |  |
|  | Analysis 1 | Analysis 2 | Analysis 3 |  |
| Not Impacted by 2013 OMB MA Boundaries Changes | Analysis 1 | Analysis 2 |  |  |

The investment test, service test, and CD investments and services evaluations, respectively, are combined for the calendar years 2014 through 2019.

The bank merged with Chase USA in May 2019. Chase USA received an Outstanding rating during its last PE dated December 31, 2014. Chase USA was one of the largest issuers of consumer and small business credit cards in the U.S. At the time of the merger, Chase USA had $\$ 141$ billion in total assets, $\$ 54$ billion in total deposits, and $\$ 24$ billion in tier 1 capital. All of Chase USA's assets, deposits, and capital were absorbed into Chase. Chase USA's AA was comprised of three counties, New Castle County, Delaware County, and Philadelphia County, within the Philadelphia-Camden-Wilmington, PA-NJ-DEMMSA. The current evaluation includes Chase USA's small loans to businesses, small loans to farms, and community development services for the years 2015 through May 2019.

## Selection of Areas for Full-Scope Review

In each state where the bank has an office, one or more AAs within that state were selected for a fullscope review. For purposes of this evaluation, bank delineated AAs located within the same MSA, MMSA as Combined Statistical Areas (CSA) are evaluated as a single AA. Similarly, bank delineated non-metropolitan (Non-Metro) AAs within the same state are combined and are evaluated as a single AA. These combined AAs may be evaluated as full- or limited-scope. Refer to the Scope section under each State Rating section for details regarding how full-scope AAs were selected.

The states and CSAs comprise the 30 rating areas assessed in this evaluation: 22 states and eight CSAs. Performance in the limited-scope AAs was considered in developing state ratings. For states with AAs in Non-Metro areas, the analysis is based on the combined Non-Metro areas within each state. For analysis purposes, the OCC combined Non-Metro AAs within each state. From each rating area, the OCC selected one or more AAs for full-scope reviews. In states with multiple large AAs such as California and Texas, the OCC selected more than one AA for a full-scope review. Across all rating areas, the OCC selected 38 full-scope AAs. The OCC based these selections on several criteria, including the bank's deposits and loans and the AA's geographic size and population relative to the rating area. The OCC also selected smaller AAs that had not previously been reviewed as full-scope AAs during prior evaluations. All AAs consisted of whole geographies and met the requirements of the regulation. The AAs reasonably reflect the different trade areas that the bank's branches could service and did not arbitrarily exclude any low- and moderate-income (LMI) areas.

Refer to appendix A: Scope of Examination, for a list of full- and limited-scope AAs. For AAs comprised of contiguous MDs/MSAs that are part of a CSA, the bank's performance is presented at the CSA level. For each full-scope review, economic information is separately detailed for each MSA area within a CSA.

## Ratings

The bank's overall rating is a blend of the state ratings, and CSA ratings. The PE is presented by CSA rated areas followed by each state in alphabetical order.

While the ratings, conclusions, and analyses are based on the bank's activities over a six-year evaluation period, this PE only includes narratives and supporting tables for the years 2017, 2018, and 2019, which is the period of activity of greatest significance to overall conclusions. Additional discussion is included in the narrative when OMB boundary changes significantly impacted the bank's performance context or where performance in the 2014-2016 period differs significantly from performance in 2017-2019.

CSA ratings are based on the one AA. State ratings are based on conclusions of the AA(s) reviewed using full-scope evaluation procedures; however, limited-scope AA ratings were also considered.

Limited-scope procedures focused primarily on quantitative data, with consideration of qualitative data generally limited to demographic and competitive factors. Performance in limited-scope AAs was considered as stronger than, weaker than, or consistent with overall performance in full-scope AAs within the rating area. Based on these conclusions, there was a positive, negative, or neutral impact on the state rating.

In rating areas where there was a significant difference in weighting, as explained later, it is noted under the Scope of the Evaluation section. The loan distribution analyses compared HMDA loans and loans to small businesses to demographic and aggregate data under the applicable lending test components. Aggregate data illustrates how the bank is performing relative to other lenders in the AA and provides context as to the reasonableness of the bank's performance. All peer aggregate lending data used in the analysis is from 2014-2018. Aggregate lending data for 2019 was not available at the time this evaluation was completed.

The state of California, the New York-Newark, NY-NJ-CT-PA CSA (New York-Newark CSA), the state of Texas, the Chicago-Naperville, IL-IN-WI CSA and the state of Michigan represent the bank's most significant markets in terms of lending, deposits, and branch distribution and carried the greatest weight in our overall conclusions. The state of California accounts for 36.7 percent of bank's home mortgage, community development, small business, and small farm loans (by number of loans), 11.2 percent of total allocated deposits, 20 percent of the branch network, and 23.5 percent of total ATMs. The New York-Newark CSA rating area accounts for 14.7 percent of bank's home mortgage, community development, small business, and small farm loans, 42.1 percent of total allocated deposits, 17.4 percent of the branch network, and 19.8 percent of total ATMs. The state of Texas accounts for 8.8 percent of bank's home mortgage, community development, small business, and small farm loans, 18.3 percent of total allocated deposits, 10.9 percent of the branch network, and 24.2 percent of total ATMs. The Chicago-Naperville, IL-IN-WI CSA rating area accounts for 8.7 percent of bank's home mortgage, community development, small business, and small farm loans, 6.3 percent of total allocated deposits, 6.6 percent of the branch network, and 8.7 percent of total ATMs. The state of Michigan accounts for 2.3 percent of bank's home mortgage, community development, small business, and small farm loans, 3.2 percent of total allocated deposits, 4.2 percent of the branch network, and 3.0 percent of total ATMs. When these top five rating areas were combined, they contained 71.2 percent of bank's home mortgage, community development, small business, and small farm loans, 81.1 percent of the bank's total allocated deposits and 41.1 percent of the branch network during the evaluation period.

Under the Lending Test, the OCC considered the weighting of both the number and dollar volume of loans to determine the weighting of loan products. The number of small loans to business represented 70.0 percent of the total number of loans compared to home mortgages representing 29.1 percent of total loans. However, when comparing the dollar amount of loans, home mortgages represented 88.5 percent of the total dollar amount of loans versus the total dollar amount of small loans to business representing 11.5 percent of total loans; the results of both analyses yield similar conclusions. Therefore, the OCC weighted home mortgages and small loans to businesses products equally. The loan product weighting was calculated equally for each rating area, and those weights were applied to each AA within the rating area. Farm lending is not a strategic focus of the bank. Small loans to farms represented less than 1.0 percent of the loan volume within a substantial majority of rating areas ( 21 rating areas) and less than 2.5 in the remaining rating areas.

The CSA and state ratings are based on performance in all bank AAs. Refer to the Scope section under each State and CSA Rating section for details regarding how areas were weighted in arriving at the respective ratings.

## Description of Factors Considered Under Each Performance Test

General themes regarding the various impacts on CRA performance over the evaluation period were:

## Lending Test

Due to the changes in census data during the evaluation period, the bank's Lending Test performance was evaluated separately for 2014-2016 and 2017-2019. When arriving at overall rating area conclusions, significant weight was placed on the bank's lending performance in 2017-2019 when performance in low- or moderate-income geographies was inconsistent during the 2014-2016 time period. Greater significance was placed on the moderate-income borrower performance due to the challenges limiting opportunities in lending to low-income persons. The bank's lending in all AAs was evaluated.

- Performance in low-income geographies between 2014 and 2016 was consistent with other periods.
- Inconsistent performance in moderate-income geographies between 2014 and 2016 did not impact overall excellent performance.
- Loan Products Evaluated -The OCC evaluated home mortgage, small loans to business, and small loans to farms in each AA. All home mortgage products were reviewed, and conclusions were reached in the aggregate. As indicated above, farm loans are not a strategic focus or primary product in any of the bank's AAs. Small farm data analysis indicated that farm lending did not significantly affect the conclusions or ratings in any of the bank's rating areas. Therefore, a discussion of farm loans is not included in the rating areas. However, the data used in the analysis is included in appendix D.
- Lending Activity -To assess the bank's lending activity in each AA, the OCC compared the bank's market share and rank of loans using peer loan data to its market share and rank in deposits using FDIC deposit market share data as of June 30, 2019. Deposit market share data includes deposit data for FDIC-insured institutions such as banks and savings and loan associations (depository financial institutions). Deposit market share data does not include credit unions.
- Home Mortgage Products - For the various loan products considered under the Lending Test, home mortgage loans were weighted equally to small loans to business in developing conclusion. Home mortgages accounts for 88.5 percent of the total dollar amount of total loan volume and 29.1 percent of total number of loans. All home mortgage products including home purchase, home improvement, and home refinance loans were reviewed with conclusions based on home mortgage loan aggregate data and consideration of performance context that is discussed in each applicable rating area section within the Lending Test.
- Home Mortgage Products -Loan Distribution Analysis -Throughout all rating areas, as data was available, equal emphasis was given to the geographic and borrower distribution components of the Lending Test. The analysis of the distribution of loans to geographies with different income levels was given greater consideration to the bank's performance in moderate-income geographies when there were a small number of owner-occupied housing units in the low-income geographies. For the analysis of the distribution of loans by income level of the borrower, consideration was given to the impact that income and poverty levels, housing costs, and homeownership opportunities has on low-
and moderate-income individuals and families. In these higher cost markets, it is difficult for many low- and moderate-income individuals and families to afford a home as the area's median housing value is typically too high for conventional mortgage loan qualification. As such, more emphasis was placed on the bank's lending results to low- and moderate-income borrowers relative to the aggregate's performance rather than demographic data.
- Small Business Lending - Loan Distribution Analysis -The loan distribution analyses compared loans to small businesses to demographic and aggregate data under the applicable lending test components. Aggregate data illustrates how the bank is performing relative to other lenders in the AA and provides context as to the reasonableness of the bank's performance. All peer aggregate lending data used in the analysis is from 2014-2018. Aggregate lending data for 2019 was not available and not used due to timing of evaluation.

The OCC compared the bank's lending performance against available demographic data and aggregate lender performance. Any relevant performance context information available was considered. Expectations for lending in low-income geographies were the same for lending in moderate-income geographies. Performance in moderate-income geographies were weighted more heavily if there was a small number of businesses in low-income geographies. More weight was given to the bank's lending performance relative to demographics and less weight to performance relative to aggregate lenders. In some cases, it was more appropriate to place more weight on performance relative to aggregate lenders such as when bank performance exceeded aggregate, but bank performance and aggregate are less than demographic data. In those cases, performance relative to aggregate lenders can be more reflective of market conditions such as loan demand and opportunities.

- CD Lending - CD lending based on volume, complexity, and responsiveness provided a significantly positive, positive, neutral, or negative effect to the rating area's Lending Test rating, as applicable. Lending programs were limited by various factors over the examination period, the most significant of which included tier 1 capital requirement increases and competition in the Low-Income Housing Tax Credit (LIHTC) market.
- Flexible and Innovative Lending Products - Chase offered flexible home mortgage and small business lending programs in order to serve AAs credit needs. Flexible lending programs included government insured Federal Housing Administration (FHA), Veterans Administration (VA), Home Affordable Refinance Program (HARP), United States Department of Agriculture (USDA), and SBA loans. During the evaluation period, the bank launched a new flexible lending program called DreaMaker. Since January 2014, the bank provided 288,246 flexible mortgage and small loans to businesses totaling $\$ 54.6$ billion to low- and moderate-income borrowers, small businesses, or in low- and moderate-income geographies.
- Other Loan Data -The OCC also considered, at the bank's option, letters of credit used to support CD lending activities. The letters of credit were given positive consideration under the Lending Test if they supported or addressed an identified community development need in the AA. Chase issued over 180 letters of credit or standby bond purchase agreements totaling nearly $\$ 3.5$ billion. This other loan data helped many financing deals to come to fruition to create over 13,000 units of affordable housing.


## Investment Test

- Qualified Investments -The analysis considered the volume of qualified investments and grants made during the current evaluation period and qualified investments that were made prior to the current evaluation period, which were still outstanding and continued to benefit the bank's AA. Emphasis was placed on those investments that were particularly innovative, complex, or responsive to the needs of the AA. The amount of consideration given to the current and prior period investments is based on the responsiveness of the investments to the needs in the AAs.

The analysis compared the dollar amount of qualified investments made in the current evaluation period and prior evaluation periods to the tier 1 capital allocated to the AAs to gain a common perspective regarding the volume of investment activity. The OCC compared the CD investment activity volume in each AA to the tier 1 capital allocated to the rating areas and AAs based on the percentage of bank total deposits therein.

- Complex and Innovative Investment Products - The bank makes extensive use of complex CD investments, often in a leadership role. Many investments are complex LIHTC, and New Markets Tax Credits (NMTC). The LIHTC provides a tax incentive to construct or rehabilitate affordable rental housing for low- and moderate-income households. Other investments are complex as they include the participations from federal and state governments, local housing agencies, and real estate developers. Complex investments also require bank expertise and capacity in selecting projects and partners, negotiating agreements, overseeing project development and operations, and ensuring compliance with legal and tax requirements.


## Service Test

- Distribution of Branch Delivery Systems/Openings and Closings -The OCC placed primary consideration on the distribution of the bank's branches and their accessibility to low- and moderateincome individuals and geographies. Impact to the AA from the opening and closing of branches was considered. During the evaluation period, the bank continued to execute their ongoing control processes when determining whether to close or consolidate its retail branches. The bank considered the following factors in the decision-making process: 1) branch redundancy or proximity to other Chase locations or ATMs, 2) real estate costs for branches with expiring leases, 3) customer behaviors in the market, including transaction migration to the bank's growing digital capabilities, and 4) results of a detailed analysis of LMI service levels in each assessment area. Chase includes several departments of the bank, including its CRA personnel, in discussions to assess and mitigate any negative impact of branch consolidations to LMI customers and communities.
- Alternative Delivery Systems -The systems were assessed to determine if they improved access to retail banking services where financial centers may be limited. The alternative delivery systems included the following delivery channels: full-service deposit-taking ATMs, mobile banking, telephone banking, online banking, and the bank's own Secure Banking retail deposit product. To determine the effect alternative delivery systems have on the bank's service delivery systems, the OCC compared the number of enrolled customers residing in low- and moderate-income geographies for mobile banking, telephone banking, online banking, and Secure Banking to the population residing in low- and moderate-income geographies. The OCC also compared the number of full-service deposit-taking ATMs in low- and moderate-income geographies to the population in low- and moderate-income geographies.
- Adjacent Branches - In full-scope AAs, the OCC considered if adjacent branches, in middle- and upper-income (MUI) geographies, provided accessibility to individuals in low- and moderate-
income geographies. The OCC analyzed adjacent branches that are located within one-half-mile of a low- and moderate-income geographies. OCC verified and confirmed that these branches held deposit accounts of, and mortgage loans to individuals in adjacent low- and moderate-income geographies. OCC also verified that there are no barriers or other impediments that would prevent a resident of the low- and moderate-income geography from obtaining full use of the bordering branch's banking services. The OCC determined if it had a neutral or positive impact on the distribution of branch delivery systems.
- Banking Hours -The OCC considered banking hours, products and services, and the level of community development services.
- CD Services -The bank's record of providing CD services was evaluated in AAs that received fullscope reviews. The primary consideration of the analysis of CD services was the responsiveness to the needs of the AA.


## Other Information

- Assessment Areas-All AAs consisted of whole geographies and met the requirements of the regulation.

For AAs comprised of contiguous MSAs that are part of a CSA, the analysis of the bank's performance was conducted at the MSA level. If there were no anomalies at the MSA level, the bank's performance is presented for AAs at the CSA level. For each full-scope review, economic information is separately detailed for each MSA area within a CSA AA.

- Lending Gap Analysis -Summary reports and maps were reviewed, and lending activity of home mortgage loans, small loans to business, and small loans to farms were analyzed over the evaluation period to identify any gaps in the geographic distribution of loans in all full-scope AAs.
- Bank-wide Activities -During the past six years, the bank has provided $\$ 26$ billion in CD loans and $\$ 16$ billion in CD investments across its aggregate AAs and broader regional areas. Most were provided for the specific purpose of affordable rental housing development.


## Community Contacts

The OCC gathered contact information to assist in understanding the AAs community profile and learn about opportunities for bank participation in helping to meet local needs. The information was used to assist in the evaluation of the bank's performance in the various AAs. The OCC's Community Affairs Officers conducted or updated contact information in the full-scope AAs for this evaluation. The Officers held interviews with a variety of large community organizations including housing agencies, small business development centers, and social service and community action organizations. Other OCC personnel gathered information from community groups, local government representatives, realtors, and business leaders. The OCC reviewed and considered comments received from the public in assessing the bank's performance during the evaluation period. Community contact information for the most significant rating areas is summarized within each MMSA or State rating areas.

Community contact information indicates that urban and rural areas continue to have various affordable housing, CD, and economic development needs that are not being met. Contact information noted that the economy in the respective areas has stabilized and/or is improving. Although unemployment rates in
most areas have declined, they remain high in some of the AAs. Affordable housing was consistently noted by numerous community contacts as a credit need throughout the AAs. Community contacts involved with economic development indicated that flexible financing options for small loans to businesses are important to creating additional job growth in communities. Small loans to businesses were identified as a major factor in expanding employment opportunities in both urban and rural areas. Many contacts noted that small loans to businesses have faced limited access to credit in recent years due to tightened lending standards. Many contacts noted that demand for micro small loans to business is strong, but these loans are not generally available from banks. In addition, contacts identified needs for small dollar consumer loans, affordable mortgage loans, and flexible lending standards for small businesses.

## Lending in Assessment Area

A substantial majority of the bank's loans are in its AA. This analysis is performed at the bank, rather than the AA, level.

The bank originated and purchased 76 percent of its total loans inside the bank's AA during the evaluation period. This percentage does not include extensions of credit by affiliates that may be considered under the other performance criteria.

| Lending Inside and Outside of Assessment Areas - 2014 Through 2019 |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Loan Category | Number of Loans |  |  |  | Total \# | Dollar Amount of Loans \$(000s) |  |  |  | $\begin{gathered} \text { Total } \\ \$(000 \mathrm{~s}) \end{gathered}$ |
|  | Inside |  | Outside |  |  | Inside |  | Outside |  |  |
|  | \# | \% | \# | \% |  | \# | \% | \# | \% |  |
| Home Mortgage |  |  |  |  |  |  |  |  |  |  |
| 2014 | 237,195 | 65.2 | 126,458 | 34.8 | 363,653 | 74,490,762 | 74.8 | 25,151,879 | 25.2 | 99,642,641 |
| 2015 | 258,577 | 67.7 | 123,437 | 32.3 | 382,014 | 103,531,344 | 77.2 | 30,630,945 | 22.8 | 134,162,289 |
| 2016 | 248,577 | 73.3 | 90,576 | 26.7 | 339,153 | 109,225,926 | 81.9 | 24,073,310 | 18.1 | 133,299,236 |
| 2017 | 248,646 | 73.2 | 91,032 | 26.8 | 339,678 | 96,378,090 | 80.5 | 23,418,167 | 19.5 | 119,796,257 |
| 2018 | 263,589 | 81.1 | 61,597 | 18.9 | 325,186 | 90,968,688 | 85.2 | 15,805,661 | 14.8 | 106,774,349 |
| 2019 | 292,875 | 80.7 | 69,826 | 19.3 | 362,701 | 116,254,763 | 84.6 | 21,223,347 | 15.4 | 137,478,110 |
| Subtotal | 1,549,459 | 73.4 | 562,926 | 26.6 | 2,112,385 | 590,849,573 | 80.8 | 140,303,309 | 19.2 | 731,152,882 |

## Small Business

| 2014 | 456,942 | 75.2 | 150,430 | 24.8 | 607,372 | $10,177,419$ | 83.3 | $2,036,831$ | 16.7 | $12,214,250$ |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 2015 | 420,827 | 76.7 | 127,976 | 23.3 | 548,803 | $10,515,932$ | 84.7 | $1,897,673$ | 15.3 | $12,413,605$ |
| 2016 | 497,795 | 76.1 | 156,388 | 23.9 | 654,183 | $11,914,809$ | 84.9 | $2,115,845$ | 15.1 | $14,030,654$ |
| 2017 | 587,713 | 76.2 | 183,106 | 23.8 | 770,819 | $12,850,824$ | 85.1 | $2,254,707$ | 14.9 | $15,105,531$ |
| 2018 | 836,424 | 76.4 | 258,205 | 23.6 | $1,094,629$ | $14,769,381$ | 83.2 | $2,975,773$ | 16.8 | $17,745,154$ |
| 2019 | $1,147,527$ | 81.1 | 267,040 | 18.9 | $1,414,567$ | $19,146,264$ | 85.5 | $3,255,364$ | 14.5 | $22,401,628$ |
| Subtotal | $\mathbf{3 , 9 4 7 , 2 2 8}$ | $\mathbf{7 7 . 5}$ | $\mathbf{1 , 1 4 3 , 1 4 5}$ | $\mathbf{2 2 . 5}$ | $\mathbf{5 , 0 9 0 , 3 7 3}$ | $\mathbf{7 9 , 3 7 4 , 6 2 9}$ | $\mathbf{8 4 . 5}$ | $\mathbf{1 4 , 5 3 6 , 1 9 3}$ | $\mathbf{1 5 . 5}$ | $\mathbf{9 3 , 9 1 0 , 8 2 2}$ |

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| Small Farm |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2014 | 2,333 | 36.9 | 3,986 | 63.1 | 6,319 | 55,687 | 52.1 | 51,272 | 47.9 | 106,959 |
| 2015 | 1,990 | 42.4 | 2,701 | 57.6 | 4,691 | 57,905 | 56.6 | 44,389 | 43.4 | 102,294 |
| 2016 | 2,310 | 43.0 | 3,068 | 57.0 | 5,378 | 63,614 | 59.9 | 42,663 | 40.1 | 106,277 |
| 2017 | 4,813 | 45.2 | 5,838 | 54.8 | 10,651 | 80,846 | 57.2 | 60,387 | 42.8 | 141,233 |
| 2018 | 6,757 | 42.3 | 9,212 | 57.7 | 15,969 | 86,647 | 49.7 | 87,745 | 50.3 | 174,392 |
| 2019 | 9,669 | 43.8 | 12,416 | 56.2 | 22,085 | 122,216 | 47.9 | 133,190 | 52.1 | 255,406 |
| Subtotal | 27,872 | 42.8 | 37,221 | 57.2 | 65,093 | 466,915 | 52.7 | 419,646 | 47.3 | 886,561 |
| Total | 5,524,559 | 76.0 | 1,743,292 | 24.0 | 7,267,851 | 670,691,117 | 81.2 | 155,259,148 | 18.8 | 825,950,265 |

Source: Evaluation Period: 1/1/2014-12/31/2019 Bank Data
Due to rounding, totals may not equal 100.0
Chase and CUSA data included for SBSF; data for each year is based on bank's assessment area definitions as of $12 / 31$ of that respective year

## Discriminatory or Other Illegal Credit Practices Review

Pursuant to 12 C.F.R. §25.28(c) or §195.28(c), respectively, in determining a national bank's or federal savings association's (collectively, bank) CRA rating, the OCC considers evidence of discriminatory or other illegal credit practices in any geography by the bank, or in any assessment area by an affiliate whose loans have been considered as part of the bank's lending performance. As part of this evaluation process, the OCC consults with other federal agencies with responsibility for compliance with the relevant laws and regulations, including the U.S. Department of Justice, the U.S. Department of Housing and Urban Development (HUD), and the Bureau of Consumer Financial Protection (CFPB), as applicable.

The OCC identified the following public information regarding non-compliance with the statutes and regulations prohibiting discriminatory or other illegal credit practices with respect to this institution:

CFPB Enforcement Action: Real Estate Settlement Procedures Act Kickbacks (File No. 2015-CFPB0001), effective January 22, 2015. Terminated January 22, 2020.

- The CFPB and the State of Maryland's Office of the Attorney General's Consumer Protection Division took action against the bank for an illegal marketing-services-kickback scheme they participated in with Genuine Title, now a defunct title company that went out of business in April 2014.
- From 2010 through 2013, Genuine Title offered loan officers valuable services to increase the amount of loan business generated. The CFPB found that at least six bank loan officers in three different branches in Maryland, Virginia, and New York were involved. These officers referred settlement business to Genuine Title on almost 200 loans. The CFPB also alleged that Chase did not have an adequate system in place to ensure that its loan officers were following the law.
- Civil Money Penalties Paid to the CFPB: $\$ 500,000$.
- Per the Consent Order approximately $\$ 300,753$ in redress was provided to injured consumers, including but not limited to refund of moneys, restitution, damages, or other monetary relief, and for any attendant expenses for the administration of any such redress.
- The bank has enhanced their compliance program, including policies and procedures addressing the prohibition of mortgage loan officers receiving kickbacks for a business referral specific to a real estate settlement service involving a federally related mortgage loan.

The OCC found evidence of a violation of Section 5 of the Federal Trade Commission (FTC) Act, 15 USC 45 - Prohibition of unfair or deceptive acts or practices in or affecting commerce (UDAP). The bank failed to remediate 477 borrowers who were affected by a loss mitigation processing error. Estimated reimbursement to affected borrowers is $\$ 6,131,400$. The bank corrected its processing system and enhanced its policies and procedures to ensure that the violation does not recur.

The OCC does not have additional public information regarding non-compliance with statutes and regulations prohibiting discriminatory or other illegal credit practices with respect to this institution. In determining this institution's overall CRA rating, the OCC has considered information that was made available to the OCC on a confidential basis during its consultations.

The CRA performance rating was not lowered as a result of these findings. The OCC considered the nature, extent, and strength of the evidence of the practices; the extent to which the institution had policies and procedures in place to prevent the practices; and the extent to which the institution has
taken or has committed to take corrective action, including voluntary corrective action resulting from self-assessment; and other relevant information.

The OCC will consider any information that this institution engaged in discriminatory or other illegal credit practices, identified by, or provided to the OCC before the end of the institution's next performance evaluation in that subsequent evaluation, even if the information concerns activities that occurred during the evaluation period addressed in this performance evaluation.

## Multistate Metropolitan Statistical Area Rating

## New York-Newark, NY-NJ-CT-PA CSA (NY CSA)

CRA rating for the NY CSA ${ }^{\mathbf{1}}$ : Satisfactory
The Lending Test is rated: High Satisfactory
The Investment Test is rated: High Satisfactory
The Service Test is rated: High Satisfactory
The major factors that support this rating include:

- An excellent level of lending activity.
- An excellent geographic distribution of home mortgage loans and small loans to businesses.
- A good borrower distribution of home mortgage loans and small loans to businesses.
- An adequate level of CD loans that has a neutral effect on the rating.
- The extensive use of flexible products, and issuance of letters of credit that positively affected the rating.
- A significant level of qualified CD investments that demonstrated excellent responsiveness to credit and community economic development needs.
- The occasional use of complex investments and investments that serve as catalysts for additional development.
- The significant level of broader statewide investments further supports the bank's Investment Test performance.
- Retail service delivery systems that are accessible to geographies and individuals of different income levels in the bank's AA.
- Leadership in providing CD services that are responsive to AA needs.


## Description of Institution's Operations in NY CSA

The NY CSA represents the largest retail market for the bank in terms of deposits, branches, and lending. Chase had $\$ 597.6$ billion in deposits in the NY CSA representing 42.1 percent of the bank's total deposits. As of December 31, 2019, the bank operated 861 branches and 3,256 deposit-taking ATMs within the rating area, representing 17.4 percent of total branches and 19.8 percent of total ATMs. The bank originated and purchased approximately $\$ 102.5$ billion in loans or 14.7 percent of total bank loan originations and purchases during the evaluation period in the NY CSA.

The local banking environment is highly competitive with 216 FDIC-insured institutions operating 6,042 branches. Chased ranked first in deposit market share with 30.3 percent. The next three banks by deposit market share are Bank of America, N.A. ( 8.0 percent), BNY Mellon ( 6.3 percent), and Citibank, N.A. ( 6.0 percent). In addition to FDIC-insured institutions, this area is served by several credit unions, mortgage lenders and brokers, and money service businesses.

Chase's AA in the NY CSA is comprised of geographies in New York, New Jersey, and Connecticut. Refer to appendix A for a complete list of counties included in the AA.

[^99]
## Description of Full-Scope AA

The following table provides a summary of the demographics that includes housing and business information for the NY CSA. The NY CSA poses challenges to home mortgage lenders in the AA, including Chase. The NY CSA is a high cost housing area, limiting access to affordable homeownership among LMI borrowers. The median housing value in the CSA is $\$ 444,639$ while the National Association of Realtors (NAR) 4Q2019 median sales price of a single-family home is $\$ 428,000$. One simplistic method used to determine housing affordability assumes a maximum monthly principal and interest payment of no more than 30 percent of the applicant's income.

Assuming a 30-year mortgage with a 5 percent interest rate, and not accounting for down payment, homeowners insurance, real estate taxes, or any additional monthly expenses, a low-income borrower making $\$ 44,686$ per year (or less than 50 percent of the FFIEC adjusted median family income in the AA) could afford a $\$ 161,198$ mortgage with a payment of $\$ 865$ per month; a moderate-income borrower earning $\$ 71,498$ per year (or less than 80 percent of the FFIEC adjusted median family income in the AA) could afford a $\$ 257,918$ mortgage with a payment of $\$ 1,385$ per month.

The poverty level across the AA was considered in the evaluation of lending performance. Families living below the stated poverty rate are identified as having difficulty meeting basic financial needs and as such are less likely to have the financial wherewithal to qualify for a home loan than those with income above poverty. In the NY CSA, the overall household poverty level was 10.8 percent. However, in low-income geographies, the household poverty level increases to 36 percent and in moderate-income geographies it increases to 20 percent. In MUI geographies, the combined poverty level is just 8 percent.

| Table A - Demographic Information of the Assessment Area |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Assessment Area: NY CSA 2017-2019 |  |  |  |  |  |  |

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| Median Family Income MSA - 20524 <br> Dutchess County-Putnam County, NY <br> MD | $\$ 94,443$ | Families Below Poverty Level | $10.8 \%$ |
| :--- | ---: | :--- | :--- |
| Median Family Income MSA - 28740 <br> Kingston, NY MSA | $\$ 74,546$ |  |  |
| Median Family Income MSA - 35004 <br> Nassau County-Suffolk County, NY <br> MD | $\$ 108,193$ |  |  |
| Median Family Income MSA - 35084 <br> Newark, NJ-PA MD | $\$ 95,579$ |  |  |
| Median Family Income MSA - 35300 <br> New Haven-Milford, CT MSA | $\$ 80,739$ |  |  |
| Median Family Income MSA - 35614 <br> New York-Jersey City-White Plains, <br> NY-NJ MD | $\$ 72,047$ |  |  |
| Median Family Income MSA - 45940 <br> Trenton, NJ MSA | $\$ 94,908$ |  |  |
| Source: 2010 U.S. \& 2015 ACS and 2018 D\& Bata <br> Due to rounding, totals may not equal 100.0\% <br> (*) The NA category consists of geographies that have not been assigned an income classification. |  |  |  |

## Economic Data

According to the November 2019 Moody's Analytics report, in the New York-Jersey City-White Plains, NY-NJ portion of the CSA, the housing market remains stagnant with both single-family and condo prices moving sideways or lower and multifamily building well below its mid-decade peak. As the financial capital of the world, the area has a high per capita income and limited exposure to manufacturing. It has strong international immigration. However, high costs, including taxes, housing, office rents and energy, a rapidly aging infrastructure, and an overreliance on wealthy overseas buyers to support real estate market are major challenges. Major industries include education and health services, professional and business services, and government. Major employers in the area include Montefiore Health System, Mount Sinai Health System, JPMorgan Chase \& Co., Bank of America, N.A., and New York-Presbyterian Healthcare System.

The Nassau County-Suffolk County, NY portion of the CSA has a robust healthcare sector and a highly skilled workforce. The proximity to New York City contributes to the high per capita income. However, there are high housing costs and a lack of land available for development. The high taxes are a burden for residents and firms. Population growth is weak, and a rapidly rising number of retirementage seniors exist. Major industries include education and health services, government, and professional and business services. Major employers in the area include Northwell Health, Henry Schein Inc., Cablevision Systems Corp., CA Inc., and Pall Corp.

Newark, NJ-PA has a well-educated and productive workforce matched with financial services, pharmaceuticals, and high-tech industries. However, prescription-drug price reform led to layoffs among major pharmaceutical companies located in the area. Also, Newark has weak population growth as well as high business and living costs. Major industries include professional and business services, education and health services, and government. Major employers in the area include Newark International Airport, Verizon, University of Medicine and Dentistry of New Jersey, NJ Transit and United Airlines Inc.

Bridgeport-Stamford-Norwalk struggled from the middle of 2016 until the middle of 2019. The area experienced employment declines in recent years, but added jobs in the second half of 2019, primarily from healthcare and professional/business services. There are high living and business costs. Since Stamford has higher incomes, it skews the income distribution across the area. It does have a highly educated labor force and above-average exposure to high-tech. Major industries include education and health services, professional and business services, and retail trade. Major employers in the area include Sikorsky Aircraft Corp., St. Vincent's Medical Center, Stamford Hospital, Frontier Communications, and Bridgeport Hospital.

New Haven-Milford, CT MSA has the highest jobless rate among Connecticut's four metro areas. It does have a large, stable university concentration and a strong commitment by Yale to urban development. Business costs are lower here than in New York and Boston. Major industries include education and health services, as well as government, professional and business services. Major employers in the area include Yale New Haven Health System, Yale University, Verizon, Bozzuto's Inc., and Southern Connecticut State University.

Poughkeepsie-Newburgh-Middletown, NY MSA is among the nation's 10 most dependent areas on computer and electronic product manufacturing and the area is experiencing a shrinking semiconductor industry. Job growth here is the slowest in New York. Lower living costs and proximity to New York City attract commuters. Housing is affordable and single-family housing is modestly undervalued. The area has a highly educated workforce with a strong healthcare and university presence. There is a rapidly expanding senior population. Major industries include education and health services, government, and retail trade. Major employers in the area include Health Quest, IBM, GlobalFoundries, Bard College and Mid-Hudson Regional Hospital.

Trenton-Princeton, NJ MSA has a highly educated and highly skilled workforce with a concentration of white-collar and high-tech jobs. There are strong talent pipelines from Princeton University and The College of New Jersey. The workforce attracts investment in technology, finance, and professional services. Business costs are low relative to the state. The affordability of housing is above-average and close to-average living costs. The unemployment rate is among the lowest for metro areas in the Middle Atlantic region. Trenton is New Jersey's state capital and government positions make up 27 percent of total employment. As a result, the area is vulnerable to the state's poor financial condition. Major industries include government, education, and health services as well as professional and business services. Major employers in the area include Bank of America, N.A., Princeton University, BristolMyers Squibb, Capital Health System and New Jersey Manufacturers Insurance.

Allentown-Bethlehem-Easton, PA-NJ MSA experienced a downtown revitalization which stimulating investment and hiring. The area has below-average employment volatility and strong migration patterns with people coming from surrounding high cost areas. There is a high concentration of jobs in manufacturing. Aging infrastructure exists. The rate of appreciation of home prices is slower than elsewhere in the state. Local government finances are weak. Major industries include education and health services, professional and business services, retail trade, government, and manufacturing. Major employers in the area include Lehigh Valley Health Network, St. Luke's University Health Network, Air Products and Chemicals, Sands Bethworks Gaming LLC, and Dorney Park/Wildwater Kingdom.

The Kingston, NY MSA has below-average employment instability but also has a below-average concentration of high-wage jobs. Business costs are low for the Northeast. However, it does have an overreliance on government and few private sector growth drivers. Vacancy rates for residential properties are high and the working-age population is shrinking. Major industries include government,
education and health services and retail trade. Major employers in the area include Health Alliance of the Hudson Valley, State University of New York at New Paltz, Eastern New York Correctional Facility, Northeast Center for Special Care and Ulster-Greene ARC.
Community Contacts
A review was conducted of ten community contacts completed during the examination period with organizations located throughout the area. The organizations contacted focus on areas such as affordable housing, small business development, community services and housing/urban policy and research. The contacts noted the need for affordable housing programs, both homeownership and rental housing due to the high cost areas across the AA. Affordable rental housing is particularly necessary in high cost metropolitan areas such as New York City, where two-thirds of its residents remain renters. Often these renters experience a high rent burden. Multifamily lending is also a need in these areas, many of which have experienced gentrification during the rating period. For homeowners across the AA, affordable mortgages with down payment assistance and home improvement loans are needed for low- and moderate-income families purchase and repair homes. Support for seniors is necessary as many areas throughout the AA report a growing senior population. Seniors will need access to various community services as well as low-cost loans to maintain homes. Job training is noted as experienced workers age out of the workforce without enough qualified replacements. For small businesses, there is an increased need especially for small-scale businesses that struggle most to access capital. In the high cost areas across the AA, it is difficult for businesses to survive due to rising commercial real estate leases and large chains entering the local retail markets. Capacity building for community organizations including providing access to technical training and leadership development was noted. Other needs identified include:

- Access to affordable banking products and services including low cost checking and savings products and credit repair products
- Access to traditional financial services
- Financial literacy
- Financial education for start-up businesses
- Small dollar mortgage and small business loans
- Affordable rehabilitation loans
- Affordable small dollar emergency credit
- Homebuyer Education and Counseling
- Support for youth after-school programs
- Support for youth aging out of foster care
- Job training and resources


## Scope of Evaluation in NY CSA

The NY CSA received a full-scope review. Bank delineated MDs and the MSA were combined in evaluating performance under each test. The NY CSA represents one of the bank's most significant markets in terms of lending, deposits, and branch distribution. The performance in the NY CSA was weighted more heavily in determining the bank's overall CRA rating.

## CONCLUSIONS WITH RESPECT TO PERFORMANCE TESTS IN NY CSA

## LENDING TEST

The bank's performance under the Lending Test in the NY CSA is rated High Satisfactory.
Based on a full-scope review, the bank's performance in the NY CSA is good.

## Lending Activity

Lending levels reflect excellent responsiveness to credit needs in the AA.
Examiners considered the number and dollar amount of home mortgage, small business, and small farm loans originated or purchased relative to Chase's capacity based on deposits, competition, and market presence. Lending activity for home mortgage and small loans to businesses received the most weight in reaching conclusions. Respectively, home mortgage lending and small loans to businesses account for 18.3 percent and 81.3 percent of the loan volume in the CSA by number and 81.0 and 16.0 percent of loan volume by dollar. Small farm lending is not a strategic focus of the bank and received minimal weight in reaching conclusions. Farm loans represented 0.2 percent of the loan volume in the NY CSA by number and 0.02 percent loan volume by dollar.

| Number of Loans |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home <br> Mortgage | Small <br> Business | Small <br> Farm | Community <br> Development | Total |  |
| NY CSA | 163,731 | 725,875 | 2,098 | 640 | 892,344 |  |


| Dollar Volume of Loans (000s) |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Home <br> Mortgage | Small <br> Business | Small <br> Farm | Community <br> Development | Total |  |
| Assessment Area | $83,149,235$ | $16,387,828$ | 26,221 | $2,968,920$ | $102,532,204$ |  |
| NY CSA |  |  |  |  |  |  |

As of June 30, 2019, Chase ranked first in deposits out of 216 institutions with 30.3 percent market share.

In overall home mortgage lending, Chase ranked second with 7.7 percent market share. The top three lenders in the market are Wells Fargo Bank, N.A. (8.6 percent), Bank of America, N.A. (4.6 percent), and Quicken Loans, Inc. (4.2 percent).

In small loans to businesses, Chase ranked second out of 334 lenders with a 21.7 percent market share. Other major lenders are American Express National Bank (31.0 percent), Bank of America, N.A. (7.1 percent), and Citibank, N.A. (6.53 percent).

In small loans to farms, Chase ranked first out of 31 lenders with a 46.7 percent market share. The other major lenders in the market are Bank of America, N.A. (12.4 percent), U.S. Bank, N.A. (10.7 percent), and Wells Fargo Bank, N.A. (10.4 percent).

## Distribution of Loans by Income Level of the Geography

The bank exhibits excellent geographic distribution of loans in its AA.

## Home Mortgage Loans

Refer to Table O in the Multi State New York section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of home mortgage loan originations and purchases for this evaluation is good. The following information was taken into consideration when determining this rating.

- The limited proportion of housing units in low-income geographies, particularly OOUs ( 3.0 percent) and constrained lending opportunities were noted; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of OOUs in those geographies.
- The high level of competition in the AA, with a number of major home mortgage lenders, was also considered and examiners placed greater significance on performance compared to the aggregate of lenders.
- Between 2017 and 2019, the proportion of loans in low-income areas was near to the percentage of owner-occupied units and well below the aggregate distribution of loans. In moderate-income areas the proportion of loans was near to both the percentage of owner-occupied units and aggregate distribution of loans.
- During 2014 through 2016, performance in low-income geographies was below the percentage of owner-occupied units and below the aggregate distribution of loans, while performance in moderateincome geographies was below the percentage of owner-occupied units and near to the aggregate distribution of loans.


## Small Loans to Businesses

Refer to Table Q in the Multi State New York section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to businesses.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to businesses for this evaluation is excellent. The following information was taken into consideration when determining this rating.

- The smaller proportion of businesses in low-income geographies ( 7.5 percent) and competition between 334 lenders constrained lending opportunities to existing businesses. Therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of businesses in those geographies.
- Between 2017 and 2019, the proportion of small loans to businesses in low-income geographies was near to both the proportion of businesses and the aggregate distribution, while the proportion of small loans to businesses in moderate-income geographies exceeded both the proportion of businesses and the aggregate distribution.
- During 2014 to 2016, the proportion of small loans to businesses in low- and moderate-income geographies exceeded both the proportion of businesses and the aggregate distribution.


## Small Loans to Farms

Refer to Table S in the Multi State New York section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to farms.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to farms is good. The following information was taken into consideration when determining this rating.

- The limited number of farms in low-income geographies, ( 2.6 percent) and constrained lending opportunities were noted; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher number of farms in those geographies.
- The fact that farm lending is not a focus of the bank was also considered.
- Between 2017 and 2019, the proportion of loans to small farms in low-income geographies was below the proportion of farms in those geographies and significantly exceeded the aggregate distribution of all lenders. The proportion of loans to small farms in moderate-income geographies was well below the proportion of farms in those geographies and near to the aggregate distribution of all lenders.
- During the 2014 to 2016 period, the proportion of loans to small farms in both low- and moderateincome geographies exceeded the proportion of farms in those geographies and exceeded the aggregate distribution of all lenders.


## Lending Gap Analysis

A review of home mortgage loans, small loans to business, and small loans to farms including summary reports and AA maps did not identify any unexplained conspicuous lending gaps in the bank's activities.

## Distribution of Loans by Income Level of Borrower

The bank exhibits good distribution of loans among individuals of different income levels and business of different sizes.

## Home Mortgage Loans

Refer to Table P in the Multi State New York section of appendix D for the facts and data used to evaluate the borrower distribution of the institution's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall borrower distribution of home mortgage loan originations and purchases for this evaluation is adequate. The following information was taken into consideration when determining this rating.

- Greater significance was placed on performance against the aggregate distribution as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of this Full-Scope AA.
- Examiners particularly considered housing affordability challenges for low- and moderate-income borrowers.
- Between 2017 and 2019, the proportion of loans to low-income borrowers was well below the percentage of low-income families and near to the aggregate distribution of lenders. The proportion of moderate-income loans was near to both the proportion of moderate-income families and the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 to 2019. The proportion of loans to low-income borrowers was well below the percentage of lowincome families and near to the aggregate distribution of lenders. The proportion of moderateincome loans was below both the proportion of moderate-income families and the aggregate distribution.


## Small Loans to Businesses

Refer to Table R in the Multi State New York section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's originations and purchases of small loans to businesses.

Based on the data in the tables and the following considerations, the distribution of the bank's originations and purchases of small loans to businesses by revenue category is good. The following information was taken into consideration when determining this rating.

- Greater significance was placed on performance against the aggregate distribution of lenders as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of the Full-Scope AA.
- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and significantly exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was weaker than performance between 2017 and 2019. The bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was well below the percentage of businesses and significantly exceeded the aggregate distribution.


## Small Loans to Farms

Refer to Table T in the Multi State New York section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to farms.

Based on the data in the table and the following considerations, the distribution of the bank's originations and purchases of small loans to farms by revenue category is good. The following information was taken into consideration when determining this rating.

- The fact that farm lending is not a focus of the bank was considered.
- Between 2017 and 2019, the bank's percentage of loans to farms with revenues of $\$ 1$ million or less was below the percentage of farms and significantly exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 and 2019. The bank's percentage of loans to farms with revenues of $\$ 1$ million or less was well below the percentage of farms and significantly exceeded the aggregate distribution.


## Community Development Lending

The bank has made an adequate level of CD loans.
The Lending Activity Tables, shown above, set forth the information and data used to evaluate the bank's level of CD lending. These tables include all CD loans, including multifamily loans that also qualify as CD loans.

There were 640 CD loans made for a total of $\$ 2.9$ billion. This represents 3.9 percent of the tier 1 capital allocated to the AA. The majority (or 66 percent) of CD loans were for affordable housing purposes, which is a critical need in this AA. Examples of CD loans in the AA include:

- In December 2015, Chase provided four loans totaling $\$ 108.0$ million to a neighborhood revitalization project that was a part of the Downtown Brooklyn Redevelopment Plan. The mixeduse housing development resulted in 129 affordable housing units in a moderate-income tract and the activity was a catalyst for other community development activities.
- In February 2018, Chase provided a $\$ 29.7$ million loan to renovate affordable housing, which consisted of a portfolio of 13 buildings in the Bronx, NY. More than one-third of the borough's residents are considered low-income. More than 50 percent of the 497 apartment units are restricted to low- and moderate-income households.
- In December 2017, Chase helped to preserve affordable housing and provided a $\$ 18.5$ million loan to renovate a multifamily property. The building is located in a moderate-income tract of Far Rockaway, NY. Of the 132 units in the building, 130 are affordable to low- and moderate-income households.


## Other Loan Data

In addition to the bank's community development loans, Chase also issued 80 letters of credit totaling $\$ 1.65$ billion that had a qualified CD purpose. The letters of credit were given positive consideration to the Lending Test conclusion and supported the creation or preservation of affordable housing within the AA.

## Product Innovation and Flexibility

The bank makes extensive use of innovative and/or flexible lending practices to serve AA credit needs. As shown in the table below, a total of 24,504 loans were funded in the amount of $\$ 6.2$ billion. Refer to the comments in the Product Innovation and Flexibility section of this performance evaluation for additional details regarding the programs.

| Loan Type | Number of <br> Loans | Dollar Amount <br> $\mathbf{( \$ 0 0 0 s )}$ |
| :--- | :---: | :---: |
| DreaMaker | 8,822 | $2,394,176$ |
| Federal Housing Administration (FHA) | 6,351 | $1,797,508$ |
| Home Affordable Refinance Program (HARP) | 4,549 | 833,250 |
| Veteran's Administration (VA) | 973 | 323,766 |
| Small Business Administration (SBA) | 3,428 | 796,115 |
| U.S. Department of Agriculture (USDA) | 381 | 73,998 |

## INVESTMENT TEST

The bank's performance under the Investment Test in NY CSA is rated High Satisfactory.
Based on a full-scope review, the bank's performance in the NY CSA is good.
The bank has a significant level of qualified CD investment and grants, occasionally in a leadership position, particularly those that are not routinely provided by private investors. The current and prior period investments qualified investments represent 4.6 percent of tier 1 capital allocated to the AA. A significant majority, or 81.7 percent of total investments, represents current period investments.

The bank exhibits excellent responsiveness to credit and community economic development needs identified in the AA, including affordable housing, community services, and revitalization/stabilization for low- and moderate-income individuals and geographies. Over 96.0 percent of the dollar volume of the bank's current period and almost all prior period investments focus on affordable housing, a primary community development need in the AA. Two percent support community services and one percent revitalization/stabilization. Additionally, the bank provided 517 grants totaling $\$ 65.2$ million to a variety of organizations that primarily support community services. The grants also supported affordable housing, economic development and to a lesser extent revitalization/stabilization. In total, the bank's investments helped create or retain 59,498 affordable housing units including housing units for low- and moderate-income senior citizens.

The bank makes occasional use of complex investments to support CD initiatives. Exclusive of grants, the bank has 347 current period CD investments. These include 70 complex Direct Investment LIHTC and NMTC transactions. Prior period investments include 88 complex Direct Investment LIHTC and NMTC investments. Forty-three current period CD investments serve as catalysts as part of a local government plan for revitalization or stabilization to encourage further growth or improvements. In addition, the bank shows leadership with nine investments which supports the bank-developed New Skills at Work initiative, or the Healthcare Workforce Pathways with Hostos and Montefiore initiative. Leadership also included the bank's commitment to support and strengthen Community Development Financial Institutions (CDFIs).

| Qualified Investments - New York-Newark CSA |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Prior Period* |  | Current Period |  | Total |  |  |  | UnfundedCommitments** |  |
| Assessment Area | \# | \$(000's) | \# | \$(000's) | \# | \% of Total \# | \$(000's) | $\%$ of <br> Total \$ | \# | \$(000's) |
| New YorkNewark CSA | 479 | 646,619 | 864 | 2,878,934 | 1,343 | 94.4 | 3,525,553 | 97.0 | 0 | 0 |
| Statewide <br> Investments with <br> Purpose, <br> Mandate, or <br> Function (P/M/F) <br> to Serve AAs | 11 | 20,796 | 44 | 76,780 | 55 | 3.9 | 97,576 | 2.7 | 0 | 0 |
| Statewide <br> Investments with <br> No Purpose, <br> Mandate, or <br> Function ( $\mathrm{P} / \mathrm{M} / \mathrm{F}$ ) <br> to Serve AAs | 16 | 11,026 | 7 | 315 | 23 | 1.6 | 11,341 | 0.3 | 0 | 0 |

* Prior Period Investments' means investments made in a previous evaluation period that are outstanding as of the examination date.
** Unfunded Commitments' means legally binding investment commitments that are tracked and recorded by the bank's financial reporting system.
Examples of CD Investments in the AA include:
- In December 2019, the bank made a $\$ 23.7$ million equity investment to a community development project for affordable housing in the AA. Eighty-eight housing units were created for low- and moderate-income seniors. This is a Direct Investment LIHTC transaction supporting affordable housing.
- In December 2016, the bank made three investments totaling $\$ 20.4$ million in the New York State Housing Finance Agency (HFA) 2016 Affordable Housing Revenue Bonds (Series I). The purpose of the proceeds of these bonds was to finance the 2016 Series I Project. HFA's mission is to create and preserve high quality affordable multi-family rental housing units that serves communities across the state of New York.
- From 2014 through 2019, five grants totaling $\$ 800,000$ were provided to a nonprofit organization for continued support of its financial center. The mission of this small business development organization is to improve the economic prospects of traditionally underserved groups, with a focus on providing training and financial assistance to low- and moderate-income entrepreneurs and their communities to help grow revenue and create jobs thereby stimulating economic stability and growth within the bank's AA.


## Statewide Investments in Connecticut and New Jersey

The bank has 78 current and prior period investments totaling $\$ 108.9$ million with and without a $\mathrm{P} / \mathrm{M} / \mathrm{F}$ to serve AAs in Connecticut and New Jersey. These CD investments primarily support affordable housing and community services, with revitalization/stabilization to a lesser extent. These investments represent 3.1 percent of total qualified investments in and surrounding the NY CSA broader area including Connecticut and New Jersey. Of the $\$ 108.9$ million, 89 percent have a P/M/F to serve AAs. The investments supported the bank's overall performance in the NY CSA.

## SERVICE TEST

The bank's performance under the Service Test in NY CSA is rated High Satisfactory.
Based on a full-scope review, the bank's performance in the NY CSA is good.

## Retail Banking Services

Service delivery systems are accessible to geographies and individuals of different income levels in the bank's AA.

Examiners evaluated the data as outlined in the Scope section at the front of this document including bank-provided data on usage of branches adjacent to low- and moderate-income geographies by individuals residing in those geographies and on increases in the usage of alternative delivery systems.

Based on the data in the table below and performance context, the branch distribution is good. In lowand moderate-income geographies, the distribution is respectively below and near to the percentage of the population. The bank had 54 branches in low-income geographies and 139 branches in moderateincome geographies. The distribution was augmented by 13 MUI tract branches that serve low-income tracts and 115 MUI tract branches that serve moderate-income tracts. Examiners reviewed data on the accounts held and transactions conducted at the MUI branches and confirmed they were serving the adjacent low- and moderate-income populations.

| Distribution of Branch Delivery System |  |  |  |  |  |  |  | As of December 31, 2019 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Deposits | Branches |  |  |  |  |  | Population |  |  |  |
|  | \% of Rated |  | \% of <br> Rated | Location of Branches by Income of Geographies (\%) |  |  |  | \% of Population within Each Geography |  |  |  |
|  | Area Deposits in AA | \# of <br> Bank <br> Branches | Area <br> Branches in AA | Low | Mod | Mid | Upp | Low | Mod | Mid | Upp |
| New York- <br> Newark, NY- <br> NJ-CT-PA <br> CSA | 100 | 865 | 99.8 | 6.2 | 16.1 | 29.1 | 47.7 | 11.6 | 21.7 | 32.4 | 34.1 |

*May not add up to 100 percent due to geographies with unknown tract income level and rounding.
Alternative delivery systems enhanced the delivery of banking services to geographies and individuals of all income levels. The OCC considered the availability and use of alternative delivery systems over the evaluation period. This included review of the bank's 3,259 deposit-taking ATMs, online banking, mobile banking, and telephone banking to determine the effectiveness of these systems to make retail banking services available to individuals in low- and moderate-income geographies. The bank increased the deposit-taking ATMs in low- and moderate-income geographies by 27.9 percent over the prior rating period to 243 ( 7.5 percent) deposit-taking ATMs in low-income geographies and 602 ( 18.5 percent) ATMs in moderate-income geographies. Additionally, bank-provided data on use of online, mobile, and telephone banking showed significant increases in the adoption of these services by low- and moderateincome individuals from the prior rating period.

| Distribution of Branch Openings/Closings |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment <br> Area | \# of Branch <br> Openings | \# of Branch <br> Closings | Net change in Location of Branches <br> $(+$ or -$)$ |  |  |  |
|  | Low | Mod | Mid | Upp |  |  |
|  | 44 | 79 | +4 | -3 | -26 | -10 |

bank's opening and closing of branches have not adversely affected the accessibility of its delivery systems, particularly in low- and moderate-income geographies and/or to low- and moderate-income individuals. The bank opened four branches in low-income geographies and closed three branches in moderate-income geographies. The closures in moderate-income geographies were the results of reduced customer usage trends and proximity to other Chase branches based on the bank's retail branch consolidation strategy. Despite the branch closures, branch locations remained accessible to geographies and individuals of different income levels in the bank's AA.

Services, including where appropriate, business hours, did not vary in a way that inconvenienced the AA, particularly low- and moderate-income geographies and/or individuals. Generally, branches are open Monday through Friday 8:30 am to 6:00 pm and Saturday 9:00 am to 2:00 pm. A limited number of branches are open on Sunday from 10:00 am to 2:00 pm. All retail banking services are available within the low- and moderate-income branches.

## Community Development Services

The bank was a leader in providing CD services that are responsive to AA needs. The CD services positively affected the service test performance.

Bank employees provided 9,400 CD services to 287 organizations. These employees provided a total of 49,000 hours of service. A substantial amount of the bank's assistance was to organizations that provide community services to low- and moderate-income individuals and families. The CD services provided were responsive to the needs identified in the community, particularly financial literacy, and programs for low- and moderate-income youth. The following are examples of CD services provided in this AA:

- A bank employee provided 250 hours of board service to an organization focused on serving children from low- and moderate-income backgrounds. The employee played an integral role in shaping the nonprofit's strategic goals and executing directives that benefit the needs of the community.
- A bank employee provided 220 hours of board service to a community foodbank that serves as the state's largest anti-hunger and anti-poverty organization.
- Bank employees assisted a nonprofit with a financial literacy workshop focused on teaching the basics of money management and credit building to low-income women/clients. The workshop is responsive to the needs of these low-income women, many of whom lack the skills to build financial freedom.


## Multistate Metropolitan Statistical Area Rating

## Chicago-Naperville, IL-IN-WI CSA (Chicago CSA)

CRA rating for the Chicago CSA ${ }^{2}$ : Outstanding
The Lending Test is rated: High Satisfactory
The Investment Test is rated: Outstanding
The Service Test is rated: Outstanding
The major factors that support this rating include:

- An excellent level of lending activity.
- An adequate geographic distribution of home mortgage loans and small loans to businesses.
- A good borrower distribution of home mortgage loans and small loans to businesses.
- A relatively high level of CD loans that positively affected the rating.
- The extensive use of flexible products, which positively affected the rating.
- An excellent level of qualified CD investments that demonstrated excellent responsiveness to credit and economic develop needs.
- Some use of complex investments.
- Retail service delivery systems that are readily accessible to geographies and individuals of different income levels in the bank's AA.
- Leadership in providing CD services that are responsive to AA needs.


## Description of Institution's Operations in Chicago CSA

The Chicago CSA is the bank's 4th largest rating area based on its total deposits in the CSA of $\$ 87.8$ billion, representing 6.3 percent of the bank's total deposits. As of December 31, 2019, the bank operated 328 branches and 1,400 deposit-taking ATMs within the rating area, representing 6.6 percent of total branches and 8.7 percent of total ATMs. The bank originated and purchased approximately $\$ 60.5$ billion in loans or 8.7 percent of total bank loan originations and purchases during the evaluation period in the CSA.

According to FDIC Deposit Market Share data as of June 30, 2019, there were 180 banks s operating 2,638 branches in the Chicago CSA. The bank had deposits of $\$ 87.8$ billion, ranking it first in deposit market share with 21.1 percent. The next three largest competitors and their deposit market shares are BMO Harris Bank (15.3 percent), Bank of America, N.A. (8.6 percent), and Fifth Third Bank (5.8 percent).

Chase has delineated a significant portion of the Chicago-Naperville-Elgin, IL-IN-WI MSA and Michigan City-LaPorte, IN MSA within the CSA as its AA. Refer to appendix A for a complete listing of the counties included in the AA.

## Description of Full-Scope AA

The following table provides a summary of the demographics that includes housing and business information for the Chicago CSA. The CSA poses challenges to home mortgage lenders in the AA, including Chase. The CSA is a high cost housing area, limiting access to affordable homeownership among many low-income and some moderate-income borrowers. The median housing value in the CSA is $\$ 444,639$, which ranges from 2.7 to 4.0 times the median income in each MSA for the CSA, 4.0 times the averaged moderate-income, and 6.4 times the averaged low-income. One simplistic method used to determine housing affordability assumes a maximum monthly principal and interest payment of no more than 36 percent of the applicant's income.

Assuming a 30-year mortgage with a five percent interest rate, three percent down payment and not accounting for homeowners insurance, real estate taxes, or any additional monthly expenses, a lowincome borrower making $\$ 36,555$ per year (or less than 50 percent of the FFIEC adjusted median family income in the AA) could afford a $\$ 174,233$ mortgage with a payment of $\$ 1,097$ per month; a moderateincome borrower earning $\$ 58,488$ per year (or less than 80 percent of the FFIEC adjusted median family income in the AA) could afford a $\$ 278,796$ mortgage with a payment of $\$ 1,755$ per month.

The poverty level across the AA was considered in the evaluation of lending performance. Families living below the stated poverty rate are identified as having difficulty meeting basic financial needs and as such are less likely to have the financial wherewithal to qualify for a home loan than those with income above poverty. In the Chicago CSA, the overall household poverty level was 10.6 percent.

| Table A - Demographic Information of the Assessment Area |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area: Chicago CSA 2017-2019 |  |  |  |  |  |  |  |

## Economic Data

According to the November 2019 Moody's Analytics report, employment growth in the Chicago area has decelerated or abated in most industries and the housing market is among the weakest in the top U.S. metro areas. The area is a major center for business, distribution, transportation, and finance. It has a large talent pool as well as several highly regarded educational institutions. However, the area is showing weak population trends and has struggled with high crime rates. Chicago and Illinois are both grappling with mounting pension obligations and a shrinking population, both of which are placing added financial strain on city and state budgets. Major industries include professional and business services; educational and health services; and leisure and hospitality. Major employers in the area include Advocate Health Care System; Northwestern Memorial Healthcare; University of Chicago; JP Morgan Chase; and Amazon.

## Community Contacts

A review was conducted of five community contacts completed during the examination period with organizations located throughout the area. The organizations contacted focus on areas such as housing/urban policy and research and affordable housing. The contacts noted the need for access to traditional financial services for residents of LMI communities, particularly in the southside of Chicago; Gary, Indiana; East Chicago; and Hammond in Lake County, Indiana. Contacts also noted the need for smaller dollar mortgage loans as nonprofit organizations seem to hold a disproportionate share of the single-family mortgage market in low-income areas with lower property values. Contacts also discussed affordable housing and the need to construct more affordable rental housing in areas that provide lowincome households with access to better employment and workforce development opportunities that can lead to financial self-sufficiency. Other needs identified include:

- Access to affordable rental housing
- Access to affordable, conventional mortgages
- Smaller dollar mortgage loans
- Down payment assistance programs
- Smaller dollar loans for smaller businesses
- Access to second chance checking accounts, credit builder loans, and branches in low- and moderate-income areas
- Financial literacy training


## Scope of Evaluation in Chicago CSA

The Chicago CSA received a full-scope review. The MSAs within the CSA were combined in evaluating performance with each test.

## CONCLUSIONS WITH RESPECT TO PERFORMANCE TESTS IN CHICAGO CSA

## LENDING TEST

The bank's performance under the Lending Test in the Chicago CSA is rated High Satisfactory.
Based on a full-scope review, the bank's performance in the Chicago CSA is good.

## Lending Activity

Lending levels reflect excellent responsiveness to the credit needs in the AA.
Examiners considered the number and dollar amount of home mortgage, small business, and small farm loans originated or purchased relative to Chase's capacity based on deposits, competition, and market presence. Lending activity for home mortgage and small loans to businesses received the most weight in reaching conclusions. Respectively, home mortgage lending and small loans to businesses account for 36.8 percent and 62.8 percent of the loan volume in the CSA by number and 88.8 percent and 9.5 percent of loan volume by dollar. Small farm lending is not a strategic focus of the bank and received minimal weight in reaching conclusions. Farm loans represented 0.2 percent of the loan volume in the CSA by number and 0.02 percent loan volume by dollar.

| Number of Loans |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home <br> Mortgage | Small <br> Business | Small Farm | Community <br> Development | Total |
| Chicago CSA | 166,548 | 284,344 | 967 | 369 | 452,228 |
| Dollar Volume of Loans (000s) Home Small <br> Business Small Farm Community <br> Development Total <br> Assessment Area Mortgage 13,585 $1,028,313$ $60,471,122$  <br> Chicago CSA $53,688,554$ $5,740,670$ 10   |  |  |  |  |  |

Chase ranked first in deposits within the CSA with 21.1 percent market share.
In overall home mortgage lending, Chase ranked first with 8.5 percent market share. This is a very competitive market with 1,057 home mortgage lenders and 180 depository institutions. The other top lenders were Wells Fargo Bank, N.A. (6.3 percent), Guaranteed Rate Inc. (5.9 percent), and U.S. Bank, N.A. (4.2 percent).

In small loans to businesses, Chase ranked first with 26.9 percent market share. This is a highly competitive market with 233 small business lenders. The other top lenders were American Express National Bank (16.6 percent) and Citibank, N.A. (8.8 percent).

In small loans to farms, Chase ranked first out of 44 lenders with a 20.3 percent market share. The other major lenders in the market are John Deere Financial, F.S.B. (13.6 percent), First Midwest Bank (13.5 percent), and First National Bank of Omaha (11.4 percent).

## Distribution of Loans by Income Level of the Geography

The bank exhibits an adequate geographic distribution of loans in its AA.

## Home Mortgage Loans

Refer to Table O in the Multi State Chicago section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of home mortgage loan originations and purchases for this evaluation is adequate. The following information was taken into consideration when determining this rating.

- The limited proportion of housing units in low-income geographies, particularly OOUs (4.4 percent), constrained lending opportunities; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of OOUs in those geographies.
- The high level of competition in the AA, with 1,057 home mortgage lenders, was also considered and examiners placed greater significance on performance compared to the aggregate of lenders.
- Between 2017 and 2019, the proportion of loans in low-income areas was well below both the percentage of owner-occupied units and the aggregate distribution of loans. In moderate-income areas the proportion of loans was below the percentage of owner-occupied units and near to the aggregate distribution of loans.
- During 2014 through 2016, performance in low-income geographies was well below the percentage of owner-occupied units and near to the aggregate distribution of loans, while performance in moderate-income geographies was well below the percentage of owner-occupied units and below the aggregate distribution of loans.


## Small Loans to Businesses

Refer to Table Q in the Multi State Chicago section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to businesses.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to businesses for this evaluation is adequate. The following information was taken into consideration when determining this rating:

- The smaller proportion of businesses in low-income geographies (4.9 percent) and competition between 233 lenders constrained lending opportunities to existing businesses. Therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of businesses in those geographies.
- Between 2017 and 2019, the proportion of small loans to businesses in low-income geographies was well below both the proportion of businesses and the aggregate distribution, while the proportion of small loans to businesses in moderate-income geographies was near to the proportion of businesses and below the aggregate distribution.
- During 2014 to 2016, the proportion of small loans to businesses in low-income geographies was well below both the proportion of businesses and below the aggregate distribution, while the proportion of small loans to businesses in moderate-income geographies was below the proportion of businesses and near to the aggregate distribution.


## Small Loans to Farms

Refer to Table S in the Multi State Chicago section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to farms.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to farms is poor. The following information was taken into consideration when determining this rating.

- The limited number of farms in low-income geographies ( 2.6 percent) constrained lending opportunities; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher number of farms in those geographies.
- The fact that farm lending is not a focus of the bank was also considered.
- Between 2017 and 2019, the proportion of loans to small farms in low-income geographies was well below the proportion of farms in those geographies and significantly exceeded the aggregate distribution of all lenders. The proportion of loans to small farms in moderate-income geographies was well below the proportion of farms in those geographies and near to the aggregate distribution of all lenders.
- During the 2014 to 2016 period, performance was weaker. The proportion of loans to small farms in both low- and moderate-income geographies was well below both the proportion of farms in those geographies and the aggregate distribution of all lenders.


## Lending Gap Analysis

A review of home mortgage loans, small loans to business, and small loans to farms including summary reports and AA maps did not identify any unexplained conspicuous lending gaps in the bank's activities.

## Distribution of Loans by Income Level of the Borrower

The bank exhibits a good distribution of loans among individuals of different income levels and business of different sizes.

## Home Mortgage Loans

Refer to Table P in the Multi State Chicago section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall borrower distribution of home mortgage loan originations and purchases for this evaluation is good. The following information was taken into consideration when determining this rating:

- Greater significance was placed on performance against the aggregate distribution as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of this Full-Scope AA.
- Examiners particularly considered housing affordability challenges for low- and moderate-income borrowers.
- Between 2017 and 2019, the proportion of loans to low-income borrowers was well below the percentage of low-income families and below the aggregate distribution of lenders. The proportion of loans to moderate-income families exceeded both the proportion of moderate-income families and the aggregate distribution.
- During 2014 to 2016, the bank's performance was weaker than 2017 to 2019. The proportion of loans to low-income borrowers was well below the percentage of low-income families and below the aggregate distribution of lenders. The proportion of moderate-income loans was below both the proportion of moderate-income families and the aggregate distribution.


## Small Loans to Businesses

Refer to Table R in the Multi State Chicago section of appendix D for the facts and data used to evaluate the borrower distribution of the institution's originations and purchases of small loans to businesses.

Based on the data in the tables and the following considerations, the distribution of the bank's originations and purchases of small loans to businesses by revenue category is good. The following information was taken into consideration when determining this rating:

- Greater significance was placed on performance against the aggregate distribution of lenders as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of the Full-Scope AA.
- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and significantly exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was weaker than performance between 2017 and 2019. The bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was well below the percentage of businesses and significantly exceeded the aggregate distribution.


## Small Loans to Farms

Refer to Table T in the Multi State Chicago section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to farms.

Based on the data in the table and the following considerations, the distribution of the bank's originations and purchases of small loans to farms by revenue category is good. The following information was taken into consideration when determining this rating.

- The fact that farm lending is not a focus of the bank was considered.
- Between 2017 and 2019, the bank's percentage of loans to farms with revenues of $\$ 1$ million or less was below the percentage of farms and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 and 2019. The bank's percentage of loans to farms with revenues of $\$ 1$ million or less was below the percentage of farms and exceeded the aggregate distribution.


## Community Development Lending

The bank has made a relatively high level of CD loans.
The Lending Activity Tables, shown above, set forth the information and data used to evaluate the bank's level of CD lending. These tables include all CD loans, including multifamily loans that also qualify as CD loans

There were 369 CD loans made for a total of $\$ 1$ billion. This represents 8.7 percent of the allocated tier 1 capital. The loans were responsive to the identified needs of the AA. The majority ( 56 percent) of CD loans were for affordable housing purposes followed by community services ( 42 percent). Examples of CD loans in the AA include:

- In October 2014, Chase provided a $\$ 10.0$ million loan to a school district that primarily serves LMI students in the community. The funds were used to facilitate the purchase of equipment and construction/reconstruction projects.
- In June 2016, Chase provided a $\$ 13.3$ million loan to improve a multifamily property in a middleincome census tract of Chicago. Of the 124 units, 121 are occupied by LMI families.
- In April 2019, Chase funded a $\$ 5.6$ million loan located in a low-income census tract in Chicago. The loan helped to preserve 112 affordable units occupied by LMI families.


## Product Innovation and Flexibility

The bank makes extensive use of innovative and/or flexible lending practices to serve AA credit needs. As shown in the table below, a total of 26,643 loans were funded in the amount of $\$ 4.9$ billion. Refer to the comments in the Product Innovation and Flexibility section of this PE for additional details regarding the programs.

| Loan Type | Number of <br> Loans | Dollar Amount <br> $\mathbf{( \$ 0 0 0 ' s )}$ |
| :--- | :---: | :---: |
| DreaMaker | 9,202 | $1,735,384$ |
| FHA | 7,983 | $1,338,818$ |
| HARP | 5,363 | 807,306 |
| VA | 2,048 | 480,720 |
| SBA | 1,731 | 462,999 |
| USDA | 316 | 42,594 |

## INVESTMENT TEST

The bank's performance under the Investment Test in the Chicago CSA is rated Outstanding.
Based on a full-scope review, the bank's performance in the Chicago CSA is excellent.

The bank has an excellent level of qualified CD investments and grants, particularly those that are not routinely provided by private investors, although rarely in a leadership position. Current and prior period investments represent 28.3 percent of tier 1 capital allocated to the AA. A significant majority, or 95.8 percent, of total investments are current period investments.

The bank exhibits excellent responsiveness to credit and community economic development needs. Qualified investments primarily supported affordable housing and community services including economic and workforce development. Eighty-one percent of qualified investments were provided for community service needs. Seventeen percent supported affordable housing. The remaining supported economic development and the revitalization/stabilization of distresses areas. Affordable housingrelated investments created or retained 26,921 housing units for low- and moderate-income individuals and families. Of total qualified investments, grants totaled $\$ 43.9$ million to a variety of organizations primarily supporting community service and economic development. In some occurrences, grants were made over multiple years.

The bank rarely uses complex investments to support CD initiatives. Complex investments represent 13.9 percent of total investments and 2.6 percent of total investments serve as catalysts for future growth and other improvements. The bank's complex investments include Direct Investor LIHTC and NMTC transactions. Direct Investor LIHTC require bank expertise and capacity in selecting projects and partners, negotiating agreements, overseeing project development and operations, and ensuring compliance.

| Qualified Investments - Chicago-Naperville, IL-IN-WI CSA |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area (AA) | Prior Period* |  | Current Period |  | Total |  |  |  | Unfunded Commitments** |  |
|  | \# | \$(000's) | \# | \$(000's) | \# | \% of Total \# | \$(000’s) | \% of <br> Total \$ | \# | \$(000`s) |
| $\begin{aligned} & \text { Chicago-Naperville, IL- } \\ & \text { IN-WI CSA } \end{aligned}$ | 137 | 132,996 | 542 | 3,064,189 | 679 | 100 | 3,197,185 | 100 | 0 | 0 |

Prior Period Investments' means investments made in a previous evaluation period that are outstanding as of the examination date.
** Unfunded Commitments' means legally binding investment commitments that are tracked and recorded by the institution's financial reporting system.

Examples of CD Investments in the AA include:

- Between September 2015 and July 2018, the bank provided twelve Educational Purposes Tax and Grant Anticipation Notes totaling $\$ 2.5$ billion to the Chicago Board of Education (Board), in Chicago, Illinois. The Board is responsible for the governance, organizational, and financial oversight of Chicago Public Schools (CPS) - City of Chicago School District 299. The proceeds were used, together with certain funds available to the Board, to pay ordinary and necessary expenditures for educational purposes, and to pay the issuance costs. Per the National Center for Education Statistics, the majority or 83.5 percent of the local student population is eligible for the Federal Free or Reduced Lunch program in the CPS.
- In December 2018, the bank made a $\$ 16.5$ million investment in a LIHTC Direct Investor project. The investment supports the development of a four-story building containing 60 housing units restricted to those 62 years or older and at 60 percent or less of AMI. Sixteen of the units will receive a rental subsidy through a Project-Based Section 8 contract. A non-profit organization will provide supportive services with a full-time on-site manager available to help link and refer residents to area services according to their individual needs. There is strong demand in the market for senior
affordable housing evidenced by two older adult LIHTC properties in the market which had current occupancies of 100 percent and waitlists, as well as a significant senior population growth in the area since 2010.
- In September 2019, the bank made a $\$ 12.1$ million equity investment in a LIHTC project located in Pleasant Prairie, Wisconsin. The investment will support new construction of a 140 -unit family development with 84 units set aside for low- and moderate-income families. Service organizations will provide and coordinate services for job skills training, financial literacy, community building, and federal benefits assistance.


## SERVICE TEST

The bank's performance under the Service Test in the Chicago CSA is rated Outstanding.
Based on a full-scope review, the bank's performance in the Chicago CSA is excellent.

## Retail Banking Services

Service delivery systems are readily accessible to geographies and individuals of different income levels in the bank's AA.

Examiners evaluated the data as outlined in the Scope section at the front of this document including bank-provided data on usage of branches adjacent to low- and moderate-income geographies by individuals residing in those geographies and on increases in the usage of alternative delivery systems. Based on the data in the table below and performance context, the branch distribution is excellent. In low- and moderate-income geographies, the distribution is near to the percentage of the population. The bank had 24 branches in low-income geographies and 54 branches in moderate-income geographies. The distribution was augmented by five MUI tract branches near low-income tracts and 41 MUI tract branches near moderate-income tracts. Examiners reviewed data on the accounts held and transactions conducted at the adjacent MUI branches and determined they were serving the adjacent low- and moderate-income populations.

| Distribution of Branch Delivery System |  |  |  |  |  |  |  | As of December 31, 2019 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Deposits | Branches |  |  |  |  |  | Population |  |  |  |
| Assessment | \% of Rated <br> Area <br> Deposits in AA | \# of <br> Bank <br> Branches | \% of <br> Rated <br> Area <br> Branches in AA | Location of Branches by Income of Geographies (\%) |  |  |  | \% of Population within Each Geography |  |  |  |
| Area |  |  |  | Low | Mod | Mid | Upp | Low | Mod | Mid | Upp |
| Chicago- <br> Naperville, <br> IL-IN-WI <br> CSA | 100 | 328 | 98.9 | 7.3 | 16.5 | 27.4 | 48.8 | 9.8 | 23.4 | 32.4 | 34.2 |

*May not add up to 100 percent due to geographies with unknown tract income level and rounding.
Alternative delivery systems enhanced the delivery of banking services to geographies and individuals of all income levels. The OCC considered alternative delivery systems over the evaluation period. This included review of the bank's 1,400 deposit-taking ATMs, online banking, mobile banking, and telephone banking to determine the effectiveness of these systems to make retail banking services available to individuals in low- and moderate-income geographies. The bank increased the deposit-
taking ATMs in low- and moderate-income geographies by 33.7 percent over the prior rating period to 115 (8.2 percent) deposit-taking ATMs in low-income geographies and 247 ( 17.6 percent) ATMs in moderate-income geographies. Additionally, bank-provided data on use of online, mobile, and telephone banking showed increases in the adoption of these services by low- and moderate-income individuals from the prior rating period.

| Distribution of Branch Openings/Closings |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | \# of Branch Openings | \# of Branch Closings | Net change in Location of Branches (+ or -) |  |  |  |
|  |  |  | Low | Mod | Mid | Upper |
| Chicago- <br> Naperville, IL-IN- <br> WI CSA | 16 | 67 | 0 | -6 | -18 | -27 |

The bank's opening and closing of branches generally has not adversely affected the accessibility of its delivery systems, particularly in low- and moderate-income geographies and/or to low- and moderateincome individuals. The bank opened four branches and closed four branches in low-income geographies and opened one branch and closed seven branches in moderate-income geographies. Branch closures were due to reduced customer usage, and proximity to other Chase branches. The branch closures in moderate-income geographies generally did not adversely affect the distribution of branches relative to the population residing in the geographies. Branch locations remained accessible to geographies and individuals of different income levels in the bank's AA.

Services, including where appropriate, business hours, do not vary in a way that inconveniences the AA, particularly low- and moderate-income geographies and/or individuals. Generally, branches are open Monday through Friday 8:30 am to 6:00 pm, and Saturday 9:00 am to 2:00 pm. A limited number of branches offer Sunday hours, often from 10:00 am to 2:00 pm. All retail banking services are available at all branches within the low- and moderate-income geographies.

## Community Development Services

The bank was a leader in providing CD services that are responsive to AA needs. The CD services positively affected the service test performance.

Bank employees provided their financial or job-specific expertise and/or technical assistance for 6,100 CD services to 130 organizations since the last evaluation. This is a total of 34,300 hours over a sixyear period. A substantial amount of the bank's assistance was to organizations that provide services to low- and moderate-income individuals and families. The CD services provided were responsive to the needs identified in the community, particularly financial literacy training:

- A bank employee facilitated financial literacy workshops for over 300 low- and moderate-income individuals. These workshops were often performed in coordination with a nonprofit organization that served the low- and moderate-income community. The education helped equip participants with the knowledge and skills necessary to make good financial decisions and become self-sufficient.
- Five bank employees provided training to low- and moderate-income individuals, through service to a nonprofit organization dedicated to educating students in grades K-12 about entrepreneurship, work readiness, and financial literacy through the experiential, hands-on program.


# Multistate Metropolitan Statistical Area Rating 

## Philadelphia-Reading-Camden, PA-NJ-DE MMSA (Philadelphia MMSA)

CRA rating for the Philadelphia MMSA ${ }^{\text {3 }}$ : Outstanding

The Lending Test is rated: High Satisfactory
The Investment Test is rated: Outstanding
The Service Test is rated: Outstanding
The major factors that support this rating include:

- An excellent level of lending activity.
- A good geographic distribution of home mortgage loans and small loans to businesses.
- A good borrower distribution of home mortgage loans and small loans to businesses.
- Leadership in CD lending that had a significantly positive affect on the rating.
- The extensive use of flexible loan products, that positively affected the rating.
- An excellent level of qualified CD investments that demonstrated excellent responsiveness to credit and community economic development needs.
- The extensive use of innovative and/or complex investments.
- Retail service delivery systems that are readily accessible to geographies and individuals of different income levels in the bank's AA.
- Leadership in providing CD services that are responsive to AA needs.


## Description of Institution's Operations in Philadelphia MMSA

The Philadelphia MMSA is Chase's $28^{\text {th }}$ largest rating area based on its deposits of $\$ 198.4$ million, representing less than one percent of the bank's total deposits. As of December 31, 2019, the bank operated 14 branches and 80 deposit-taking ATMs within the rating area, representing 0.2 percent of total branches and 0.4 percent of total ATMs. The bank originated and purchased approximately $\$ 1.1$ billion in loans or 0.2 percent of total bank loan originations and purchases during the evaluation period in the MMSA.

According to the FDIC Deposit Market Share Data, as of June 30, 2019, there were 109 banks s operating 1,631 branches in the area. Chase ranked $55^{\text {th }}$ with a 0.05 percent market share. Capital One, N.A. had the largest deposit market share with 29.9 percent followed by TD Bank, N.A. ( 26.5 percent), and Wells Fargo Bank, N.A. (6.7 percent).

Chase's AA is comprised of geographies in Delaware, New Jersey, and Pennsylvania and contains a substantial portion of the MDs within Philadelphia-Camden-Wilmington MSA. Refer to appendix A for a complete listing of counties included in the AA.

[^100]
## Description of Full-Scope AA

The following table provides a summary of the demographics that includes housing and business information for the Philadelphia MMSA. Table A indicates that approximately 22.2 percent of families in the AA are low-income. The Philadelphia MMSA's cost of housing is generally affordable for some low-income and most moderate-income borrowers. The median housing value in the Philadelphia MMSA ranges from 2.4 to 4.3 times the median income across the MMSA, 3.7 times the average moderate-income, and approximately six times the average low-income, indicating OOUs are not affordable to some low-income borrowers. One simplistic method used to determine housing affordability assumes a maximum monthly principal and interest payment of no more than 36 percent of the applicant's income.

In the Philadelphia MMSA, assuming a 30-year mortgage with a 5 percent interest rate, 3.0 percent down payment, and not accounting for homeowners insurance, real estate taxes, or any additional monthly expenses, a low-income borrower making \$40,524 per year (or less than 50 percent of the FFIEC adjusted median family income in the MMSA) could afford a $\$ 193,166$ mortgage with a payment of $\$ 1,216$ per month; a moderate-income borrower earning $\$ 64,838$ per year (or less than 80 percent of the FFIEC adjusted median family income in the AA) could afford a $\$ 309,055$ mortgage with a payment of $\$ 1,945$ per month.

| Table A - Demographic Information of the Assessment Area Assessment Area: Philadelphia MMSA 2017-2019 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Demographic Characteristics | \# | Low \% of \# | Moderate \% of \# | Middle \% of \# | Upper \% of \# | $\begin{aligned} & \text { NA* } \\ & \text { \% of \# } \end{aligned}$ |
| Geographies (Census Tracts) | 1,370 | 7.2 | 24.4 | 36.3 | 30.7 | 1.5 |
| Population by Geography | 5,578,302 | 7.1 | 23.3 | 37.6 | 31.7 | 0.4 |
| Housing Units by Geography | 2,263,278 | 7.2 | 24.3 | 37.1 | 31.2 | 0.2 |
| Owner-Occupied Units by Geography | 1,381,586 | 3.9 | 18.9 | 40.4 | 36.9 | 0.0 |
| Occupied Rental Units by Geography | 684,058 | 12.1 | 32.1 | 32.8 | 22.5 | 0.5 |
| Vacant Units by Geography | 197,634 | 13.8 | 35.2 | 29.3 | 21.4 | 0.3 |
| Businesses by Geography | 407,923 | 4.0 | 18.0 | 37.7 | 39.8 | 0.6 |
| Farms by Geography | 8,584 | 1.6 | 14.1 | 45.7 | 38.5 | 0.1 |
| Family Distribution by Income Level | 1,327,581 | 22.2 | 17.3 | 19.8 | 40.7 | 0.0 |
| Household Distribution by Income Level | 2,065,644 | 25.3 | 15.6 | 16.9 | 42.1 | 0.0 |
| Median Family Income MSA - 15804 Camden, NJ |  | \$87,133 | Median Hous | g Value |  | \$243,122 |
| Median Family Income MSA - 33874 Montgomery County-Bucks CountyChester County, PA |  | \$99,939 | Median Gross | Rent |  | \$1,053 |
| Median Family Income MSA - 37964 Philadelphia, PA |  | \$56,411 | Families Belo | Poverty Le |  | 9.4\% |
| Median Family Income MSA - 48864 Wilmington, DE-MD-NJ |  | \$80,707 |  |  |  |  |
| Source: 2015 ACS and 2018 D\&B Data <br> Due to rounding, totals may not equal $100.0 \%$ <br> (*) The NA category consists of geographies that have not been assigned an income classification. |  |  |  |  |  |  |

## Economic Data

According to the November 2019 Moody's Analytics report, the area economy is strong. The area has world-class educational institutions and is a center for healthcare and medical research. Growth in total employment is in the top 10 among metro areas in the Northeast and firmly outpaces the national average. The unemployment rate has been historically low for the area due to an expanding labor force. The housing market is also making inroads. After a brief slowdown in 2018, homebuilding picked up in the first three quarters of 2019, and house price appreciation outpaced the Pennsylvania and U.S. averages. Major employment industries include college, universities and professional schools, and federal government. Top employers include University of Pennsylvania Health System, Thomas Jefferson University, Comcast, Drexel University and Aramark, Corp. Collectively, the federal, state, and local government is a significant employer in the area. The area has a relatively low population growth. Prohibitive business taxes push firms out of the area. The 2018 poverty levels across the AA are the greatest in the Philadelphia, PA MD at 20.4 percent compared to the national average of 13.1 percent. This had an impact on meeting basic financial needs and home mortgage lending.

## Community Contacts

A review was conducted of five community contacts completed during the examination period. The contacts were conducted with organizations located throughout the rating area. The mission of the organizations contacted focused on affordable housing, economic development, and community services. Contacts noted concerns regarding foreclosures and negative equity, low-income wage earners being able to earn a living wage, aging housing stock, rent burden, poverty levels, and access to credit for small business. The contacts identified the following needs in the area:

- Affordable housing and commercial rehabilitation and preservation
- Foreclosure prevention
- Financing for small businesses including micro-loans for small business working capital
- Small dollar loans
- Financial literacy
- Technical assistance for small business
- Workforce housing
- Branches in low- to moderate-income neighborhoods


## Scope of Evaluation in the Philadelphia MMSA

The rating for the Philadelphia MMSA is based on a full-scope evaluation. Since the bank did not enter the Philadelphia MMSA until December 2018, there was less than one month of performance to evaluate for 2018, which would not provide meaningful conclusions. Therefore, the evaluation for the Philadelphia MMSA includes only 2019 performance.

## CONCLUSIONS WITH RESPECT TO PERFORMANCE TESTS IN PHILADELPHIA MMSA

## LENDING TEST

The bank's performance under the Lending Test in the Philadelphia MMSA is rated High Satisfactory.

Based on a full-scope review, the bank's performance in the Philadelphia MMSA is good. Aggregate lending data for 2019 was not available at the time this evaluation was completed and was not used in the lending test analysis for the Philadelphia MMSA.

## Lending Activity

Lending levels reflect excellent responsiveness to credit needs in the AA.
Examiners considered the number and dollar amount of home mortgage, small business, and small farm loans originated or purchased relative to Chase's capacity based on deposits, competition, and market presence. Lending activity for home mortgage and small loans to businesses received the most weight in reaching conclusions. Respectively, home mortgage lending and small loans to businesses account for 20.8 percent and 78.8 percent of the loan volume in the MMSA by number and 84.2 and 13.9 percent of loan volume by dollar. Small farm lending is not a strategic focus of the bank and received minimal weight in reaching conclusions. Farm loans represented 0.3 percent of the loan volume in the MMSA by number and 0.05 percent loan volume by dollar.

| Number of Loans |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home <br> Mortgage | Small <br> Business | Small <br> Farm | Community <br> Development | Total |  |
| Philadelphia MMSA | 3,081 | 11,659 | 53 | 2 | 14,795 |  |


| Dollar Volume of Loans (\$000's) |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home Mortgage | Small <br> Business | Small Farm | Community <br> Development | Total |  |
| Philadelphia MMSA | 909,346 | 150,631 | 513 | 18,995 | $1,079,485$ |  |

As of June 30, 2019, Chase ranked 55th in deposits out of 109 institutions with 0.05 percent market share.

In overall home mortgage lending, Chase ranked ninth out of 796 lenders with 2.1 percent market share. The top three lenders in the market are Wells Fargo Bank, N.A. (10.1 percent), PNC Bank, N.A. (3.3 percent), Citizens Bank of PA (3.1) and Quicken Loans, Inc. (3.1 percent).

In small loans to businesses, Chase ranked second out of 219 lenders with a 9.7 percent market share. Other major lenders are American Express National Bank (24.3 percent), Wells Fargo Bank, N.A. (7.4 percent), and Citibank, N.A. (7.0 percent).

In small loans to farms, Chase ranked second out of 31 lenders with a 17.7 percent market share. The other major lenders in the market are Branch Banking and Trust Co. (20.2 percent), John Deere Financial, F.S.B. (11.3 percent), and U.S. Bank, N.A. (7.9 percent).

## Distribution of Loans by Income Level of the Geography

The bank exhibits good geographic distribution of loans in its AA.

## Home Mortgage Loans

Refer to Table O in the Multi State Philadelphia section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of home mortgage loan originations and purchases for this evaluation is good. The following information was taken into consideration when determining this rating.

- The limited proportion of housing units in low-income geographies, particularly OOUs (3.9 percent), constrained lending opportunities; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of OOUs in those geographies.
- The high level of competition in the AA, with 796 home mortgage lenders, was also considered.
- During 2019, the proportion of loans in low-income areas was well below the percentage of owneroccupied units, while in moderate-income areas the proportion of loans exceeded the percentage of owner-occupied units.


## Small Loans to Businesses

Refer to Table Q in the Multi State Philadelphia section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to businesses.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to businesses for this evaluation is adequate. The following information was taken into consideration when determining this rating.

- The smaller proportion of businesses in low-income geographies (4.0 percent) and competition between 219 lenders constrained lending opportunities to existing businesses. Therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of businesses in those geographies.
- During 2019, the proportion of small loans to businesses in low-income geographies was well below the proportion of businesses, while the proportion of small loans to businesses in moderate-income geographies was below the proportion of businesses.


## Small Loans to Farms

Refer to Table S in the Multi State Philadelphia section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to farms.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to farms is good. The following information was taken into consideration when determining this rating.

- The limited number of farms in low-income geographies (1.6 percent) constrained lending opportunities; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher number of farms in those geographies.
- The fact that farm lending is not a focus of the bank was also considered.
- During 2019, the bank made no loans to small farms in low-income geographies. The proportion of loans to small farms in moderate-income geographies exceeded the proportion of farms in those geographies.


## Lending Gap Analysis

A review of home mortgage loans, small loans to business, and small loans to farms including summary reports and AA maps did not identify any unexplained conspicuous lending gaps in the bank's activities.

## Distribution of Loans by Income Level of the Borrower

The bank exhibits a good distribution of loans among individuals of different income levels and business of different sizes.

## Home Mortgage Loans

Refer to Table P in the Multi State Philadelphia section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall borrower distribution of home mortgage loan originations and purchases for this evaluation is good. The following information was taken into consideration when determining this rating.

- Examiners considered the competition and the economic constraints discussed above under the Description of this Full-Scope AA, particularly the cost of housing and level of poverty in portions of the MMSA.
- During 2019, the proportion of loans to low-income borrowers was well below the percentage of low-income families, while the proportion of loans to moderate-income borrowers exceeded the proportion of moderate-income families.


## Small Loans to Businesses

Refer to Table R in the Multi State Philadelphia section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's originations and purchases of small loans to businesses.

Based on the data in the tables and the following factors, the distribution of the bank's originations and purchases of small loans to businesses by revenue category is adequate. The following information was taken into consideration when determining this rating.

- During 2019, the proportion of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of small businesses located in the AA.


## Small Loans to Farms

Refer to Table T in the Multi State Philadelphia section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to farms.

Based on the data in the table and the following considerations, the distribution of the bank's originations and purchases of small loans to farms by revenue category is good. The following information was taken into consideration when determining this rating.

- The fact that farm lending is not a focus of the bank was considered.
- During 2019, the bank's percentage of loans to farms with revenues of $\$ 1$ million or less was near to the percentage of farms.


## Community Development Lending

The bank is a leader in CD lending.
The Lending Activity Tables, shown above, set forth the information and data used to evaluate the bank's level of CD lending. These tables include all CD loans, including multifamily loans that also qualify as CD loans.

There were two CD loans made for a total of $\$ 19.0$ million. This represents 74.4 percent of tier 1 capital. Eighty-four percent supported revitalization/stabilization and 16 percent supported affordable housing.

The following two CD loans were made in the AA:

- In March 2019, Chase originated a $\$ 13.0$ million bridge loan for the purposes of revitalizing a community in Camden, NJ. The purpose was to facilitate the NMTC financing for the construction of a new manufacturing facility in a low-income census tract of Camden, NJ. The project is part of three city plans (Future Camden Master Plan, Comprehensive Revitalization Plan and General Reexamination of the Master Plan) to revitalize the area. It will help redevelop 31 acres of a former brownfield into four buildings in an underutilized area. The opening of the manufacturing facility will result in the creation of 210 jobs.
- In November 2019, Chase originated a $\$ 3.0$ million term loan to an apartment complex in Philadelphia, PA. The building has 55 units for LMI individuals and families. The Philadelphia Housing Authority Department sponsored the project.


## Product Innovation and Flexibility

The bank makes extensive use of innovative and/or flexible lending practices in order to serve AA credit needs. As shown in the table below, the bank originated 1,486 loans totaling nearly $\$ 255.2$ million in the AA. Refer to the comments in the Product Innovation and Flexibility section of this performance evaluation for additional details regarding the programs.

| Loan Type | Number of <br> Loans | Dollar Amount <br> $\mathbf{( \$ 0 0 0 ' s )}$ |
| :--- | :---: | :---: |
| DreaMaker | 592 | 116,142 |
| FHA | 548 | 79,269 |
| HARP | 201 | 26,093 |
| VA | 107 | 23,697 |
| SBA | 9 | 4,556 |
| USDA | 29 | 5,435 |

## INVESTMENT TEST

The bank's performance under the Investment Test in Philadelphia MMSA is rated Outstanding.
Based on a full-scope review, the bank's performance in the Philadelphia MMSA is excellent.
The bank has an excellent level of qualified CD investments and grants, occasionally in a leadership position, particularly those that are not routinely provided by private investors. Current and prior period investments represent 94.1 percent of tier 1 capital allocated to the AA. Bank operations commenced in the AA December 2018.

The bank exhibits excellent responsiveness to credit and community economic development needs identified in the AA including affordable housing and affordable rental housing, community service, and economic development. Current period dollar investments were 74.7 percent revitalization/stabilization, 12.9 percent community service, and 12.4 percent affordable housing. Current period affordable housing investments created 293 low- and moderate-income housing units for individuals and families. The bank provided 67 grants totaling $\$ 10.9$ million to a variety of community organizations, primarily revitalization/stabilization and community service.

The bank makes extensive use of innovative and/or complex investments to support CD initiatives. Current period complex dollar investments represent 54.4 percent or $\$ 13.1$ million of investments and included two NMTC transactions totaling $\$ 10.6$ million. Twelve or 74.7 percent of investment dollars are catalysts for future growth and other improvements.

| Qualified Investments - Philadelphia-Reading-Camden PA-NJ-DE MD CSA |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Prior Period* |  | Current Period |  | Total |  |  |  | UnfundedCommitments** |  |
|  | \# | \$(000's) | \# | \$(000's) | \# | $\%$ of Total \# | \$(000's) | \% of Total \$ | \# | \$(000's) |
| Philadelphia MMSA | 78 | 56,543 | 71 | 24,032 | 149 | 52.3 | 80,575 | 28.2 | 0 | - |
| Other: |  |  |  |  |  |  |  |  |  |  |
| Statewide Investments with Purpose, Mandate, or Function (P/M/F) to Serve AAs | 31 | 52,710 | 168 | 246,181 | 199 | 37.2 | 298,892 | 70.3 | 0 | 0 |
| Statewide Investments with No Purpose, Mandate, or Function ( $\mathrm{P} / \mathrm{M} / \mathrm{F}$ ) to Serve AAs | 41 | 6,607 | 10 | 23,565 | 51 | 10.5 | 30,172 | 1.5 | 0 | 0 |

Prior Period Investments' means investments made in a previous evaluation period that are outstanding as of the examination date.
** Unfunded Commitments' means legally binding investment commitments that are tracked and recorded by the institution's financial reporting system.

Examples of CD Investments in the AA include:

- In December 2019, the bank provided a $\$ 1.5$ million grant for a three-year investment to a collaborative aimed at promoting inclusive growth in three impoverished neighborhoods in Wilmington, (West, East and Northeast) Delaware. The collaborative will use the funds to support affordable housing development, small businesses, and community facilities, while addressing social determinants of health, including access to healthy foods, and health care facilities, through partnerships with the healthcare sector. The grant will build the capacity of community-based organizations to preserve or rehab over 100 affordable housing units; provide 48 small business loans totaling $\$ 1.0$ million; and develop community facilities that create assets and resources for the LMI community.
- In May 2019, the bank provided a $\$ 2.5$ million grant to an organization for PRO-N 2018 located in Philadelphia, PA. Along with CDFI partners, the organization will prioritize economic development and housing outcomes of the Kensington Avenue commercial corridor, all composed of low- and moderate-income tracts. Aligning with the Heart of Kensington Neighborhood Development Plan to build community capacity and wealth and protect long-term residents and businesses from displacement, the CDFIs will implement an equitable investment strategy and support affordable housing options on surrounding blocks.

CDFIs will also identify and cultivate local entrepreneurs, support existing and attract new businesses, finance redevelopment of small-scale and large-scale mixed-use properties to meet local needs, provide flexible capital tailored to business needs, deliver individualized coaching and technical assistance to businesses, and support pathways to homeownership and affordable rental housing options. The efforts will attract/retain 85 businesses, create/preserve 300 jobs, 115 residential units, 20 new homeowners, address 45 vacant/blighted properties, and drive $\$ 85.0$ million in additional public/private investments. This activity serves as a catalyst for other community development activities and is part of a local government plan for revitalization or stabilization

- In March 2019, the bank originated a $\$ 7.9$ million equity investment to construct a new manufacturing facility located in Camden NJ using NMTC and other capital sources. The Project is in a low-income census tract and part of three city plans to revitalize this area: Future Camden Master Plan, Comprehensive Revitalization Plan, and General Reexamination of the Master Plan and Master Plan Amendment.

Four buildings totaling approximately $379,000 \mathrm{SF}$ will be constructed on 31 acres. When the facility opens, it will create 210 permanent jobs. This development will revitalize an underutilized industrial area and eliminate a large, blighted fronting on a heavily trafficked corridor to the heart of Camden.

## Statewide Investments in Delaware and Pennsylvania

The bank has 250 current and prior period investments totaling $\$ 329.0$ million with and without a $\mathrm{P} / \mathrm{M} / \mathrm{F}$ to serve AAs in the states of Delaware and Pennsylvania. These CD investments primarily support affordable housing, community services and revitalization/stabilization. Qualified investments in the broader statewide areas represent 71.8 percent of total qualified investments. These investments support the bank's overall excellent performance in the Philadelphia MMSA.

## SERVICE TEST

The bank's performance under the Service Test in Philadelphia MMSA is rated Outstanding.
Based on a full-scope review, the bank's performance in the Philadelphia MMSA is excellent.

## Retail Banking Services

Service delivery systems are readily accessible to geographies and individuals of different income levels in the bank's AA.

Examiners evaluated the data as outlined in the Scope section at the front of this document including bank-provided data on usage of branches adjacent to low- and moderate-income geographies by individuals residing in those geographies and on increases in the usage of alternative delivery systems.

Based on the data in the table below and performance context, the branch distribution is good. In lowand moderate-income geographies, the distribution is respectively near to and exceeds the percentage of the population. The bank had one branch in a low-income geography and four branches in moderateincome geographies. The distribution was augmented by four MUI tract branches that serve moderateincome tracts. Examiners reviewed data on the accounts held and transactions conducted at the MUI branches and confirmed they were serving the adjacent low- and moderate-income populations.

| Distribution of Branch Delivery System |  |  |  |  |  |  |  | As of December 31, 2019 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Deposits <br> \% of Rated Area <br> Deposits in AA | Branches |  |  |  |  |  | Population |  |  |  |
|  |  | \# of <br> BANK <br> Branches | \% of <br> Rated <br> Area <br> Branches <br> in AA | Location of Branches by Income of Geographies (\%) |  |  |  | \% of Population within Each Geography |  |  |  |
|  |  |  |  | Low | Mod | Mid | Upper | Low | Mod | Mid | Upper |
| Philadelphia <br> -ReadingCamden, PA-NJ-DEMD CSA | 100 | 14 | 100 | 7.1 | 28.6 | 14.3 | 50.0 | 9.0 | 25.7 | 32.0 | 33.0 |

*May not add up to 100 percent due to geographies with unknown tract income level and rounding.
Alternative delivery systems did not significantly enhance the delivery of banking services to geographies and individuals of all income levels. The OCC considered the availability and use of alternative delivery systems over the evaluation period. This included review of the bank's 80 deposittaking ATMs, online banking, mobile banking, and telephone banking to determine the effectiveness of these systems to make retail banking services available to individuals in low- and moderate-income geographies. The bank had 3 (3.7 percent) deposit-taking ATMs in low-income geographies and 18 ( 22.5 percent) ATMs in moderate-income geographies. Bank-provided data on use of online, mobile, and telephone banking showed negligible change in the adoption of these services by low- and moderate-income individuals from the prior rating period.

| Distribution of Branch Openings/Closings |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | \# of Branch <br> Openings | \# of Branch <br> Closings | Net change in Location of Branches <br> $(+$ or -$)$ |  |  |  |
|  |  | Low | Mod | Mid | Upper |  |
| Philadelphia- <br> Reading-Camden, <br> PA-NJ-DE-MD <br> CSA | 14 | 0 | +1 | +4 | +2 | +7 |

The bank's opening and closing of branches has improved the accessibility of its delivery systems, particularly in low- and moderate-income geographies and/or to low- and moderate-income individuals. The bank did not close any branches in the low- and moderate-income geographies and opened one and four branches, respectively, in low- and moderate-income geographies.

Services, including where appropriate, business hours, do not vary in a way that inconveniences the various portions of its AA, particularly low- and moderate-income geographies and/or low- and moderate-income individuals. Generally, branches are open Monday through Friday from 9:00 am to 5:00 pm and Saturday from 9:00 am to 1:00 pm. All retail banking services are available within the low- and moderate-income branches.

## Community Development Services

The bank was a leader in providing CD services that are responsive to AA needs. The CD services positively affected the service test performance.

Bank employees provided 875 CD service activities consisting of technical assistance and/or jobspecific expertise to 41 organizations for a total of 5,666 hours of service, including 1,896 hours of board service over a three-year period. The bank's assistance was primarily to organizations that provide services to low- and moderate-income individuals and families. The CD services were responsive to the needs identified in the community, particularly affordable housing, and foreclosure prevention. The following are examples of CD services provided in this AA:

- A bank employee provided 98 hours of board service over a two-year period to a community organization that provides affordable housing construction and home renovation to low- and moderate-income families.
- Two bank employees provided 443 hours of board service during a three-year period to a community organization that provides homebuyer education, foreclosure prevention programs, training, education in personal finance management, self-employment, and work readiness to low- and moderate-income women and minorities.


# Multistate Metropolitan Statistical Area Rating 

## Washington-Arlington-Alexandria MMSA (DC MMSA)

CRA rating for the DC MMSA is Outstanding
The Lending Test is rated: Outstanding
The Investment Test is rated: Outstanding
The Service Test is rated: Outstanding
The major factors that support this rating include:

- An excellent level of lending activity.
- A good geographic distribution of home mortgage loans and small loans to businesses.
- A good borrower distribution of home mortgage loans and small loans to businesses.
- Leadership in CD lending, which had a significantly positive affect on the rating.
- The extensive use of flexible products, which positively affected the rating.
- An excellent level of qualified CD investments, that demonstrated excellent responsiveness to credit and community economic development needs.
- The extensive use of innovative and/or complex investments.
- Retail service delivery systems that are readily accessible to geographies and individuals of different income levels in the bank's AA.
- Leadership in providing CD services that are responsive to AA needs.


## Description of Institution's Operations in the DC MMSA

The DC MMSA is Chase's $27^{\text {th }}$ largest rating area based on its total deposits of $\$ 269.0$ million, representing less than one percent of the bank's total deposits. As of December 31, 2019, the bank operated 30 branches and 149 ATMs within the rating area, representing 0.6 percent of total branches and 0.9 percent of total ATMs. The bank originated and purchased approximately $\$ 4.0$ billion in loans or 0.6 percent of total bank loan originations and purchases during the evaluation period in the MMSA.

The bank initially entered the DC MMSA in September 2018 and further expanded its presence in April 2019. According to FDIC Deposit Market Share Data, as of June 30, 2019, there were 75 banks operating 1,491 branches in the MMSA. Chase ranked $39^{\text {th }}$ with a deposit market share of 0.1 percent. The top three banks and their deposit market share were E*TRADE Bank ( 15.6 percent), Bank of America, N.A. (14.6 percent), and Capital One, N.A. (13.9 percent). Both Bank of America, N.A. and Capital One, N.A. have substantially larger branch networks.

Chase's AA within the DC MMSA consists of geographies within the District of Columbia (DC), Maryland, and Virginia. Refer to appendix A for a complete list of the geographies.

## Description of Full-Scope AA

The following table provides a summary of the demographics that includes housing and business information for the DC MMSA. Table A indicates that approximately 22.0 percent of families in the AA are low-income. The MMSA is a high cost housing area, limiting access to affordable homeownership among LMI borrowers. The median housing value in the MMSA is $\$ 427,189$ while the

NAR 4Q2019 median sales price of a single-family home is $\$ 436,200$. One simplistic method used to determine housing affordability assumes a maximum monthly principal and interest payment of no more than 30 percent of the applicant's income.

Assuming a 30-year mortgage with a 5 percent interest rate, and not accounting for down payment, homeowners insurance, real estate taxes, or any additional monthly expenses, a low-income borrower making $\$ 58,327$ per year (or less than 50 percent of the FFIEC adjusted median family income in the AA) could afford a $\$ 210,405$ mortgage with a payment of $\$ 1,130$ per month; a moderate-income borrower earning \$93,322 per year (or less than 80 percent of the FFIEC adjusted median family income in the AA) could afford a $\$ 336,644$ mortgage with a payment of $\$ 1,807$ per month.

| Table A - Demographic Information of the Assessment Area |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area: DC MMSA 2017-2019 |  |  |  |  |  |  |

Source: 2015 ACS and 2019 D\&B Data
Due to rounding, totals may not equal $100.0 \%$
(*) The NA category consists of geographies that have not been assigned an income classification. $_{\text {a }}$

## Economic Data

According to the November 2019 Moody's Analytics report, the area economy is strong. The area has a high per capita income and educated workforce. The area is a major center for computer system design and tech-related professional services as well as a popular tourist destination. The labor market is strong and the pace of employment growth in the area is ahead of the U.S. average. Amazon has designated the area for its second headquarters location and the first employees have started work. Federal payrolls have stabilized in the past year after two years of declines. The unemployment rate has dropped to a
cycle low of 3.0 percent even as the labor force has continued to grow. Major employment industries include professional and business services, government, and education and health services. Collectively, the federal, state, and local government is a significant employer in the area. Other major employers include Naval Support Activity Washington, Joint Base Andrews-Naval Facility, MedStar Health, Marriott International, Inc. and Inova Health System. The area does have above average living costs and high business costs. In terms of housing, lean inventories and improvement in sales will continue to put upward pressure on house prices at the expense of affordability.

## Community Contacts

A review was conducted of six community contacts completed during the examination period. The contacts were conducted with organizations located throughout the rating area. The mission of the organizations contacted focused on several areas including affordable housing, economic development, community services, as well as asset development and financial stability. Contacts noted concerns regarding housing affordability and access to affordable housing. Low-income individuals and households are being pushed out of communities as more affluent individuals move in causing home prices to increase dramatically. Despite the growing economic prosperity in the area most low-income residents are being left behind. The contacts identified the following needs in the area:

- Affordable housing development and preservation
- Financing for small businesses
- Workforce development and job training programs to help individuals obtain living wage jobs
- Employment readiness for youth and youth programming
- Support for non-English speakers
- Asset development for low- and moderate-income households
- Access to healthy foods and health services
- Access to traditional financial services


## Scope of Evaluation in DC MMSA

The DC MMSA received a full-scope review. Since the bank did not enter the DC MMSA until September 2018, there was less than three months of performance to evaluate for 2018, which would not provide meaningful conclusions. Therefore, the evaluation for the DC MMSA includes only 2019 performance.

## CONCLUSIONS WITH RESPECT TO PERFORMANCE TESTS IN DC MMSA

## LENDING TEST

The bank's performance under the Lending Test in the DC MMSA is rated Outstanding.
Based on a full-scope review, the bank's performance in the DC MMSA is excellent. Aggregate lending data for 2019 was not available at the time this evaluation was completed and was not used in the lending test analysis for the DC MMSA.

## Lending Activity

Lending levels reflect excellent responsiveness to credit needs in the AA.

Examiners considered the number and dollar amount of home mortgage, small business, and small farm loans originated or purchased relative to Chase's capacity based on deposits, competition, and market presence. Lending activity for home mortgage and small loans to businesses received the most weight in reaching conclusions. Respectively, home mortgage lending and small loans to businesses account for 17.0 percent and 82.6 percent of the loan volume in the MMSA by number and 83.9 and 9.2 percent of loan volume by dollar. Small farm lending is not a strategic focus of the bank and received minimal weight in reaching conclusions. Farm loans represented 0.3 percent of the loan volume in the MMSA by number and 0.03 percent loan volume by dollar.

| Number of Loans |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home <br> Mortgage | Small <br> Business | Small Farm | Community <br> Development | Total |  |
| DC MMSA | 6,016 | 29,268 | 130 | 30 | 35,444 |  |


| Dollar Volume of Loans (\$000's) |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home <br> Mortgage | Small <br> Business | Small Farm | Community <br> Development | Total |
| DC MMSA | $3,343,722$ | 366,352 | 1,252 | 274,392 | $3,985,718$ |

As of June 30, 2019, Chase ranked 39th in deposits out of 75 institutions with 0.1 percent market share.
In overall home mortgage lending, Chase's rank and market share exceeded its deposit market share competing with 744 mortgage lenders. The top three lenders in the market are Wells Fargo Bank, N.A. (8.4 percent), Navy Federal Credit Union (4.0 percent), and Branch Banking and Trust Co. (3.20 percent).

In small loans to businesses, Chase ranked second out of 190 lenders with a 12.7 percent market share. Other major lenders are American Express National Bank (24.4 percent), Bank of America, N.A. (12.3 percent), and Branch Banking and Trust Co. (7.4 percent).

In small loans to farms, Chase ranked first out of 27 lenders with a 26.0 percent market share. The other major lenders in the market are John Deere Financial, F.S.B (20.5 percent), Wells Fargo Bank, N.A. (13.3 percent), and Bank of America, N.A. (11.6 percent).

## Distribution of Loans by Income Level of the Geography

The bank exhibits a good geographic distribution of loans in its AA.

## Home Mortgage Loans

Refer to Table O in the Multi State Washington section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of home mortgage loan originations and purchases for this evaluation is good. The following information was taken into consideration when determining this rating.

- The limited proportion of housing units in low-income geographies particularly OOUs (3.9 percent) as well as high competition constrained lending opportunities; therefore, performance in moderateincome geographies was given slightly more consideration due to the higher percentage of OOUs in those geographies.
- During 2019, the proportion of loans in low-income geographies exceeded the percentage of owneroccupied units, while in moderate-income areas the proportion of loans was below the percentage of owner-occupied units.


## Small Loans to Businesses

Refer to Table Q in the Multi State Washington section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to businesses.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to businesses for this evaluation is adequate. The following information was taken into consideration when determining this rating.

- The smaller proportion of businesses in low-income geographies (4.7 percent) and competition between 190 lenders constrained lending opportunities to existing businesses. Therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of businesses in those geographies.
- During 2019, the proportion of small loans to businesses in low- and moderate-income geographies was below the proportion of businesses.


## Small Loans to Farms

Refer to Table S in the Multi State Washington section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to farms.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to farms is poor. The following information was taken into consideration when determining this rating.

- The limited number of farms in low-income geographies (3.9 percent) constrained lending opportunities; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher number of farms in those geographies.
- The fact that farm lending is not a focus of the bank was also considered.
- During 2019, the bank made no loans to small farms in low-income geographies. The proportion of loans to small farms in moderate-income geographies was well below the proportion of farms in those geographies.


## Lending Gap Analysis

A review of home mortgage loans, small loans to business, and small loans to farms including summary reports and AA maps did not identify any unexplained conspicuous lending gaps in the bank's activities.

## Distribution of Loans by Income Level of the Borrower

The bank exhibits a good distribution of loans among individuals of different income levels and business of different sizes.

## Home Mortgage Loans

Refer to Table P in the Multi State Washington section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall borrower distribution of home mortgage loan originations and purchases for this evaluation is good. The following information was taken into consideration when determining this rating.

- Examiners considered the competition and the economic constraints discussed above under the Description of this Full-Scope AA, particularly, the cost of housing and level of poverty in portions of the MMSA.
- During 2019, the proportion of loans to low-income borrowers was well below the percentage of low-income families, while the proportion of loans to moderate-income borrowers exceeded the proportion of moderate-income families.


## Small Loans to Businesses

Refer to Table R in the Multi State Washington section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's originations and purchases of small loans to businesses.

Based on the data in the tables and the following factors, the distribution of the bank's originations and purchases of small loans to businesses by revenue category is good. The following information was taken into consideration when determining this rating.

- Examiners considered competition and the economic constraints discussed above under the Description of this Full-Scope AA.
- During 2019, the proportion of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of small businesses located in the AA.


## Small Loans to Farms

Refer to Table T in the Multi State Washington section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to farms.

Based on the data in the table and the following considerations, the distribution of the bank's originations and purchases of small loans to farms by revenue category is good. The following information was taken into consideration when determining this rating.

- The fact that farm lending is not a focus of the bank was considered.
- During 2019, the bank's percentage of loans to farms with revenues of $\$ 1$ million or less was near to the percentage of farms.


## Community Development Lending

The bank is a leader in making CD loans.
The Lending Activity Tables, shown above, set forth the information and data used to evaluate the bank's level of CD lending. These tables include all CD loans, including multifamily loans that also qualify as CD loans.

There were 30 CD loans made for a total of $\$ 274.4$ million. This represents 792 percent of the tier 1 capital allocated to the AA. The funding focused on the area's revitalization, stabilization, and affordable housing, all of which are community needs.

Examples of CD loans in the AA include:

- In February 2019, Chase originated $\$ 21.1$ million loan to partially finance and redevelop an apartment complex in the Washington, DC. area. The complex has 13 buildings and 272 units for low- and moderate-income households.
- In October 2018, Chase funded a $\$ 115$ million loan for a mixed-use project in the low-income Brookland neighborhood of Washington, DC. The project meets the mission of the Brookland/CUA Metro station Small Area Plan which aims for growth, development, and revitalization of underutilized areas within a quarter mile (or 10 -minute walk) from the Brookland/CUA Metro Station. It consists of 562 apartment units, 46,000 square feet of retail space, and 27 artist studios. Brookland is known for high crime, 30 percent of residents living below the poverty line, and 51 percent of children living in poverty. This loan helped to revitalize and stabilize four out of the seven surrounding census tracts which are also low- and moderate-income areas. The project helped encourage additional investments to this underserved community so that the efforts in this and the surrounding neighborhoods continue.


## Product Innovation and Flexibility

The bank makes extensive use of innovative and/or flexible lending practices in order to serve AA credit needs. As shown in the table below, the bank originated 1,614 loans totaling nearly $\$ 480$ million in the AA. Refer to the comments in the Product Innovation and Flexibility section of this performance evaluation for additional details regarding the programs.

| Loan Type | Number of <br> Loans | Dollar Amount <br> $\mathbf{( \$ 0 0 0 ' s )}$ |
| :--- | :---: | :---: |
| DreaMaker | 760 | 247,357 |
| FHA | 302 | 79,237 |
| HARP | 306 | 52,916 |
| VA | 220 | 95,517 |
| SBA | 5 | 560 |
| USDA | 21 | 4,387 |

## INVESTMENT TEST

The bank's performance under the Investment Test in DC MMSA is Outstanding.
Based on a full-scope review, the bank's performance in the DC MMSA is excellent.
The bank has an excellent level of qualified CD investments and grants, often in a leadership position, particularly those that are not routinely provided by private investors. Investments represent 97.7 percent of tier 1 capital allocated to the AA. Bank operations commenced in the AA December 2018.

The bank exhibits excellent responsiveness to credit and community economic development needs, including affordable housing, community services, and economic and workforce development. Qualified investment allocations were 85.0 percent affordable housing, 5.5 percent community services, 5.0 percent economic and workforce development, and 4.5 percent revitalization/stabilization. Affordable housing investments created or retained 227 low- and moderate-income housing units for individuals and families. Twenty-nine grants totaling $\$ 5.7$ million were provided to a variety of organizations primarily supporting community services, economic development, and revitalization/stabilization.

The bank makes extensive use of innovative and/or complex investments to support CD initiatives. Five complex investments totaled $\$ 28.8$ million and included one Direct Investor LIHTC transaction and one innovative investment structure. The LIHTC transaction requires bank expertise and capacity in selecting projects and partners, negotiating agreements, overseeing project development and operations, and ensuring compliance. An $\$ 1.5$ million grant was a catalyst for future growth and other improvements under a local government plan.

## Number and Amount of Qualified Investments

| Qualified Investments - Washington-Baltimore-Arlington, DC-MD-VA-WV-PA CSA |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area (AA) | Prior Period* |  | Current Period |  | Total |  |  |  | UnfundedCommitments** |  |
|  | \# | \$(000's) | \# | \$(000's) | \# | \% of <br> Total \# | \$(000's) | \% of <br> Total \$ | \# | \$(000's) |
| DC MMSA | 0 | 0 | 31 | 33,838 | 31 | 22.5 | 33,838 | 17.0 | 0 | 0 |
| Other: |  |  |  |  |  |  |  |  |  |  |
| Statewide Investments with Purpose, Mandate, or Function ( $\mathrm{P} / \mathrm{M} / \mathrm{F}$ ) to Serve AAs | 31 | 25,933 | 37 | 128,580 | 68 | 49.3 | 154,513 | 77.6 | 0 | 0 |
| Statewide Investments with No Purpose, Mandate, or Function (P/M/F) to Serve AAs | 26 | 9,531 | 13 | 1,255 | 39 | 28.2 | 10,786 | 5.4 | 0 | 0 |

Examples of CD Investments in AA include:

- In June 2019, the bank provided a $\$ 1.0$ million grant (first installment of $\$ 3.3$ million) to a CDFI based in Arlington VA for its program in the Washington DC Metro Region. Funding will be used to implement a program targeting diverse low- and moderate-income entrepreneurs with revenues of
$\$ 1$ million or less in Washington DC area and the nearby suburbs in Maryland and Virginia. The program is a partnership between three CDFIs. The three-year program will provide loan capital to entrepreneurs with a focus on the footprint of participating CDFIs.
- In April 2019, the bank invested $\$ 10.0$ million in 501(c)(3) bonds used to finance a portion of cost acquisition and improvement of mixed-income affordable workforce housing rental projects by nonprofit entities in the Washington DC region. The subject property is a qualified low-income building. Fifty-one percent of capital commitments were allocated for affordable housing projects where at least 51.0 percent of residential units are reserved for households earning less than 80 percent AMI. Households meeting this requirement will pay rents that are no more than 30 percent of 80 percent AMI. Local non-profit developers in the DC region viewed the investment structure as an innovative solution to a housing affordability requirement that is typically only extended for 15 years.
- In December 2018, the bank provided an $\$ 18.1$ million Low Income Housing Tax Credit (LIHTC) investment for a new construction family property located in Triangle, VA. The project consists of 227 LIHTC units restricted at 60.0 percent AMI. A nonprofit community development corporation that serves the needs of low-income individuals and families is the developer and will also provide resident services to the tenants.


## Statewide Investments in Maryland

The bank has 107 current and prior period investments totaling $\$ 165.2$ million with and without a $\mathrm{P} / \mathrm{M} / \mathrm{F}$ to serve AAs in the state of Maryland. These CD investments primarily support affordable housing and community services, with revitalization/stabilization and economic development to a lesser extent. Qualified investments in the broader statewide or regional area represent 83.0 percent of total qualified investments in and surrounding the Washington-Baltimore-Arlington broader regional area. The bank was investing in this broader area before its official CRA entry into the market with the opening of branch locations. These investments support the bank's overall excellent performance in the DC MMSA.

## SERVICE TEST

The bank's performance under the Service Test in the DC MMSA is rated Outstanding.
Based on a full-scope review, the bank's performance in the DC- MMSA is excellent.

## Retail Banking Services

Service delivery systems are readily accessible to geographies and individuals of different income levels in the bank's AA.

Examiners evaluated the data as outlined in the Scope section at the front of this document including bank-provided data on usage of branches adjacent to low-and moderate-income geographies by individuals residing in those geographies and on increases in the usage of alternative delivery systems.

Based on the data in the table below and performance context, the branch distribution is excellent. In low- and moderate-income geographies, the distribution respectively exceeds and is near to the percentage of the population. The bank had four branches in the low-income geographies and five
branches in moderate-income geographies. The distribution was augmented by one MUI tract branch that served moderate-income tracts. Examiners reviewed data on the accounts held and transactions conducted at the MUI branch and confirmed it serves the adjacent moderate-income population.

| Distribution of Branch Delivery System |  |  |  |  |  |  |  | As of December 31, 2019 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Deposits Area Deposits in AA | \# of <br> BANK <br> Branches | Branches |  |  |  |  | Population |  |  |  |
|  |  |  | \% of Rated | Location of Branches by Income of Geographies (\%) |  |  |  | \% of Population within Each Geography |  |  |  |
|  |  |  | Branches in AA | Low | Mod | Mid | Upp | Low | Mod | Mid | Upp |
| $\begin{aligned} & , \mathrm{DC} \\ & \mathrm{MMSA} \end{aligned}$ | 100 | 30 | 100 | 13.3 | 16.7 | 16.7 | 53.3 | 10.9 | 20.9 | 33.9 | 33.8 |

* May not add up to 100 percent due to geographies with unknown tract income level and rounding

Alternative delivery systems had a neutral effect on the delivery of banking services to geographies and individuals of all income levels. The OCC considered the availability and use of alternative delivery systems over the evaluation period. This included review of the 149 deposit-taking ATMs, online banking, mobile banking, and telephone banking to determine the effectiveness of these systems to make retail banking services available to individuals in low- and moderate-income geographies. The bank had 13 (8.7 percent) deposit-taking ATMs in low-income geographies and 28 ( 18.8 percent) ATMs in moderate-income geographies. This is a new rating area and bank-provided data demonstrates customer adoption of online, mobile, and telephone banking delivery systems.

| Distribution of Branch Openings/Closings |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | \# of Branch Openings | \# of Branch Closings | Net change in Location of Branches (+ or -) |  |  |  |
|  |  |  | Low | Mod | Mid | Upp |
| DC MMSA | 30 | 0 | +4 | +5 | +5 | +16 |

The bank's opening of branches improved the accessibility of its delivery systems, particularly in lowand moderate-income geographies and/or to low- and moderate-income individuals. The bank entered this AA in 2019, closing no branches and opening 30 branches, four of which are in low-income geographies and five are in moderate-income geographies.

Services, including where appropriate, business hours, do not vary in a way that inconveniences the various portions of the AA, particularly low- and moderate-income geographies and/or individuals. Generally, branches are open Monday through Friday from 9:00 am to 6:00 pm and Saturday from 9:00 am to $1: 00 \mathrm{pm}$. All retail banking services are available at all branches within the low- and moderateincome geographies.

## Community Development Services

The bank was a leader in providing CD services that are responsive to AA needs. The level and responsiveness of CD services positively affected the service test performance.

Bank records show that employees provided technical assistance and/or job-specific expertise for 573 CD service activities to 35 organizations for a total of 3,580 qualified hours of service within the AA, including 178 hours of board service over 16 months. Much of the bank's assistance was to organizations that provide community services to low- and moderate-income individuals and families. The activities were responsive to AA needs, particularly affordable housing. The following are examples of CD services provided in the AA:

- A bank employee provided 40 hours of board service to a community development organization that provides private financing for affordable housing and neighborhood revitalization.
- Five bank employees provided 230 hours of technical expertise to a non-profit organization that provides low-cost, short-term financing to non-profits, for-profits, and government entities engaged in developing affordable housing for low-income individuals.
- Four bank employees provided 600 hours of technical assistance to a nonprofit community development fund that provides capital financing to low- and moderate-income entrepreneurs.


# Multistate Metropolitan Statistical Area Rating 

## Portland-Vancouver-Salem, Oregon-Washington CSA (Portland CSA)

CRA rating for the Portland CSA ${ }^{4}$ : Outstanding<br>The Lending Test is rated: Outstanding<br>The Investment Test is rated: Outstanding<br>The Service Test is rated: Outstanding

The major factors that support this rating include:

- An excellent level of lending activity.
- An excellent geographic distribution of home mortgage loans and small loans to businesses.
- A good borrower distribution of home mortgage loans and small loans to businesses.
- Leadership in CD lending, which significantly positively affected the rating.
- The extensive use of flexible products, which positively affected the rating.
- An excellent level of qualified CD investments that displayed excellent responsiveness to community economic development needs.
- Retail service delivery systems that are readily accessible to geographies and individuals of different income levels in the bank's AA.
- Leadership in providing CD services that are responsive to AA needs.


## Description of Institution's Operations in Portland CSA

The Portland CSA is Chase's $15^{\text {th }}$ largest rating area based on its total deposits of $\$ 7.0$ billion, representing 0.5 percent of the bank's total deposits. As of December 31, 2019, the bank operated 92 branches and 160 ATMs in the rating area, representing 1.8 percent of total branches and 0.9 percent of total ATMs. The bank originated and purchased approximately $\$ 10.6$ billion in loans or 1.5 percent of total bank loan originations and purchases during the evaluation period in the CSA.

According to FDIC Deposit Market Share data as of June 30, 2019, there were 36 banks s operating 635 branches in the rating area. Chase ranked fourth with deposit market share of 11.4 percent. The top three banks and their deposit market share were U.S. Bank, N.A. (21 percent), Bank of America, N.A. (17.6 percent), and Wells Fargo Bank, N.A. with 16.3 percent.

Chase's AA consists of geographies in the states of Oregon and Washington. Refer to appendix A for a complete listing of the counties included in the AA.

## Description of Full-Scope AA

The following table provides a summary of the demographics that includes housing and business information for the Portland CSA. Table A indicates that approximately 21.4 percent of families in the AA are low-income. The Portland CSA's cost of housing generally makes homeownership difficult for many LMI borrowers. The median housing value across the Portland CSA ranges from three to five

[^101]times the median income, three times the moderate-income, and approximately four times the lowincome, indicating OOUs are not affordable to some moderate- and most low-income borrowers. One simplistic method used to determine housing affordability assumes a maximum monthly principal and interest payment of no more than 36 percent of the applicant's income.

In the Portland CSA, assuming a 30-year mortgage with a 5 percent interest rate, 3.0 percent down payment, and not accounting for homeowners insurance, real estate taxes, or any additional monthly expenses, a low-income borrower making $\$ 32,074$ per year (or less than 50 percent of the FFIEC adjusted median family income in the MMSA) could afford a $\$ 152,897$ mortgage with a payment of $\$ 962$ per month; a moderate-income borrower earning $\$ 51,318$ per year (or less than 80 percent of the FFIEC adjusted median family income in the AA) could afford a $\$ 244,647$ mortgage with a payment of $\$ 1,540$ per month.

| Table A - Demographic Information of the Assessment Area Assessment Area: Portland CSA 2017-2019 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Demographic Characteristics | \# | $\begin{aligned} & \text { Low } \\ & \text { \% of } \# \end{aligned}$ | Moderate \% of \# | Middle \% of \# | $\begin{aligned} & \text { Upper } \\ & \text { \% of \# } \end{aligned}$ | $\begin{gathered} \text { NA* } \\ \text { \% of \# } \end{gathered}$ |
| Geographies (Census Tracts) | 619 | 3.2 | 23.7 | 45.6 | 26.8 | 0.6 |
| Population by Geography | 3,017,407 | 2.7 | 24.7 | 45.9 | 26.5 | 0.2 |
| Housing Units by Geography | 1,217,933 | 2.6 | 24.2 | 45.7 | 27.2 | 0.3 |
| Owner-Occupied Units by Geography | 696,189 | 1.2 | 18.3 | 49.0 | 31.5 | 0.0 |
| Occupied Rental Units by Geography | 447,236 | 4.8 | 33.1 | 40.3 | 21.2 | 0.6 |
| Vacant Units by Geography | 74,508 | 3.1 | 26.5 | 46.7 | 23.3 | 0.4 |
| Businesses by Geography | 296,166 | 3.1 | 21.9 | 41.0 | 32.1 | 1.9 |
| Farms by Geography | 10,709 | 1.9 | 14.0 | 55.2 | 28.4 | 0.4 |
| Family Distribution by Income Level | 736,255 | 21.4 | 17.5 | 20.4 | 40.6 | 0.0 |
| Household Distribution by Income Level | 1,143,425 | 24.0 | 16.2 | 18.1 | 41.6 | 0.0 |
| Median Family Income MSA 10540 Albany-Lebanon, OR MSA |  | \$54,713 | Median Housing Value |  |  | \$264,137 |
| Median Family Income MSA 18700 Corvallis, OR MSA |  | \$76,967 | Median Gross Rent |  |  | \$973 |
| Median Family Income MSA 31020 Longview, WA MSA |  | \$57,938 | Families Below Poverty Level |  |  | 10.1\% |
| Median Family Income MSA 38900 Portland-VancouverHillsboro, OR-WA MSA |  | \$73,089 |  |  |  |  |
| Median Family Income MSA 41420 Salem, OR MSA |  | \$58,033 |  |  |  |  |
| Source: 2015 ACS and 2019 D\&B Data <br> Due to rounding, totals may not equal 100.0\% <br> (*) The NA category consists of geographies that have not been assigned an income classification. |  |  |  |  |  |  |

## Economic Data

According to Moody's Analytics November 2019 report, the economy in the Portland region is improving. Job growth has picked up and the jobless rate is near a three-decade low which is pressuring employers to raise wages. The area has a diversified economy; highly educated and skilled workforce; and above average incomes. Employment in professional, scientific, and technical services is growing, driven by an active start-up culture and expansion at existing firms. Major employment industries include business and professional services; education and health services; and government. Major employers in the area include Intel, Providence Health Systems, Oregon Health and Science University, Legacy Health System, and Nike. Higher pay and lower mortgage rates are bolstering residential real estate. Home sales are at a one-year high and housing starts have picked up recently, with gains in single- and multifamily building.

## Community Contacts

Four community contacts and community needs assessments completed during the examination period were reviewed. The organizations contacted focused on areas including affordable housing, small business assistance, community services, and community and non-profit support. Contacts noted that there is insufficient affordable housing in the region due in part to a construction industry that does not have the capacity to meet the housing demand. Contacts also noted that many employers have difficulty finding qualified workers with the needed education and experience to fill vacant job positions. Workforce development programs are needed to assist low-income individuals in developing the skills necessary to access higher paying jobs. Other identified needs in the area include:

- Down payment assistance programs for first time homebuyers
- Small business loans for start-ups and recently established businesses
- Increase the supply of affordable housing


## Scope of Evaluation in Portland-Vancouver-Salem, OR-WA CSA

The Portland CSA received a full-scope review.

## CONCLUSIONS WITH RESPECT TO PERFORMANCE TESTS IN PORTLAND CSA

## LENDING TEST

The bank's performance under the Lending Test in the Portland CSA is rated Outstanding.
Based on a full-scope review, the bank's performance in the Portland CSA is excellent.

## Lending Activity

Lending levels reflect excellent responsiveness to credit needs in the AA.
Examiners considered the number and dollar amount of home mortgage, small business, and small farm loans originated or purchased relative to Chase's capacity based on deposits, competition, and market presence. Lending activity for home mortgage and small loans to businesses received the most weight in reaching conclusions. Respectively, home mortgage lending and small loans to businesses account for 32.9 percent and 65.8 percent of the loan volume in the MMSA by number and 86.4 percent and 8.5
percent of loan volume by dollar. Small farm lending is not a strategic focus of the bank and received minimal weight in reaching conclusions. Farm loans represented 1.0 percent of the loan volume in the MMSA by number and 0.09 percent loan volume by dollar.

| Number of Loans |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home Mortgage | Small <br> Business | Small Farm | Community <br> Development | Total |  |
| Portland CSA | 25,878 | 51,757 | 841 | 178 | 78,654 |  |


| Dollar Volume of Loans (\$000's) |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home <br> Mortgage | Small <br> Business | Small Farm | Community <br> Development | Total |  |
| Portland CSA | $9,145,893$ | 898,337 | 9,749 | 527,275 | $10,581,254$ |  |

As of June 30, 2019, Chase ranked fourth in deposits out of 36 institutions with 11.4 percent market share.

In overall home mortgage lending, Chase ranked fourth with 3.8 percent market share. The top three lenders in the market are Wells Fargo Bank, N.A. (6.8 percent), U.S. Bank, N.A. (5.1 percent), OnPoint Service Group, LLC (4.1 percent), and Umpqua Bank (3.7 percent).

In small loans to businesses, Chase ranked first out of 156 lenders with a 16.8 percent market share. Other major lenders are U.S. Bank, N.A. (16.1 percent), American Express National Bank (12.3 percent), and Bank of America, N.A. (10.9 percent).

In small loans to farms, Chase ranked second out of 29 lenders with a 17.5 percent market share. The other major lenders in the market are U.S. Bank, N.A. (24.3 percent), Wells Fargo Bank, N.A. (14.9 percent), Columbia State Bank (11.6 percent), and John Deere Financial, F.S.B (10.3 percent).

## Distribution of Loans by Income Level of the Geography

The bank exhibits an excellent geographic distribution of loans in its AA.

## Home Mortgage Loans

Refer to Table O in the Multi State Portland section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of home mortgage loan originations and purchases for this evaluation is excellent. The following information was taken into consideration when determining this rating.

- Between 2017 and 2019, the proportion of loans in LMI areas exceeded the percentage of owneroccupied units and was near to the aggregate distribution of loans.
- During 2014 through 2016, performance in low-income geographies exceeded the percentage of owner-occupied units and the aggregate distribution of loans, while performance in moderateincome geographies was near to the percentage of owner-occupied units and the aggregate distribution of loans.


## Small Loans to Businesses

Refer to Table Q in the Multi State Portland section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to businesses.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to businesses for this evaluation is good. The following information was taken into consideration when determining this rating.

- The smaller proportion of businesses in low-income geographies (3.1 percent) and competition between 156 lenders constrained lending opportunities to existing businesses. Therefore, performance in moderate-income geographies and against the aggregate distribution of all lenders was given slightly more consideration.
- Between 2017 and 2019, the proportion of small loans to businesses in low-income geographies was below the proportion of businesses and the aggregate distribution, while the proportion of small loans to businesses in moderate-income geographies was near to the proportion of businesses and the aggregate distribution.
- During 2014 to 2016, the proportion of small loans to businesses in low-income geographies was below the proportion of businesses and exceeded the aggregate distribution, while the proportion of small loans to businesses in moderate-income geographies was near to the proportion of businesses and met the aggregate distribution.


## Small Loans to Farms

Refer to Table S in the Multi State Portland section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to farms.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to farms is good. The following information was taken into consideration when determining this rating.

- The limited number of farms in low-income geographies (2.6 percent) constrained lending opportunities and that farm lending is not a focus of the bank was considered.
- Between 2017 and 2019, the proportion of loans to small farms in low-income geographies met the proportion of farms in those geographies and significantly exceeded the aggregate distribution of all lenders. The proportion of loans in moderate-income geographies was well below the proportion of farms in those geographies and met the aggregate distribution of all lenders.
- During the 2014 to 2016 period, the bank made no loans to small farms in low-income geographies. The proportion of loans to small farms in moderate-income geographies was below the proportion of farms in those geographies and exceeded the aggregate distribution of all lenders.


## Lending Gap Analysis

A review of home mortgage loans, small loans to business, and small loans to farms including summary reports and AA maps did not identify any unexplained conspicuous lending gaps in the bank's activities.

## Distribution of Loans by Income Level of the Borrower

The bank exhibits a good distribution of loans among individuals of different income levels and business of different sizes.

## Home Mortgage Loans

Refer to Table P in the Multi State Portland section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall borrower distribution of home mortgage loan originations and purchases for this evaluation is good. The following information was taken into consideration when determining this rating.

- Examiners considered the competition and the economic constraints discussed above under the Description of this Full-Scope AA, particularly, the cost of housing and level of poverty in portions of the MMSA. Higher consideration was given to performance against the aggregate of all lenders.
- Between 2017 and 2019, the proportion of loans to low-income borrowers was well below the percentage of low-income families and met the aggregate distribution of lenders. The proportion of loans to moderate-income borrowers exceeded the proportion of moderate-income families and was near to the aggregate distribution of loans by all lenders.
- During 2014 to 2016, the proportion of loans to low-income borrowers was well below the percentage of low-income families and met the aggregate distribution of lenders. The proportion of loans to moderate-income borrowers exceeded the proportion of moderate-income families and was near to the aggregate distribution.


## Small Loans to Businesses

Refer to Table R in the Multi State Portland section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's originations and purchases of small loans to businesses.

Based on the data in the tables and the following factors, the distribution of the bank's originations and purchases of small loans to businesses by revenue category is excellent. The following information was taken into consideration when determining this rating.

- Slightly greater significance was placed on performance against the aggregate distribution as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of this Full-Scope AA.
- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and significantly exceeded the aggregate distribution.
- During 2014 to 2016, the percentage of loans to businesses with revenues of $\$ 1$ million or less was near to the percentage of businesses and significantly exceeded the aggregate distribution.


## Small Loans to Farms

Refer to Table T in the Multi State Portland section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to farms.

Based on the data in the table and the following considerations, the distribution of the bank's originations and purchases of small loans to farms by revenue category is good. The following information was taken into consideration when determining this rating.

- The fact that farm lending is not a focus of the bank was considered.
- Between 2017 and 2019, the bank's percentage of loans to farms with revenues of $\$ 1$ million or less was below the percentage of farms and significantly exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 and 2019. The bank's percentage of loans to farms with revenues of $\$ 1$ million or less was below the percentage of farms and significantly exceeded the aggregate distribution.


## Community Development Lending

The bank is a leader in CD lending which had a significantly positive affect on the overall Lending Test rating.

The Lending Activity Tables, shown above, set forth the information and data used to evaluate the bank's level of CD lending. These tables include all CD loans, including multifamily loans that also qualify as CD loans.

There were 178 CD loans made for a total of $\$ 527.3$ million. This represents 58.3 percent of the tier 1 capital allocated to the AA. The majority (or 98.6 percent) of CD loans were for affordable housing purposes, which is a critical need in this AA.

Examples of CD loans in the AA include:

- In May 2014, Chase originated a $\$ 7.4$ million loan to develop a 124-unit mixed income housing project in Salem, OR. The housing project is divided into two parcels. The bank's financing was used to develop 108 housing units in one of the parcels, which includes 62 one-bedroom units restricted to seniors aged 55 and older and the remaining units restricted to individuals and families with incomes up to 50 percent of the AMI.
- In June 2015, Chase provided a $\$ 29.4$ million loan to acquire and renovate an existing 301-unit apartment building in the Portland area. Ninety-five percent of the units were for low- and moderate-income seniors with incomes that are 60.0 percent or less of the AMI. The loan helped to preserve affordable housing units for seniors and the building has an on-staff service coordinator to assist residents in networking with community-based services.
- In March 2019, Chase provided a $\$ 22.4$ million construction loan for new affordable housing units in Portland, OR and Hermiston, OR. A total of 207 affordable units will be created for families with incomes of 60 percent or less of the AMI. The property managers will provide tenants with housingrelated services (eviction prevention, lease compliance, issue resolution) and other community services (learning and recreation).


## Product Innovation and Flexibility

The bank makes extensive use of innovative and/or flexible lending practices in order to serve AA credit needs. As shown in the table below, the bank originated 4,679 loans totaling nearly $\$ 964.6$ million in the AA. Refer to the comments in the Product Innovation and Flexibility section of this performance evaluation for additional details regarding the programs.

| Loan Type | Number of <br> Loans | Dollar Amount <br> $\mathbf{( \$ 0 0 0 ' s )}$ |
| :--- | :---: | :---: |
| DreaMaker | 663 | 178,523 |
| FHA | 762 | 156,301 |
| HARP | 1,124 | 168,801 |
| VA | 534 | 146,962 |
| SBA | 176 | 35,143 |
| USDA | 1,420 | 278,826 |

## INVESTMENT TEST

The bank's performance under the Investment Test in the Portland CSA is rated Outstanding.
Based on a full-scope review, the bank's performance in the Portland CSA is excellent.
The bank has an excellent level of qualified CD investments and grants, but rarely in a leadership position, particularly those that are not routinely provided by private investors. The current and prior period qualified investments represent 13.9 percent of tier 1 capital allocated to the AA. A significant majority, or 79.5 percent, were current period investments. Leadership was displayed with two current period investments.

The bank exhibits excellent responsiveness to credit and community economic development needs. All current and prior period investments are considered responsive to credit and community economic development needs such as affordable housing, community service, economic development, and revitalizing/stabilization efforts. Ninety-eight percent of the dollar amount of current period CD investments support affordable housing, which is an identified need. A total of 4,437 housing units for low- and moderate-income individuals were created or retained. Additionally, the bank made 41 grants totaling $\$ 2.1$ million, of which $\$ 1.7$ million or 79.7 percent supported community service. One and two grants supported revitalization/stabilization and economic development, respectively. All prior period CD investments are LIHTC-related investments that support affordable housing.

The bank occasionally uses innovative and/or complex investments to support CD initiatives. Of 115 total qualified investments, 26.3 percent of the total dollar amount were complex. Six current period investments are considered complex as they are mainly related to Direct Investment LIHTC transactions and NMTC financings. Additionally, five prior period investments are considered complex as they are related to Direct Investment LIHTC transactions. Three CD investments or 1.7 percent of the total
dollar amount of total qualified investments are considered catalyst investments that will encourage future job growth, area improvements and community revitalization.

| Qualified Investments - Portland-Vancouver-Salem, Oregon-Washington CSA |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Prior Period* |  | Current Period |  | Total |  |  |  | Unfunded Commitments** |  |
|  | \# | \$(000's) | \# | \$(000's) | \# | \% of Total \# | \$(000's) | \% of Total \$ | \# | \$(000's) |
| Portland- CSA | 46 | 25,910 | 69 | 100,225 | 115 | 100.00 | 126,135 | 100.00 | 0 | 0 |

* Prior Period Investments' means investments made in a previous evaluation period that are outstanding as of the examination date.
** Unfunded Commitments' means legally binding investment commitments that are tracked and recorded by the institution's financial reporting system.

Examples of CD Investments in the AA include:

- The bank provided a $\$ 1.6$ million NMTC investment for the renovation of a historic post office building in Portland, now part of the Pacific Northwest College of Art. The additional space was needed to continue growing the overall student enrollment. The major program elements included instructional spaces, classrooms, studies, laboratories, and supporting administrative and faculty spaces. The project created $40-50$ new jobs and approximately 70 construction jobs, 15 percent of which will be filled by low-income persons.
- The bank provided a $\$ 14$ million LIHTC investment which contributed to the creation of 127 affordable housing units.
- The bank invested $\$ 1.1$ million in a LIHTC Fund, of which the bank had a $\$ 45$ million share of the $\$ 271$ million total fund. The fund will create opportunities for low- and moderate-income people through affordable housing in diverse communities. This investment contributed to the creation of 215 affordable housing units.


## SERVICE TEST

The bank's performance under the Service Test in Portland CSA is rated Outstanding.
Based on a full-scope review, including the data in the tables below, the bank's performance in the Portland CSA is excellent.

## Retail Banking Services

Service delivery systems are readily accessible to geographies and individuals of different income levels in the bank's AA.

Examiners evaluated the data as outlined in the Scope section at the front of this document including bank-provided data on usage of branches adjacent to low- and moderate-income geographies by individuals residing in those geographies and on increases in the usage of alternative delivery systems.

Based on the data in the table below and performance context, the branch distribution is excellent. In low- and moderate-income geographies, the distribution exceeds the percentage of the population. The bank had three branches in low-income geographies and 26 branches in moderate-income geographies. The distribution was augmented by three MUI tract branches that serve low-income tracts and 27 MUI
tract branches that serve moderate-income tracts. Examiners reviewed data on the accounts held and transactions conducted at the MUI branches and confirmed they were serving the adjacent low- and moderate-income populations.

| Distribution of Branch Delivery System |  |  |  |  |  |  |  | As of December 31, 2019 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | $\begin{gathered} \text { Deposits } \\ \% \text { of Rated } \\ \text { Area } \\ \text { Deposits in } \\ \text { AA } \end{gathered}$ | Branches |  |  |  |  |  | Population |  |  |  |
|  |  | \# of <br> BANK <br> Branches | \% of <br> Rated <br> Area <br> Branches <br> in AA | Location of Branches by Income of Geographies (\%) |  |  |  | \% of Population within Each Geography |  |  |  |
|  |  |  |  | Low | Mod | Mid | Upp | Low | Mod | Mid | Upp |
| Portland- <br> Vancouver- <br> Salem, OR- <br> WA CSA | 100 | 92 | 100 | 3.3 | 28.3 | 41.3 | 26.1 | 2.7 | 24.7 | 45.9 | 26.5 |

* May not add up to 100 percent due to geographies with unknown tract income level and rounding.

Alternative delivery systems generally enhanced the delivery of banking services to geographies and individuals of all income levels. The OCC considered the availability and use of alternative delivery systems over the evaluation period. This included review of the bank's 160 deposit-taking ATMs, online banking, mobile banking, and telephone banking to determine the effectiveness of these systems to make retail banking services available to individuals in low- and moderate-income geographies. The bank did not increase the deposit-taking ATMs. In low- and moderate-income geographies, the bank had 6 ( 3.68 percent) deposit-taking ATMs in low-income geographies and 42 (26.3 percent) ATMs in moderate-income geographies. Bank-provided data on use of online, mobile, and telephone banking showed nominal change in the adoption of these services by low- and moderate-income individuals from the prior rating period.

| Distribution of Branch Openings/Closings |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | \# of Branch Openings | \# of Branch Closings | Net change in Location of Branches (+ or -) |  |  |  |
|  |  |  | Low | Mod | Mid | Upp |
| Portland- <br> Vancouver- <br> Salem, OR-WA CSA | 0 | 6 | -1 | -1 | -3 | -1 |

The bank's opening and closing of branches has not adversely affected the accessibility of its delivery systems, particularly in low- and moderate-income geographies and/or to low- and moderate-income individuals. The bank did not open any branches in low-and moderate-income geographies and closed one branch each in low- and moderate-income geographies. Branch closures were due to reduced customer usage. Despite the branch closures, branch locations remained accessible to geographies and individuals of different income levels in the bank's AA.

Services, including where appropriate, business hours, do not vary in a way that inconveniences the various portions of its AA, particularly low- and moderate-income geographies and/or individuals. Generally, branches are open Monday through Friday from 9:00 am to 6:00 pm and Saturday from 9:00 am to $1: 00 \mathrm{pm}$. All retail banking services are available within the low- and moderate-income geographies.

## Community Development Services

The bank was a leader in providing CD services that are responsive to AA needs. The CD services positively affected the service test performance.

Bank records show employees provided technical assistance and/or job-specific expertise for 400 CD service activities to six organizations for over 2,100 qualified hours of service, including 611 hours of board service. Much of the bank's assistance was to organizations that provide community services to low- and moderate-income individuals and families that were responsive to the identified need for affordable housing. The following are examples of CD services provided in this AA:

- Two bank employees provided 239 hours of Board service to community organizations that provide affordable housing to low- and moderate-income families.
- A bank employee provided 372 hours of Board service to a community organization that provides homebuyer education, foreclosure prevention programs, training and education in personal finance management, and self-employment.


# Multistate Metropolitan Statistical Area Rating 

## Louisville/Jefferson County-Elizabethtown-Madison, KY-IN CSA (Louisville CSA)

CRA rating for the Louisville CSA ${ }^{5}$ : Satisfactory

The Lending Test is rated: Low Satisfactory
The Investment Test is rated: Outstanding
The Service Test is rated: High Satisfactory
The major factors that support this rating include:

- A good level of lending activity.
- An overall adequate geographic distribution of home mortgage loans and small loans to businesses.
- An overall good borrower distribution of home mortgage loans and small loans to businesses.
- No CD loans were made, which has a negative effect on the Lending Test rating.
- The extensive use of innovative/flexible products, which positively affected the rating.
- An excellent level of qualified CD investments and grants that displayed excellent responsiveness to credit and community economic development needs.
- The use of innovative and/or complex qualified investments.
- Retail service delivery systems are accessible to geographies and individuals of different income levels in the bank's AA.
- A relatively high level of CD services that were responsive to AA needs.


## Description of Institution's Operations in Louisville CSA

The Louisville CSA is Chase's $17^{\text {th }}$ largest rating area based on its total deposits of $\$ 4.5$ billion, representing 0.3 percent of the bank's total deposits. As of December 31, 2019, the bank operated 35 branches and 79 ATMs in the rating area, representing 0.70 percent of the bank's branches and 0.5 percent of the bank's deposit-taking ATMs. The bank originated and purchased approximately $\$ 1.9$ billion in loans or 0.3 percent of total bank loan originations and purchases during the evaluation period in the CSA.

According to FDIC Deposit Market Share Data, as of June 30, 2019, there were 40 banks s operating 374 branches s in the AA. Chase ranked second in deposit market share with 16 percent. Major competitors and their deposit market share are PNC Bank, N.A. (23.7 percent), Fifth Third Bank (10 percent), and Republic Bank and Trust ( 9.8 percent).

Chase has delineated the entire Louisville CSA as its AA. Refer to appendix A for a complete listing of counties that comprise the MMSA.

## Description of Full-Scope AA

The following table provides a summary of the demographics that includes housing and business information for the Louisville CSA. Table A indicates that approximately 21.0 percent of families in the

[^102]AA are low-income. The Louisville CSA's cost of housing generally makes homeownership affordable for most moderate-income and some low-income borrowers. The median housing value in the Louisville CSA ranges from two to three times the median income, over three times the moderateincome, and five times the low-income, indicating a proportion of OOUs are not affordable to some lowincome borrowers. One simplistic method used to determine housing affordability assumes a maximum monthly principal and interest payment of no more than 36 percent of the applicant's income.

In the Louisville CSA, assuming a 30-year mortgage with a 5.0 percent interest rate, 3.0 percent down payment, and not accounting for homeowners insurance, real estate taxes, or any additional monthly expenses, a low-income borrower making $\$ 29,636$ per year (or less than 50 percent of the FFIEC adjusted median family income in the AA) could afford a $\$ 141,228$ mortgage with a payment of $\$ 889$ per month; a moderate-income borrower earning $\$ 47,418$ per year (or less than 80 percent of the FFIEC adjusted median family income in the AA) could afford a $\$ 226,057$ mortgage with a payment of $\$ 1,423$ per month.

| Table A - Demographic Information of the Assessment Area Assessment Area: Louisville CSA 2107-2019 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Demographic Characteristics | \# | $\begin{aligned} & \text { Low } \\ & \text { \% of \# } \end{aligned}$ | Moderate \% of \# | Middle \% of \# | Upper \% of \# | $\begin{gathered} \text { NA* } \\ \% \text { of } \end{gathered}$ |
| Geographies (Census Tracts) | 288 | 12.2 | 20.5 | 37.5 | 28.8 | 1.0 |
| Population by Geography | 1,198,976 | 8.7 | 17.3 | 42.3 | 31.3 | 0.4 |
| Housing Units by Geography | 520,915 | 9.3 | 18.7 | 42.1 | 29.5 | 0.4 |
| Owner-Occupied Units by Geography | 306,543 | 4.2 | 13.9 | 44.7 | 37.2 | 0.1 |
| Occupied Rental Units by Geography | 163,008 | 16.4 | 26.1 | 38.4 | 18.2 | 0.8 |
| Vacant Units by Geography | 51,364 | 17.7 | 23.8 | 38.2 | 19.2 | 1.1 |
| Businesses by Geography | 90,139 | 7.1 | 14.8 | 35.0 | 39.5 | 3.5 |
| Farms by Geography | 2,734 | 2.8 | 9.2 | 48.3 | 39.2 | 0.4 |
| Family Distribution by Income Level | 299,723 | 21.0 | 17.3 | 19.9 | 41.8 | 0.0 |
| Household Distribution by Income Level | 469,551 | 24.6 | 15.7 | 17.6 | 42.1 | 0.0 |
| Median Family Income MSA - 21060 Elizabethtown-Fort Knox, KY MSA |  | \$59,273 | Median Housing Value |  |  | \$159,758 |
| Median Family Income MSA - 31140 Louisville/Jefferson County, KY-IN MSA |  | \$64,965 | Median Gross Rent |  |  | \$753 |
|  |  | Families Below Poverty Level | 10.7\% |

Source: 2015 ACS and 2019 D\&B Data
Due to rounding, totals may not equal $100.0 \%$
(*) The NA category consists of geographies that have not been assigned an income classification.

## Economic Data

According to the December 2019 Moody's Analytics report, the area economy is slow with nominal growth. The area has a below average per capita income and below-average educational attainment. The economy is primarily driven by transportation manufacturing with a high demand for locally produced trucks and SUVs than for cars. The declining labor market was attributed to the downward trend in job growth from mid-2018 to mid-2019. This revealed that the metro area barely added any new jobs with a substantial drop likely for the large manufacturing industry. In 2019, the unemployment
rate changed slightly, partially due to the weak labor market growth. Other economic drivers for the area are Logistics and Insurance. UPS and Amazon have a commanding presence in the area. UPS recently announced plans to invest $\$ 750$ million in the area and create approximately 1,000 positions over the next decade at a new facility. The area logistic positions will provide above average wages resulting in a boost to the economy with anticipated consumer spending. Further the area remains a strategic location for logistic firms given nearly half of the US population lives within reasonable distance. A top insurance employer in the area is Humana. In 2020, job growth is expected to pick up supported by an evolving composition of the population in the area. The graying US population will give health insurance firms an uptick as the number of Americans in their peak healthcare spending age surges. Health insurance will have to adapt quickly to the needs of the patients all while addressing the health reform (i.e., Affordable Care Act) requirements along with assessments or fees. The top three employers in the area are: Fort Knox, Ford Motor Co., and Humana Inc. The area does have relatively low living costs and business costs which makes it a desirable locale. In terms of housing, sixty percent of homes are owned-occupied.

## Community Contacts

A review was conducted of five community contacts completed during the examination period. The contacts were conducted with organizations located throughout the rating area. The mission of the organizations contacted focused on several areas including affordable housing, community development fund, entrepreneurial start-ups, economic and workforce development. Contacts noted concerns with business and home mortgage financing in low- and moderate-income areas as evidenced by large numbers of state and local government redevelopment. Contacts noted that community banks now constitute the bulk of financing investors as decisions at large banks are made out-of-town and makes them less responsive to local needs. Contacts noted that the surrounding counties continue to improve but there is a close watch due to recent layoffs by plant facilities. The housing market is tight because of the availability of land. The redevelopment of areas has caused an increase in prices ultimately pushing out predominantly low- and moderate-income and African American populations. The contacts identified the following needs in the area:

- Affordable housing and affordable rental housing
- Down payment assistance
- Financing for small business development to assist in revitalization strategy
- Financial literacy
- Neighborhood and environmental revitalization programs
- Economic and workforce development
- Financing for start-up businesses
- Financing for economically challenged individuals relative to business and home mortgage lending


## Scope of Evaluation in Louisville CSA

Examiners performed a full-scope review of the Louisville.
CONCLUSIONS WITH RESPECT TO PERFORMANCE TESTS IN THE LOUISVILLE CSA

## LENDING TEST

The bank's performance under the Lending Test in the Louisville CSA is rated Low Satisfactory.
Based on a full-scope review, the bank's performance in the Louisville CSA is adequate.

## Lending Activity

Lending levels reflect good responsiveness to credit needs in the AA.
Examiners considered the number and amount of home mortgage, small business, and small farm loans originated or purchased relative to Chase's capacity based on deposits, competition, and market presence. Lending activity for home mortgage and small loans to businesses received the most weight in reaching conclusions. Respectively, home mortgage lending and small loans to businesses account for 33.5 percent and 65.6 percent of the loan volume in the CSA by number and 78.1 and 21.8 percent of loan volume by dollar. Small farm lending is not a strategic focus of the bank and received minimal weight in reaching conclusions. Farm loans represented 0.9 percent of the loan volume in the CSA by number and 0.1 percent loan volume by dollar.

| Number of Loans |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home <br> Mortgage | Small <br> Business | Small <br> Farm | Community <br> Development | Total |  |
| Louisville CSA | 8,341 | 16,366 | 212 | 0 | 24,919 |  |


| Dollar Volume of Loans (\$000's) |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home <br> Mortgage | Small <br> Business | Small <br> Farm | Community <br> Development | Total |  |
| Louisville CSA | $1,484,280$ | 413,723 | 2,227 | 0 | $1,900,230$ |  |

As of June 30, 2019, Chase ranked second in deposits out of 40 institutions with 15.9 percent market share.

In overall home mortgage lending, Chase ranked sixth out of 457 lenders with 3.6 percent market share. This is a competitive market. The top three lenders in the market are PNC Bank, N.A. (5.4 percent), Republic Bank \& Trust Co. (5.1 percent), and Wells Fargo Bank, N.A. (4.7 percent).

In small loans to businesses, Chase ranked first out of 116 lenders with 17.5 percent market share. Other major lenders are American Express National Bank (16.8 percent), and PNC Bank, N.A. (12.9).

In small loans to farms, Chase ranked second out of 24 lenders with a 23.6 percent market share. The other major lender in the market is John Deere Financial, F.S.B with a 39.15 percent market share. Wells Fargo Bank, N.A. and U.S. Bank, N.A. are the next largest lenders, each holding 6.2 percent market share.

## Distribution of Loans by Income Level of the Geography

The bank exhibits an adequate geographic distribution of loans in its AA.

## Home Mortgage Loans

Refer to Table O in the Multi State Louisville section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of home mortgage loan originations and purchases for this evaluation is adequate. The following information was taken into consideration when determining this rating.

- The limited proportion of housing units in low-income geographies, particularly OOUs (4.2 percent), constrained lending opportunities; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of OOUs in those geographies.
- The high level of competition in the AA (457 home mortgage lenders) was also considered and examiners placed greater significance on performance compared to the aggregate of lenders.
- Between 2017 and 2019, the proportion of loans in low- income areas were well below the percentage of owner-occupied units and below the aggregate distribution of loans. In moderateincome areas the proportion of loans was below the percentage of owner-occupied units and aggregate distribution of loans.
- During 2014 through 2016, performance in low-income geographies was well below the percentage of owner-occupied units and below the aggregate distribution of loans, while performance in moderate-income geographies was below the percentage of owner-occupied units and near to the aggregate distribution of loans.


## Small Loans to Businesses

Refer to Table Q in the Multi State Louisville section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to businesses.

Based on the data in the tables and the following considerations, the overall geographic distribution of the bank's originations and purchases of small loans to businesses is adequate. The following information was taken into consideration when determining this rating.

- The smaller proportion of businesses in low-income geographies (7.1 percent) and competition between 116 lenders constrained lending opportunities to existing businesses. Therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of businesses in those geographies.
- Performance against the aggregate distribution of lenders was given additional consideration as it reflects the difficulties all lenders are experiencing due to the economic constraints discussed above under the Description of the Full-Scope AA.
- Between 2017 and 2019, the proportion of small loans to businesses in low-income geographies was below the proportion of businesses and well below the aggregate distribution, while the proportion of small loans to businesses in moderate-income geographies was below both the proportion of businesses and the aggregate distribution
- During 2014 to 2016, the bank's proportion of small loans to businesses in low- and moderateincome geographies was below both the proportion of businesses and the aggregate distribution.

Charter Number: 8

## Small Loans to Farms

Refer to Table S in the Multi State Louisville section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to farms.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to farms is adequate. The following information was taken into consideration when determining this rating.

- The limited number of farms in low-income geographies ( 2.8 percent) constrained lending opportunities; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher number of farms in those geographies.
- The fact that farm lending is not a focus of the bank was also considered.
- Between 2017 and 2019, the bank made no loans to small farms in low-income geographies. The proportion of loans to small farms in moderate-income geographies was well below the proportion of farms in those geographies and significantly exceeded the aggregate distribution of all lenders.
- Performance in low- and moderate-income geographies during the 2014 to 2016 period was generally consistent with performance during the 2017 to 2019 period. The bank made no loans to small farms in low-income geographies during the period. The proportion of loans to small farms in moderate-income geographies was well below the proportion of farms in those geographies and significantly exceeded the aggregate distribution of all lenders.


## Lending Gap Analysis

A review of home mortgage loans, small loans to business, and small loans to farms including summary reports and AA maps did not identify any unexplained conspicuous lending gaps in the bank's activities.

## Distribution of Loans by Income Level of the Borrower

The bank exhibits a good distribution of loans among individuals of different income levels and business of different sizes.

## Home Mortgage Loans

Refer to Table P in the Multi State Louisville section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall borrower distribution of home mortgage loan originations and purchases is good. The following information was taken into consideration when determining this rating.

- Examiners considered the competition and the economic constraints discussed above under the Description of this Full-Scope AA, particularly, the cost of housing and level of poverty in portions of the CSA.
- Between 2017 and 2019, the proportion of loans to low-income borrowers was well below the percentage of low-income families and the aggregate distribution of lenders. The proportion of loans to moderate-income borrowers exceeded the proportion of moderate-income families and the aggregate distribution of loans by all lenders
- During 2014 to 2016, the bank's performance in lending to low-income borrowers was stronger than its performance between 2017 to 2019. The proportion of loans to low-income borrowers was below the percentage of low-income families and near to the aggregate distribution of lenders. The proportion of loans to moderate-income borrowers exceeded the proportion of moderate-income families and was near to the aggregate distribution.


## Small Loans to Businesses

Refer to Table R in the Multi State Louisville section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's originations and purchases of small loans to businesses.

Based on the data in the table and the following considerations, the distribution of the bank's originations and purchases of small loans to businesses by revenue category for this evaluation is good. The following information was taken into consideration when determining this rating.

- Greater significance was placed on performance against the aggregate distribution as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of this Full-Scope AA.
- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 and 2019. The bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.


## Small Loans to Farms

Refer to Table T in the Multistate Louisville section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to farms.

Based on the data in the table and the following considerations, the distribution of the bank's originations and purchases of small loans to farms by revenue category is good. The following information was taken into consideration when determining this rating.

- The fact that farm lending is not a focus of the bank was considered.
- Between 2017 and 2019, the bank's percentage of loans to farms with revenues of $\$ 1$ million or less was below the percentage of farms and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 and 2019. The bank's percentage of loans to farms with revenues of $\$ 1$ million or less was below the percentage of farms and exceeded the aggregate distribution.


## Community Development Lending

The bank has made no CD loans in the AA during the evaluation period, which negatively affected the rating.

While the bank was unable to make any CD loans during the period, the bank continued to meet the needs of the low- and moderate-income individuals and geographies in Louisville CSA through qualified $C D$ investments and service activities.

The Lending Activity Tables, shown above, set forth the information and data used to evaluate the bank's level of CD lending. These tables include all CD loans, including multifamily loans that also qualify as CD loans.

## Product Innovation and Flexibility

The bank makes extensive use of innovative and/or flexible lending practices in order to serve AA credit needs. As shown in the table below, a total of 2,443 loans were funded totaling $\$ 343.1$ million. Refer to the comments in the Product Innovation and Flexibility section of this performance evaluation for additional details regarding the programs.

| Loan Type | Number of <br> Loans | Dollar Amount <br> (\$000's) |
| :--- | :---: | :---: |
| DreaMaker | 472 | 72,111 |
| FHA | 752 | 85,186 |
| HARP | 301 | 33,055 |
| VA | 387 | 69,143 |
| SBA | 75 | 21,412 |
| USDA | 456 | 62,159 |

## INVESTMENT TEST

The bank's performance under the Investment Test in the Louisville CSA is rated Outstanding.
Based on a full-scope review, the bank's performance in the Louisville CSA is excellent.
The bank has an excellent level of qualified CD investments and grants, occasionally in a leadership position, particularly those that are not routinely provided by private investors. Current and prior period investment dollar volume represents 9.3 percent of tier 1 capital allocated to the AA. A significant majority or 84.5 percent of total investments represent current period investments.

The bank exhibits excellent responsiveness to credit and community economic development needs identified in the AA, including affordable housing and affordable rental housing, economic and workforce development, community service, and revitalization/stabilization for low- and moderateincome individuals and geographies. Current period investments include 92.6 percent or $\$ 42.3$ million affordable housing and 7.3 percent or $\$ 3.4$ million community service. All prior period investments were allocated to affordable housing. Current and prior period affordable housing investments created 3,129 low- and moderate-income units for individual and families. The bank provided 27 grants or $\$ 3.4$ million to a variety of organizations that primarily support community service through economic and workforce development. In some occurrence's grants were provided in multiple years.

The bank occasionally uses innovative and/or complex investments to support CD initiatives. Current and prior period complex investments represent 38.4 percent or $\$ 20.8$ million of total investments. They included Direct Investor LIHTC transactions with participations from federal and state governments, local housing agencies, and real estate developers. Direct LIHTC require bank expertise and capacity in selecting projects and partners, negotiating agreements, overseeing project development and operations, and ensuring compliance.

| Qualified Investments - Louisville/Jefferson County-Elizabethtown-Bardstown KY-IN CSA |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Prior Period* |  | Current Period |  | Total |  |  |  | UnfundedCommitments*$*$ |  |
| A | \# | \$(000's) | \# | \$(000's) | \# | \% of Total \# | \$(000's) | \% of Total \$ | \# | \$(000's) |
| Louisville CSA | 22 | 8,412 | 49 | 45,739 | 71 | 100 | 54,151 | 100 | 0 | 0 |

* Prior Period Investments' means investments made in a previous evaluation period that are outstanding as of the examination date.
** Unfunded Commitments' means legally binding investment commitments that are tracked and recorded by the bank's financial
Examples of CD Investments in the AA include:
- In November 2014 and in April and December of 2019, the bank made $\$ 1.3$ million in grants to an organization that provides community service intended to provide technology skills to low-income individuals within the AA, with a focus on the six lowest-income neighborhoods. The goal of the project was to expand access to career pathways for low- and moderate-income individuals in those six Louisville neighborhoods. A total of 500 individuals were expected to enroll and participate in the program. The median income for individuals in the focus area was $\$ 18$ thousand per annum compared to $\$ 31$ thousand in the AA.
- In 2018 and 2019, the bank originated five grants totaling $\$ 600,000$ to a foundation project responsible for the Academies of Louisville/Workforce initiatives in Louisville KY. The Foundation provides low- and moderate-income youth who need a first work experience and have barriers to finding work, the opportunity to acquire the skills, resources, and networks needed to connect to employment opportunities leading to lifelong careers. Funding was expected to support the initiatives and to launch the new Summer Youth Tech Program in Louisville KY. The Foundation will prepare, inspire, and empower students by offering meaningful and relevant learning experiences through career pathways connected to core academic subjects. All students are low- and moderate-income with 6.0 percent identified as homeless. Academic experiences include career exploration field trips, job shadows, internships/co-ops, and solving real-world challenges through project-based learning.
- In December 2019, the bank made a $\$ 7$ million investment to a community development project for affordable housing in this AA. Plans were to renovate the homes in the apartment complex and use as affordable independent living units for people aged 62 or older, with 51 low- and moderateincome units available.
- From June 2016 through July 2018, the bank made three investments totaling $\$ 1.6$ million towards providing affordable housing through various LIHTC funds. Participation purchases represented 272 low- and moderate-income affordable housing units and exhibited the bank's responsiveness to community needs.


## SERVICE TEST

The bank's performance under the Service Test in the Louisville CSA is rated High Satisfactory.
Based on a full-scope review, the bank's performance in the Louisville CSA is good.

## Retail Banking Services

Service delivery systems are accessible to geographies and individuals of different income levels in the bank's full-scope AAs.

Examiners evaluated the data as outlined in the Scope section at the front of this document including bank-provided data on usage of branches adjacent to low- and moderate-income geographies by individuals residing in those geographies and on increases in the usage of alternative delivery systems.

Based on the data in the table below and performance context, the branch distribution is good. In lowand moderate-income geographies, the distribution respectively exceeds and is well below the percentage of the population. The bank had three branches in low-income geographies and two branches in moderate-income geographies. The distribution was augmented by eight MUI tract branches that serve moderate-income tracts. Examiners reviewed data on the accounts held and transactions conducted at the MUI branches and confirmed they were serving the adjacent low- and moderate-income populations.

| Distribution of Branch Delivery System |  |  |  |  |  |  |  | As of December 31, 2019 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | $\begin{gathered} \text { Deposits } \\ \hline \text { \% of } \\ \text { Rated } \\ \text { Area } \\ \text { Deposits } \\ \text { in AA } \end{gathered}$ | Branches |  |  |  |  |  | Population |  |  |  |
|  |  | \# of <br> BANK <br> Branches | \% of <br> Rated <br> Area <br> Branches in AA | Location of Branches by Income of Geographies (\%) |  |  |  | \% of Population within Each Geography* |  |  |  |
|  |  |  |  | Low | Mod | Mid | Upp | Low | Mod | Mid | Upp |
| Louisville/Jeff erson CountyElizabethtown -Madison, KY-IN | 100.0 | 35 | 100.0 | 8.6 | 5.7 | 45.7 | 37.1 | 8.7 | 17.3 | 42.3 | 31.3 |

* May not add up to 100 percent due to geographies with unknown tract income level and rounding

Alternative delivery systems did not significantly enhance the delivery of banking services to geographies and individuals of all income levels. The OCC considered the availability and use of alternative delivery systems over the evaluation period. This included review of the bank's 79 deposittaking ATMs, online banking, mobile banking, and telephone banking to determine the effectiveness of these systems to make retail banking services available to individuals in low- and moderate-income geographies. The bank did not increase the deposit-taking ATMs in low-and moderate-income geographies during the evaluation period. The bank had 14 (17.7 percent) deposit-taking ATMs in lowincome geographies and five ( 6.3 percent) ATMs in moderate-income geographies. Bank-provided data on use of online, mobile, and telephone banking showed nominal change in the adoption of these services by low- and moderate-income individuals from the prior rating period.

Charter Number: 8

| Distribution of Branch Openings/Closings |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | \# of Branch Openings | \# of Branch Closings | Net change in Location of Branches$(+$ or -$)$ |  |  |  |
|  |  |  | Low | Mod | Mid | Upp |
| Louisville/Jefferson County-Elizabethtown-Madison, KY-IN | 0 | 10 | -3 | -1 | -5 | -1 |

The bank's opening and closing of branches has generally not adversely affected the accessibility of its delivery systems, particularly in low- and moderate-income geographies and/or to low- and moderateincome individuals. The bank did not open any branches in low- and moderate-income geographies and closed three branches in low-income and one branch in moderate-income geographies. Branch closures were due to reduced customer usage and proximity to other Chase branches. Despite the branch closures, branch locations generally remained accessible to geographies and individuals of different income levels in the bank's AA.

Services, including where appropriate, business hours, do not vary in a way that inconveniences the various portions of its AA, particularly low- and moderate-income geographies and/or individuals. Generally, branches are open Monday through Thursday from 9:00 am to 5:00 pm, 9:00 am to 6:00 pm on Friday and 9:00 am to $12: 00 \mathrm{pm}$ or 1:00 pm on Saturdays. Branches also have drive-up hours Monday through Thursday from 9:00 am to 5:00 pm, Friday from 9:00 am to 6:00 pm, and Saturday from 9:00 am to 12:00 pm or 1:00 pm. All retail banking services are available within the low- and moderate-income branches.

## Community Development Services

The bank provides a relatively high level of CD services.
Review of bank records show that employees provided financial or job-specific expertise and/or technical assistance for 399 qualified CD service activities to 22 organizations since the last evaluation, for a total of 1,674 hours over a six-year period. All the bank's assistance was to organizations that provide services to low- and moderate-income individuals and families. The bank's CD services were responsive to the identified needs in the AA, particularly affordable housing, and financial literacy. The following are examples of CD services provided:

- Three bank employees provided homebuyer education over five years benefitting 391 low- and moderate-income customers.
- Forty-two bank employees provided financial literacy assistance over four years to low- and moderate-income participants of a national nonprofit whose program teaches K-12 students the basic concepts of financial literacy as it relates to everyday economics, and how they apply this information into adulthood.


## Multistate Metropolitan Statistical Area Rating

## Cincinnati-Wilmington-Maysville, OH-KY MMSA (Cincinnati MMSA)

CRA rating for the Cincinnati MMSA ${ }^{6}$ : Outstanding

The Lending Test is rated: High Satisfactory
The Investment Test is rated: Outstanding
The Service Test is rated: Outstanding
The major factors that support this rating include:

- A good level of lending activity.
- A good geographic distribution of home mortgage loans and small loans to businesses.
- A good borrower distribution of home mortgage loans and small loans to businesses.
- A relatively high level of CD lending, which positively affected the rating.
- The extensive use of innovative/flexible products, which positively affected the rating.
- An excellent level of qualified CD investments that displayed excellent responsiveness to credit and community economic development needs.
- Significant use of complex qualified investments.
- Retail service delivery systems that are readily accessible to geographies and individuals of different income levels in the bank's AA.
- Leadership in providing CD services that are responsive to AA needs.


## Description of Institution's Operations in the Cincinnati MMSA

The Cincinnati MMSA is Chase's $22^{\text {nd }}$ largest rating area based on its total deposits of $\$ 2.5$ billion, representing 0.2 percent of the bank's total deposits. As of December 31, 2019, the bank operated 35 branches and 69 ATMs in the rating area, representing 0.70 percent of total bank branches and 0.4 percent of total ATMs. The bank originated and purchased approximately $\$ 1.9$ billion in loans or 0.3 percent of total bank loan originations and purchases during the evaluation period in the MMSA.

According to FDIC Deposit Market Share Data, as of June 30, 2019, there were 62 financial institutions operating 699 offices in the AA. Chase ranked sixth with deposit market share of 1.8 percent. The top three banks and their deposit market share include U.S. Bank, N.A. (52.4 percent), Fifth Third Bank (26.5 percent), and PNC Bank, N.A. (5.3 percent).

Chase's AA consists of geographies within Ohio and Kentucky. Refer to appendix A for a complete listing of counties included in the AA.

## Description of Full-Scope AA

The following table provides a summary of the demographics that includes housing and business information for the Cincinnati MMSA. Table A indicates that approximately 21.9 percent of families in

[^103]the AA are low-income. The Cincinnati MMSA's cost of housing generally makes homeownership affordable for many LMI borrowers. The median housing value in the Cincinnati MMSA is approximately two times the median income, three times the moderate-income, and approximately four times the low-income, indicating OOUs are not affordable to some low-income borrowers. One simplistic method used to determine housing affordability assumes a maximum monthly principal and interest payment of no more than 36 percent of the applicant's income.

In the Cincinnati MMSA, assuming a 30-year mortgage with a 5 percent interest rate, 3.0 percent down payment, and not accounting for homeowners insurance, real estate taxes, or any additional monthly expenses, a low-income borrower making $\$ 34,975$ per year (or less than 50 percent of the FFIEC adjusted median family income in the MMSA) could afford a $\$ 166,740$ mortgage with a payment of $\$ 1,049$ per month; a moderate-income borrower earning $\$ 55,959$ per year (or less than 80 percent of the FFIEC adjusted median family income in the AA) could afford a $\$ 266,726$ mortgage with a payment of $\$ 1,679$ per month.

| Table A - Demographic Information of the Assessment Area <br> Assessment Area: 178 Cincinnati-Wilmington-Maysville OH-KY MMSA 2017-2019 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Demographic Characteristics | \# | Low \% of \# | Moderate \% of \# | Middle \% of \# | Upper \% of \# | $\begin{aligned} & \text { NA* } \\ & \text { \% of \# } \end{aligned}$ |
| Geographies (Census Tracts) | 463 | 13.6 | 21.0 | 36.7 | 26.8 | 1.9 |
| Population by Geography | 1,976,032 | 8.7 | 17.7 | 39.0 | 33.4 | 1.3 |
| Housing Units by Geography | 847,321 | 10.7 | 19.1 | 39.3 | 30.3 | 0.5 |
| Owner-Occupied Units by Geography | 500,413 | 4.2 | 14.3 | 42.3 | 39.2 | 0.1 |
| Occupied Rental Units by Geography | 261,527 | 18.9 | 26.9 | 35.4 | 17.7 | 1.1 |
| Vacant Units by Geography | 85,381 | 23.8 | 23.6 | 34.1 | 17.2 | 1.3 |
| Businesses by Geography | 131,182 | 7.0 | 17.7 | 35.7 | 38.6 | 1.0 |
| Farms by Geography | 3,686 | 3.6 | 12.8 | 48.6 | 34.9 | 0.2 |
| Family Distribution by Income Level | 495,929 | 21.9 | 16.4 | 19.8 | 42.0 | 0.0 |
| Household Distribution by Income Level | 761,940 | 25.2 | 15.2 | 17.0 | 42.6 | 0.0 |
| Median Family Income MSA - 17140 Cincinnati-Wilmington-Maysville $\mathrm{OH}-$ KY MMSA |  | \$69,949 | Median Housing Value |  |  | \$158,731 |
|  |  |  | Median Gross Rent |  |  | \$768 |
|  |  |  | Families Below Poverty Level |  |  | 10.3\% |

Source: 2015 ACS and 2019 D\&B Data
Due to rounding, totals may not equal 100.0\%
(*) The NA category consists of geographies that have not been assigned an income classification.

## Economic Data

According to the February 2020 Moody's Analytics report, the area economy is strong. The area has a high per capita income and educated workforce. The area is a major center for manufacturing, healthcare, and financial services. The labor market is strong and the pace of employment growth in the area clocked in at its fastest since 1998. The unemployment rate has been in the mid 3 percent for the last quarters even as the labor force has continued to grow. More encouraging, Kroger, a major food chain, is expanding its digital headquarters and planned to add high e-commerce jobs by end of 2020. In
addition, healthcare investment has been spurred by a new $\$ 600$ million critical care center along with emergency facilities. Top three major employers include Cincinnati Children's Hospital Medical Center, Kroger Co., and Cincinnati/Northern Kentucky International Airport. The area has low living and business costs with affordable housing.

## Community Contacts

A review was conducted of five community contacts completed during the examination period. The contacts were conducted with organizations located throughout the rating area. The mission of the organizations contacted focused on several areas including affordable housing, economic development, redevelopment of older homes, community services, and asset development and financial stability. Contacts noted concerns regarding housing affordability and access to affordable housing. Gentrification has driven prices up and pushed out low- to moderate-income residents that that were living in the area prior to redevelopment. The contacts identified the following needs in the area:

- Neighborhood and environmental revitalization programs
- Affordable housing and affordable rental housing
- Loan programs to support the rehabilitation of older housing
- Purchase of Low-Income Housing Tax Credits
- Workforce development and job training programs to help individuals obtain living wage jobs
- Asset development for low- and moderate-income households
- Community services that address basic living needs
- Economic and workforce development
- Small business Education/Training/Technical Assistance


## Scope of Evaluation in Cincinnati MMSA

Examiners performed a full-scope review of the Cincinnati MMSA.

## CONCLUSIONS WITH RESPECT TO PERFORMANCE TESTS IN THE CINCINNATI MMSA

## LENDING TEST

The bank's performance under the Lending Test in the Cincinnati MMSA is rated High Satisfactory.
Based on a full-scope review, the bank's performance in the Cincinnati MMSA is good.

## Lending Activity

Lending levels reflect good responsiveness to credit needs in the AA.
Examiners considered the number and dollar amount of home mortgage, small business, and small farm loans originated or purchased relative to Chase's capacity based on deposits, competition, and market presence. Lending activity for home mortgage and small loans to businesses received the most weight in reaching conclusions. Respectively, home mortgage lending and small loans to businesses account for 31.3 percent and 68.1 percent of the loan volume in the MMSA by number and 79.7 and 18.8 percent of loan volume by dollar. Small farm lending is not a strategic focus of the bank and received minimal
weight in reaching conclusions. Farm loans represented 0.4 percent of the loan volume in the MMSA by number and 0.05 percent loan volume by dollar.

| Number of Loans |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home <br> Mortgage | Small <br> Business | Small <br> Farm | Community <br> Development | Total |  |
| Cincinnati MMSA | 8,417 | 18,305 | 118 | 16 | 26,856 |  |
|  |  |  |  |  |  |  |
| Dollar Volume of Loans (\$000's) | Home <br> Mortgage | Small <br> Business | Small <br> Farm | Community <br> Development | Total |  |
| Assessment Area | $1,532,957$ | 360,655 | 1,102 | 28,661 | $1,923,375$ |  |
| Cincinnati MMSA |  |  |  |  |  |  |

As of June 30, 2019, Chase ranked sixth in deposits out of 62 institutions with 1.8 percent market share.
In overall home mortgage lending, Chase ranked eleventh with 3.6 percent market share. The top three lenders in the market are U.S. Bank, N.A. ( 6.0 percent), The Huntington National Bank ( 6.0 percent), Union Savings Bank (5.3 percent), and Wells Fargo Bank, N.A. (4.6 percent).

In small loans to businesses, Chase ranked third out of 126 lenders with a 11.4 percent market share. Other major lenders are American Express National Bank (20.0 percent), U.S. Bank, N.A. (14.3 percent), and PNC Bank, N.A. (10.4 percent).

In small loans to farms, Chase ranked third out of 19 lenders with a 13.2 percent market share. The other major lenders in the market are U.S. Bank, N.A. (29.5 percent), John Deere Financial, F.S.B (18.9 percent), and The Huntington National Bank (10.6) market share.

## Distribution of Loans by Income Level of the Geography

The bank exhibits good geographic distribution of loans in its AA.

## Home Mortgage Loans

Refer to Table O in the Multi State Cincinnati section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of home mortgage loan originations and purchases for this evaluation is good. The following information was taken into consideration when determining this rating.

- The limited proportion of housing units in low-income geographies, particularly OOUs (4.2 percent) constrained lending opportunities; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of OOUs in those geographies.
- The high level of competition in the AA, with a number of major home mortgage lenders, was also considered and examiners placed greater significance on performance compared to the aggregate of lenders.
- Between 2017 and 2019, the proportion of loans in low- income areas were below the percentage of owner-occupied units and near to the aggregate distribution of loans. In moderate-income areas the proportion of loans was near to both the percentage of owner-occupied units and aggregate distribution of loans.
- During 2014 through 2016, performance in low-income geographies was well below the percentage of owner-occupied units and below the aggregate distribution of loans, while performance in moderate-income geographies was below the percentage of owner-occupied units and near to the aggregate distribution of loans.


## Small Loans to Businesses

Refer to Table Q in the Multi State Cincinnati section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to businesses.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to businesses for this evaluation is adequate. The following information was taken into consideration when determining this rating.

- The smaller proportion of businesses in low-income geographies ( 7.0 percent) and competition between 126 lenders constrained lending opportunities to existing businesses. Therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of businesses in those geographies.
- Between 2017 and 2019, the proportion of small loans to businesses in low-income geographies was below both the proportion of businesses and the aggregate distribution, while the proportion of small loans to businesses in moderate-income geographies was below both the proportion of businesses and the aggregate distribution.
- During 2014 to 2016, the proportion of small loans to businesses in low-income geographies was well below both the proportion of businesses and the aggregate distribution, while the proportion of small loans to businesses in moderate-income geographies was below both the proportion of businesses and the aggregate distribution.


## Small Loans to Farms

Refer to Table S in the Multi State Cincinnati section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to farms.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to farms is good. The following information was taken into consideration when determining this rating.

- The limited number of farms in low-income geographies (2.6 percent) constrained lending opportunities; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher number of farms in those geographies.
- The fact that farm lending is not a focus of the bank was also considered.
- Between 2017 and 2019, the bank made no loans to small farms in low-income geographies. The proportion of loans to small farms in moderate-income geographies was well below the proportion of farms in those geographies and significantly exceeded the aggregate distribution of all lenders.
- During the 2014 to 2016 period, the bank made no loans to small farms in low-income geographies. The proportion of loans to small farms in moderate-income geographies was below the proportion of farms in those geographies and exceeded the aggregate distribution of all lenders.


## Lending Gap Analysis

A review of home mortgage loans, small loans to business, and small loans to farms including summary reports and AA maps did not identify any unexplained conspicuous lending gaps in the bank's activities.

## Distribution of Loans by Income Level of the Borrower

The bank exhibits a good distribution of loans among individuals of different income levels and business of different sizes.

## Home Mortgage Loans

Refer to Table P in the Multi State Cincinnati section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall borrower distribution of home mortgage loan originations and purchases for this evaluation is good. The following information was taken into consideration when determining this rating.

- Examiners considered the competition and the economic constraints discussed above under the Description of this Full-Scope AA, particularly, the cost of housing and level of poverty in portions of the MMSA. Higher consideration was given to performance against the aggregate of all lenders.
- Between 2017 and 2019, the proportion of loans to low-income borrowers was well below the percentage of low-income families and exceeded the aggregate distribution of lenders. The proportion of loans to moderate-income borrowers exceeded the proportion of moderate-income families and the aggregate distribution of loans by all lenders.
- During 2014 to 2016, the bank's performance in lending to low-income borrowers was stronger than its performance between 2017 to 2019. The proportion of loans to low-income borrowers was below the percentage of low-income families and met the aggregate distribution of lenders. The proportion of loans to moderate-income borrowers exceeded the proportion of moderate-income families and was near to the aggregate distribution.


## Small Loans to Businesses

Refer to Table R in the Multi State Cincinnati section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's originations and purchases of small loans to businesses.

Based on the data in the tables and the following factors, the distribution of the bank's originations and purchases of small loans to businesses by revenue category is good. The following information was taken into consideration when determining this rating.

- Slightly greater significance was placed on performance against the aggregate distribution as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of this Full-Scope AA.
- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and significantly exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 and 2019. The bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and significantly exceeded the aggregate distribution.


## Small Loans to Farms

Refer to Table T in the Multi State Cincinnati section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to farms.

Based on the data in the table and the following considerations, the distribution of the bank's originations and purchases of small loans to farms by revenue category is good. The following information was taken into consideration when determining this rating.

- The fact that farm lending is not a focus of the bank was considered.
- Between 2017 and 2019, the bank's percentage of loans to farms with revenues of $\$ 1$ million or less was well below the percentage of farms and significantly exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 and 2019. The bank's percentage of loans to farms with revenues of $\$ 1$ million or less was below the percentage of farms and significantly exceeded the aggregate distribution.


## Community Development Lending

The bank has made a relatively high level of CD loans.
The Lending Activity Tables, shown above, set forth the information and data used to evaluate the bank's level of CD lending. These tables include all CD loans, including multifamily loans that also qualify as CD loans.

There were 16 CD loans made for a total of $\$ 28.7$ million. This represents 9.0 percent of the tier 1 capital allocated to the AA. Nine ( 25.8 percent) of the CD loans are for revitalization or stabilization purposes, which is a critical need in this AA. Sixty percent supported affordable housing and 14.2 percent supported community services.

Examples of CD loans in the AA include:

- In June 2017, the bank originated a $\$ 339,300$ loan to rehabilitate and construct 12 historic buildings in a low-income area of the Over-The-Rhine neighborhood. The project met the city's Comprehensive Plan to revitalize the low- and moderate-income area and included eight mixed-use apartment buildings, commercial space, and a social enterprise restaurant that provides job training and placement for positions targeting low-income individuals and residents in this severely distressed community.
- Chase originated a $\$ 7.1$ million construction loan for bonds that were issued by the Ohio Housing Finance Agency. The purpose was to provide financing for the full rehabilitation of a low-income housing project in Cincinnati. The project contained 50 units on 8 sites with all units under 60 percent AMI. Ten of the units were specifically reserved for individuals with special needs.
- Chase originated a $\$ 9.4$ million loan to finance a 44 -unit Low Income Housing Tax Credit (LIHTC) housing project in Cincinnati. The project is an affordable housing community designed for lowincome single parents. The project's rent restrictions were up to 60.0 percent Area Median Income (AMI) with the project's operations supported by a 20 -year project-based Housing Assistance Payment (HAP) contract used to provide Section 8 tenant-based assistance on all 44 units.


## Product Innovation and Flexibility

The bank makes extensive use of innovative and/or flexible lending practices in order to serve AA credit needs. As show in the table below, the bank originated 2,652 loans totaling $\$ 368.4$ million in the AA. Refer to the comments in the Product Innovation and Flexibility section in the front of this performance evaluation for additional details regarding the programs.

| Loan Type | Number of <br> Loans | Dollar Amount <br> $\mathbf{( \$ 0 0 0 ' s )}$ |
| :--- | :---: | :---: |
| DreaMaker | 341 | 48,108 |
| FHA | 855 | 99,492 |
| HARP | 406 | 43,626 |
| VA | 295 | 51,365 |
| SBA | 41 | 24,336 |
| USDA | 714 | 101,483 |

## INVESTMENT TEST

The bank's performance under the Investment Test in Cincinnati MMSA is rated Outstanding.
Based on a full-scope review, the bank's performance in the Cincinnati MMSA is excellent.
The bank has an excellent level of qualified CD investment and grants, although rarely in a leadership position, particularly those that are not routinely provided by private investors. The current and prior period qualified investments represent 52.3 percent of tier 1 capital allocated to the AA. A significant majority, or 74 percent of total investments represent current period investments. All prior period investments support a specific property in a LIHTC fund investment that supports affordable rental housing.

The bank exhibits excellent responsiveness to credit and community economic development needs, including affordable housing, community services, and revitalization/stabilization for low- and moderate-income individuals and geographies. CD investments of 70.1 percent and 24.7 percent focused on affordable housing and revitalization/stabilization, respectively, which are primary community development needs in the AA. Thirty grants totaled $\$ 2.1$ million with 82.9 percent supporting community services and 7.2 percent supporting affordable housing, respectively. All prior period investments support a specific property in a LIHTC fund investment that supports affordable rental housing.

The bank makes significant use of complex investments to support CD initiatives. Nine (29.4 percent) current period investments used NMTC financings which combines tax credit equity with other capital sources. They also serve as catalyst investments that encourage future growth and improvements in the area. Three other investments, overall total of 58.9 percent combined with complexity, serve as a catalyst for other community development activities for revitalization or stabilization that will encourage future growth and improvements in the area.

| Qualified Investments- Cincinnati MMSA |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Prior Period* |  | Current Period |  | Total |  |  |  | Unfunded Commitments** |  |
|  | \# | \$(000's) | \# | \$(000's) | \# | \% of Total \# | \$(000's) | \% of Total \$ | \# | \$(000's) |
| Cincinnati MMSA | 32 | 43,281 | 79 | 122,479 | 111 | 100 | 165,760 | 100 | 0 | 0 |

* Prior Period Investments' means investments made in a previous evaluation period that are outstanding as of the examination date.
** Unfunded Commitments' means legally binding investment commitments that are tracked and recorded by the institution's financial reporting system.

Examples of CD Investments in the AA include:

- In March 2018, there was a $\$ 1.3$ million equity investment to a redevelopment foundation for the renovation and development of 20,313 square feet of commercial space to be located outside downtown Cincinnati, Ohio. It is estimated that the project will create 40 full-time construction jobs, 20 part-time permanent positions and 10 full-time permanent positions. The tenant will post vacancies with the Walnut Hills Job bank (operated by the Foundation), a workforce development initiative designed to connect residents in the area to jobs with special emphasis on career pathway jobs in the neighborhood. The project will also generate foot traffic in an underutilized Peebles Corner Historic District in the Walnut Hills Neighborhood. The investment was complex with the creation of a sub-Community Development Entity (CDE) to help finance the project and use of the NMTC that will encourage future growth and improvements in the area. The investment supports the community needs of economic development, neighborhood revitalization, job creations and workforce training
- In June 2017, the bank originated a $\$ 8.3$ million federal investment and a $\$ 660,000$ million state investment for a project that will preserve and revitalize twelve historic buildings. The buildings are in 13 low-income census tracts within Cincinnati, Ohio Over-The-Rhine neighborhood adjacent to the city's Findlay Market. The renovated buildings will be used to support small business ownership, plus job creation, training and placement for low-income persons and residents of the surrounding severely distressed low-income community. The specific project is supported by the city's plan to revitalize and stabilize The Over Rhine neighborhood. The plan outlines goals for mixed-use developments, enhance small business and microenterprise support programs. The investment supports the community needs of economic development, neighborhood revitalization,
and workforce training. The investments were responsive to revitalize a distressed and blighted neighborhood. The investments were complex with the use of the NMTC model which combines tax credit equity with other capital sources that serve as leverage to generate tax credit subsidies.
- In 2014 through 2018, six grants totally $\$ 525,420$ were provided to a non-profit organization for continued support of its financial center whose mission is to help willing and capable people living in poverty achieve economic self-sufficiency through employment. Financial services are integrated with employment services such that, as members become job ready, secure employment, and advance to higher page jobs over time, they are making sound financial decisions to build financial security. All the individuals served by the organizations are economically disadvantaged and financially needy. The investment was responsive by helping to serve the unemployed and the underemployed, and by providing financial education, job training and placement.


## SERVICE TEST

The bank's performance under the Service Test in the Cincinnati MMSA is rated Outstanding.
Based on a full-scope review, the bank's performance in the Cincinnati MMSA is excellent.

## Retail Banking Services

Service delivery systems are readily accessible to geographies and individuals of different income levels in the bank's AA.

Examiners evaluated the data as outlined in the Scope section at the front of this document including bank-provided data on usage of branches adjacent to low-and moderate-income geographies by individuals residing in those geographies and on increases in the usage of alternative delivery systems.

Based on the data in the table below and performance context, the branch distribution is excellent. The branch distribution in low-income geographies is below and in moderate-income geographies exceeds the percentage of the population in these respective geographies. The bank had two branches in the lowincome geographies and eight branches in moderate-income geographies. The distribution was augmented by one MUI tract branch near low- and moderate-income tracts. Examiners reviewed data on the accounts held and transactions conducted at the adjacent MUI branches and confirmed they were serving the adjacent low- and moderate-income populations.

| Distribution of Branch Delivery System |  |  |  |  |  |  |  | As of December 31, 2019 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Deposits | Branches |  |  |  |  |  | Population |  |  |  |
|  | $\%$ of Rated <br> Area <br> Deposits in AA | \# of <br> BANK <br> Branches | \% of <br> Rated <br> Area <br> Branches in AA | Location of Branches by Income of Geographies (\%) |  |  |  | \% of Population within Each Geography* |  |  |  |
|  |  |  |  | Low | Mod | Mid | Upp | Low | Mod | Mid | Upp |
| Cincinnati MMSA |  |  |  |  |  |  |  |  |  |  |  |
|  | 100 | 35 | 100 | 5.7 | 22.9 | 37.1 | 31.4 | 8.7 | 17.7 | 39.0 | 33.4 |

[^104]Alternative delivery systems enhanced the delivery of banking services to geographies and individuals of all income levels. The OCC considered the availability and use of alternative delivery systems over the evaluation period. This included review of the bank's 69 deposit-taking ATMs, online banking, mobile banking, and telephone banking to determine the effectiveness of these systems to make retail banking services available to individuals in low- and moderate-income geographies. The bank increased the deposit-taking ATMs in low- and moderate-income geographies by 10.0 percent over the prior rating period to six (8.7 percent) deposit-taking ATMs in low-income geographies and 16 (23.2 percent) ATMs in moderate-income geographies. Additionally, bank-provided data on use of online, mobile, and telephone banking showed increases in the adoption of these services by low- and moderate-income individuals from the prior rating period.

| Distribution of Branch Openings/Closings |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | \# of Branch Openings | \# of Branch Closings | Net change in Location of Branches (+ or -) |  |  |  |
|  |  |  | Low | Mod | Mid | Upp |
| Cincinnati MMSA | 2 | 4 | 0 | +1 | -4 | +1 |

The bank's opening and closing of branches improved the accessibility of its delivery systems, particularly in moderate-income geographies and/or to low- and moderate-income individuals. The bank did not open or close any branches in low-income geographies and opened one branch in a moderate-income geography and one branch in an upper-income geography. The bank closed four branches in middle-income geographies. The branch closures did not adversely impact the accessibility to retail banking services. Branch closures were due reduced customer usage and proximity to other Chase branches. Despite the branch closures, branch locations remained accessible to geographies and individuals of different income levels in the bank's AA.

Services, including where appropriate, business hours, do not vary in a way that inconveniences the various portions of the AA, particularly low- and moderate-income geographies and/or individuals. Generally, branches are open Monday through Friday from 9:00 am to 6:00 pm and Saturday from 9:00 am to 2:00 pm. Branches also have drive-up hours of 8:30 am to $6: 00 \mathrm{pm}$ Monday through Friday and on Saturday 9:00 am to 2:00 pm. All retail banking services are available at all branches within the lowand moderate-income geographies.

## Community Development Services

The bank is a leader in providing CD services that are responsive to AA needs. CD services positively affected the service test performance in the MMSA.

Bank employees provided financial, job-specific expertise, or technical assistance for 389 CD service activities to 22 organizations, for a total of 1,424 hours during the evaluation period. All the bank's assistance was to organizations that provide community services to low- and moderate-income individuals and families. The bank's community development services were responsive to the community needs in the AA, particularly affordable housing, and workforce development needs. The following are examples of CD services provided:

- Over the six-year evaluation period, three bank employees provided homebuyer education activities to 528 low- and moderate-income bank customers.
- For two years, seven bank employees provided technical assistance to a local nonprofit whose mission is to partner with all willing and capable people living in poverty, to assist them in developing job skills to become self-sufficient.


# Multistate Metropolitan Statistical Area Rating 

## Wheeling, WV-OH MMSA (Wheeling MMSA)

CRA rating for the Wheeling, WV-OH MMSA ${ }^{7}$ : Satisfactory<br>The Lending Test is rated: High Satisfactory<br>The Investment Test is rated: Outstanding<br>The Service Test is rated: Needs to Improve

The major factors that support this rating include:

- A good level of lending activity.
- An overall good geographic distribution of home mortgage loans and small loans to businesses.
- An overall good borrower distribution of home mortgage loans and small loans to businesses.
- No CD loans were made, which has a negative effect on the Lending Test rating.
- The extensive use of innovative/flexible lending products, which positively affected the rating.
- An excellent level of qualified CD investments that displayed excellent responsiveness to credit and community economic development needs.
- Retail service delivery systems that are unreasonably inaccessible to geographies and individuals of different income levels in the bank's AA.
- A record of opening and closing branches that adversely affected the accessibility of delivery systems, particularly in moderate-income geographies.


## Description of Institution's Operations in Wheeling MMSA

The Wheeling MMSA is Chase's $29^{\text {th }}$ largest rating area based on deposits of $\$ 198.3$ million, representing less than one percent of the bank's total deposits. As of December 31, 2019, the bank operated two branches and three deposit-taking ATMs in the rating area. The bank originated and purchased approximately $\$ 65.7$ million in loans during the evaluation period in the MMSA.

According to FDIC Deposit Market Share Data, as of June 30, 2019, there were 14 banks s operating 59 branches s in the MMSA. Chase ranked eighth in deposit market share with 5.2 percent. The top three banks and market share are WesBanco Bank, Inc. ( 36.3 percent), United Bank (10.7 percent), and Unified Bank (8.7 percent).

Chase has delineated the entire multistate Wheeling MMSA as its AA. Refer to appendix A for a complete listing of counties that comprise the MMSA.

## Description of Full-Scope AA

The following table provides a summary of the demographics that includes housing and business information for the Wheeling MMSA. Due to ACS and OMB boundary changes, there are no lowincome census tracts in the MMSA during the 2017 to 2019 period.

[^105]Table A indicates that approximately 19.1 percent of families in the AA are low-income. The Wheeling MMSA's cost of housing generally makes homeownership affordable for most LMI borrowers. The median housing value in the Wheeling MMSA is approximately 1.7 times the median income, 2.1 times the moderate-income, and 3.4 times the low-income, indicating a large proportion of OOUs are affordable to low- and moderate-income borrowers. One simplistic method used to determine housing affordability assumes a maximum monthly principal and interest payment of no more than 36 percent of the applicant's income.

In the Wheeling MMSA, assuming a 30 -year mortgage with a 5 percent interest rate, 3.0 percent down payment, and not accounting for homeowners insurance, real estate taxes, or any additional monthly expenses, a low-income borrower making $\$ 28,426$ per year (or less than 50 percent of the FFIEC adjusted median family income in the MMSA) could afford a $\$ 135,508$ mortgage with a payment of $\$ 853$ per month; a moderate-income borrower earning $\$ 45,482$ per year (or less than 80 percent of the FFIEC adjusted median family income in the AA) could afford a $\$ 216,790$ mortgage with a payment of \$1,364 per month.

| Table A - Demographic Information of the Assessment Area Assessment Area: Wheeling WV-OH MMSA 2017-2019 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Demographic Characteristics | \# | Low \% of \# | Moderate \% of \# | Middle \% of \# | Upper <br> \% of \# | $\begin{aligned} & \text { NA* } \\ & \text { \% of \# } \end{aligned}$ |
| Geographies (Census Tracts) | 47 | 0.0 | 27.7 | 55.3 | 17.0 | 0.0 |
| Population by Geography | 145,677 | 0.0 | 15.0 | 65.4 | 19.6 | 0.0 |
| Housing Units by Geography | 69,172 | 0.0 | 17.0 | 66.0 | 17.0 | 0.0 |
| Owner-Occupied Units by Geography | 43,803 | 0.0 | 12.0 | 68.8 | 19.2 | 0.0 |
| Occupied Rental Units by Geography | 16,109 | 0.0 | 27.0 | 59.1 | 13.9 | 0.0 |
| Vacant Units by Geography | 9,260 | 0.0 | 23.2 | 64.8 | 12.0 | 0.0 |
| Businesses by Geography | 8,567 | 0.0 | 21.3 | 59.4 | 19.3 | 0.0 |
| Farms by Geography | 265 | 0.0 | 8.3 | 72.1 | 19.6 | 0.0 |
| Family Distribution by Income Level | 37,967 | 19.1 | 19.3 | 20.9 | 40.7 | 0.0 |
| Household Distribution by Income Level | 59,912 | 24.4 | 16.6 | 16.8 | 42.2 | 0.0 |
| Median Family Income MMSA - 48540 Wheeling, WV-OH MMSA |  | \$56,853 | Median Housing Value |  |  | \$98,597 |
|  |  |  | Median Gross Rent |  |  | \$558 |
|  |  |  | Families Below Poverty Level |  |  | 9.3\% |
| Source: 2015 ACS and 2019 D\&B Data <br> Due to rounding, totals may not equal 100.0\% <br> (*) The NA category consists of geographies that have not been assigned an income classification. |  |  |  |  |  |  |

## Economic Data

According to the November 2019 Moody's Analytics report, the area economy is weak. The area has a low per capita income and low educational attainment. The population is declining and rapidly aging. The area is a major center for natural resources (i.e., mining) and health care professional services, however, the labor market is weak. From mid-2018 to mid-2019 employment fell approximately one percent. Natural resources and construction, which propelled net hiring in 2018 is now shedding staff. Healthcare is struggling because of hospital closures. In 2019, health care jobs fell by five percent
following the closure of two local hospitals, one of which was a major employer of the area. As a result, the unemployment rate shot up by more than a full percentage point to 6.1 percent and is the highest in West Virginia. Experts noted that employment in the natural resources sector will taper off in 2019. The coal export business has been a major contributor for increased earnings in the area. However, the demand for the coal export business may not rise at a faster rate than to the amount of coal used in domestic electricity production, resulting in flat employment for the mining industry. The top three major employers include Wheeling Hospital Inc, Murray Energy, and Ohio Valley Medical Center, which closed in 2019. It is anticipated that the falling population will limit the demand on the housing market putting downward pressure on the house prices.

## Community Contacts

A review was conducted of three community contacts completed during the examination period. The contacts were conducted with organizations located throughout the rating area. The mission of the organizations contacted focused on several areas including affordable housing, economic development, workforce development, community services, and asset development and financial stability. Contacts noted concerns regarding financing for affordable housing and volunteers for community service efforts. Contacts observed that there could be more opportunities for involvement with local financial institutions. Due to the demographic composite, diversity is limited in the community profile. Drug addiction is a growing concern in the area and as a result many grandparents are serving as the primary guardian to children in the area. The contacts identified the following needs in the area:

- Financing for low- to moderate-income housing
- Affordable housing and affordable rental housing
- Community services
- Neighborhood and environmental revitalization programs
- Homebuyer education and counseling programs for first time homebuyers
- Economic and Workforce Development


## Scope of Evaluation in Wheeling MMSA

The Wheeling MMSA received a full-scope review.

## CONCLUSIONS WITH RESPECT TO PERFORMANCE TESTS IN WHEELING, WV-OH MMSA

## LENDING TEST

The bank's performance under the Lending Test in the Wheeling MMSA is rated High Satisfactory.
Based on a full-scope review, the bank's performance in the Wheeling MMSA is good.

## Lending Activity

Lending levels reflect good responsiveness to AA credit needs in the AA.
Examiners considered the number and amount of home mortgage, small business, and small farm loans originated or purchased relative to Chase's capacity based on deposits, competition, and market
presence. Lending activity for home mortgage and small loans to businesses received the most weight in reaching conclusions. Respectively, home mortgage lending and small loans to businesses account for 31.2 percent and 67.5 percent of the loan volume in the MMSA by number and 64.1 and 35.4 percent of loan volume by dollar. Small farm lending is not a strategic focus of the bank and received minimal weight in reaching conclusions. Farm loans represented 1.2 percent of the loan volume in the state by number and 0.4 percent loan volume by dollar.

| Number of Loans |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home <br> Mortgage | Small <br> Business | Small <br> Farm | Community <br> Development | Total |  |
| Wheeling MMSA | 441 | 951 | 17 | 0 | 1,409 |  |


| Dollar Volume of Loans (\$000's) |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home <br> Mortgage | Small <br> Business | Small <br> Farm | Community <br> Development | Total |
| Wheeling MMSA | 42,213 | 23,287 | 256 | 0 | 65,756 |

As of June 30, 2019, Chase ranked eighth in deposits out of 14 institutions with 5.2 percent market share.

In overall home mortgage lending, Chase ranked seventh out of 186 lenders with 3.1 percent market share. This is a competitive market. The top three lenders in the market are WesBanco Bank (14.1 percent), Huntington National Bank ( 8.6 percent), and Quicken Loans ( 6.5 percent)

In small loans to businesses, Chase ranked first out of 59 lenders with 15 percent market share. Other major lenders are Synchrony Bank ( 14.5 percent) and American Express National Bank (13.2 percent).

In small loans to farms, Chase ranked second out of 8 lenders with an 18.5 percent market share. The other major lenders and respective market shares are Wells Fargo Bank, N.A. ( 25.9 percent), Farmers National Bank (14.8 percent), Capital One, N.A. (11.1 percent), and U.S. Bank, N.A. (11.1 percent).

## Distribution of Loans by Income Level of the Geography

The bank exhibits good geographic distribution of loans in its AA.

## Home Mortgage Loans

Refer to Table O in the Multi State Wheeling section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of home mortgage loan originations and purchases for this evaluation is adequate. The following information was taken into consideration when determining this rating.

- The percentage of OOU in MI geographies dropped from 18.7 percent between 2014 and 2016 to 6.3 percent between 2017 and 2019. The additional challenge of high competition resulted in a poor proportion of loans to OOUs in moderate-income areas and poor performance against the aggregate.
- Between 2017 and 2019, the proportion of loans in moderate-income areas was well below both the percentage of owner-occupied units and the aggregate distribution of loans. There were no lowincome geographies in the AA during this period.
- Stronger performance in low- and moderate-income geographies between the 2014 and 2016 time periods affected overall conclusions. The proportion of loans in low-income areas was well below the percentage of owner-occupied units but near to the aggregate distribution of loans. The proportion of loans in moderate-income areas exceeded both the percentage of owner-occupied units and the aggregate distribution of loans.


## Small Loans to Businesses

Refer to Table Q in the Multi State Wheeling section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to businesses.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to businesses for this evaluation is good. The following information was taken into consideration when determining this rating.

- Between 2017 and 2019, the proportion of small loans to businesses in moderate-income geographies exceeded the proportion of businesses and was near to the aggregate distribution of all lenders.
- During 2014 to 2016, the bank's performance was weaker, particularly in low-income geographies, and negatively affected aggregated conclusions. The proportion of small loans to businesses in lowincome geographies was below the proportion of businesses and the aggregate distribution, while the proportion of small loans to businesses in moderate-income geographies was near to both the proportion of businesses and aggregate distribution.


## Small Loans to Farms

Refer to Table S in the Multi State Wheeling section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to farms.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to farms is poor. The following information was taken into consideration when determining this rating.

- The fact that farm lending is not a focus of the bank was considered.
- Between 2017 and 2019, the bank made no small loans to farms in moderate-income geographies.
- During the 2014 to 2016 period, the bank made no small loans to farms in low- and moderateincome geographies.


## Lending Gap Analysis

A review of home mortgage loans, small loans to business, and small loans to farms including summary reports and AA maps did not identify any unexplained conspicuous lending gaps in the bank's activities.

## Distribution of Loans by Income Level of the Borrower

The bank exhibits a good distribution of loans among individuals of different income levels and businesses of different sizes.

## Home Mortgage Loans

Refer to Table P in the Multi State Wheeling section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall borrower distribution of home mortgage loan originations and purchases for this evaluation is good. The following information was taken into consideration when determining this rating.

- Examiners considered the competition and the economic constraints discussed above in the description of this full-scope AA.
- Between 2017 and 2019, the proportion of loans to low-income borrowers was below the percentage of low-income families and near to the aggregate distribution of lenders. The proportion of loans to moderate-income borrowers exceeded the proportion of moderate-income families and was near to the aggregate distribution.
- During 2014 to 2016, the bank's performance was weaker than performance between 2017 to 2019. The proportion of loans to low-income borrowers was well below the percentage of low-income families and below the aggregate distribution of lenders. The proportion of loans to moderateincome borrowers exceeded the proportion of moderate-income families and was below the aggregate distribution.


## Small Loans to Businesses

Refer to Table R in the Multi State Wheeling section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's originations and purchases of small loans to businesses.

Based on the data in the tables and the following factors, the distribution of the bank's originations and purchases of small loans to businesses by revenue category is good. The following information was taken into consideration when determining this rating.

- Greater significance was placed on performance against the aggregate distribution as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of this Full-Scope AA.
- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 and 2019. The bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.


## Community Development Lending

The bank did not make any CD loans.
Wheeling MMSA is a very small market that receives one or two LIHTC allocations on average, annually. This market receives no LIHTC allocations in some years. While the bank was unable to make any CD loans during the period, the bank continued to meet the needs of the low- and moderateincome individuals and geographies in Wheeling MMSA through qualified CD investments and service activities.

The Lending Activity Tables, shown above, set forth the information and data used to evaluate the bank's level of CD lending. These tables include all CD loans, including multifamily loans that also qualify as CD loans.

## Product Innovation and Flexibility

The bank made extensive use of innovative and/or flexible lending practices in order to serve AA credit needs. As shown in the table below, the bank originated 249 loans totaling $\$ 20.3$ million in the AA. Refer to the comments in the Product Innovation and Flexibility section of this performance evaluation for additional details regarding the programs.

| Loan Type | Number of <br> Loans | Dollar Amount <br> $\mathbf{( \$ 0 0 0 ' s )}$ |
| :--- | :---: | :---: |
| DreaMaker | 36 | 3,974 |
| FHA | 21 | 2,118 |
| HARP | 15 | 1,406 |
| VA | 12 | 1,890 |
| SBA | 3 | 222 |
| USDA | 162 | 10,707 |

## INVESTMENT TEST

The bank's performance under the Investment Test in Wheeling MMSA is rated Outstanding.
Based on a full-scope review, the bank's performance in the Wheeling MMSA is excellent. The bank has an excellent level of qualified CD investment and grants, but not in a leadership position, particularly those that are not routinely provided by private investors. Current and prior period investment dollar volume represents 11.2 percent of tier 1 capital allocated to the AA. A significant majority or 90.9 percent of total investments represent current period investments.

The bank exhibits excellent responsiveness to credit and community economic development needs identified in the AA, which includes affordable housing for low- and moderate-income individuals and geographies. All current and prior period investments focused on affordable housing. The bank created or supported 189 low- and moderate-income housing units for individuals and families.

The bank does not use innovative and/or complex investments to support CD initiatives. However, all affordable housing investments were placed into LIHTC funds for the AA.

| Qualified Investments - Wheeling MMSA |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area (AA) | Prior Period* |  | Current Period |  | Total |  |  |  | UnfundedCommitments** |  |
|  | \# | \$(000's) | \# | \$(000's) | \# | \% of Total \# | \$(000's) | \% of Total \$ | \# | \$(000's) |
| Wheeling MMSA | 3 | 259 | 4 | 2,589 | 7 | 100 | 2,848 | 100 | 0 | 0 |

* Prior Period Investments' means investments made in a previous evaluation period that are outstanding as of the examination date.
** Unfunded Commitments' means legally binding investment commitments that are tracked and recorded by the bank's financial reporting system.
Examples of CD Investments in the AA include:
- From May 2014 through June 2016, the bank invested $\$ 2$ million in a LIHTC housing fund to provide 40 affordable rental units to low- and moderate-income individuals and families in the AA. Investments were in partnership with a nonprofit financial intermediary based in Columbus, Ohio.
- From December 2016 through July 2018, the bank invested \$600,000 in a LIHTC fund to provide 19 affordable rental units to low- and moderate-income individuals and families in the AA.
Investments were in partnership with a nonprofit financial intermediary based in Columbus, Ohio.


## SERVICE TEST

The bank's performance under the Service Test in Wheeling MMSA is rated Needs to Improve.
Based on a full-scope review, including the data in the tables below and performance context, the bank's performance in the Wheeling MMSA is poor.

## Retail Banking Services

Service delivery systems are unreasonably inaccessible to portions of the AA, particularly moderateincome geographies and/or moderate-income individuals.

Examiners evaluated the data as outlined in the Scope section at the front of this document including bank-provided data on usage of branches adjacent to low- and moderate-income geographies by individuals residing in those geographies and on increases in the usage of alternative delivery systems. As there are no low-income geographies, the analysis and discussion are based on performance in moderate-income geographies and to low- and moderate-individuals.

Based on the data in the table below and performance context, the branch distribution is poor. In moderate-income geographies, the distribution is well below the percentage of the population as there are no branches. The distribution was augmented by two MUI tract branches that serve the moderateincome tracts. Examiners reviewed data on the accounts held and transactions conducted at the MUI branches and confirmed they were serving the adjacent moderate-income populations.

| Distribution of Branch Delivery System |  |  |  |  |  |  |  | As of December 31, 2019 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | $\begin{gathered} \text { Deposits } \\ \hline \% \text { of Rated } \\ \text { Area } \\ \text { Deposits in } \\ \text { AA } \\ \hline \end{gathered}$ | Branches |  |  |  |  |  | Population |  |  |  |
|  |  | \# of <br> BANK <br> Branches | \% of Rated Area Branches in AA | Location of Branches by Income of Geographies (\%) |  |  |  | \% of Population within Each Geography |  |  |  |
|  |  |  |  | Low | Mod | Mid | Upp | Low | Mod | Mid | Upp |
| Wheeling MSA | 100 | 2 | 100 | 0.0 | 0.0 | 50.0 | 50.0 | 0.0 | 15.0 | 65.4 | 19.6 |

* May not add up to 100 percent due to geographies with unknown tract income level and rounding

Alternative delivery systems did not enhance the delivery of banking services to geographies and individuals of all income levels. The OCC considered the availability and use of alternative delivery systems over the evaluation period. This included review of the bank's three deposit-taking ATMs, online banking, mobile banking, and telephone banking to determine the effectiveness of these systems to make retail banking services available to individuals in moderate-income geographies. The bank did not increase ATMs in the AA during the evaluation period and had no ATMs in moderate-income geographies. Additionally, bank-provided data on use of online, mobile, and telephone banking showed decreases in the adoption of these services by low- and moderate-income individuals from the prior rating period.

| Distribution of Branch Openings/Closings |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Net change in Location of Branches <br> $(+$ or -$)$ |  |  |  |  |
| Assessment <br> Area | \# of Branch <br> Openings | \# of Branch <br> Closings | Low | Mod | Mid | Upp |  |
| Wheeling <br> MSA | 0 | 3 | 0 | -2 | -1 | 0 |  |

The bank's closing of branches has significantly adversely affected the accessibility of its delivery systems, particularly in moderate-income geographies and/or to moderate-income individuals. The bank closed its two branches in moderate-income geographies. Prior to the branch closures, the branch distribution in moderate-income geographies exceeded the percentage of the population in those geographies. Branch closures were due to reduced customer usage and unprofitability. The branch closures reduced the accessibility to geographies and individuals of different income levels in the bank's AA.

Services, including where appropriate, business hours, vary in a way that significantly inconveniences the various portions of its AA, particularly moderate-income geographies and/or low-and moderateincome individuals. Generally, branches are open Monday through Friday from 9:00 am to 6:00 pm and on Saturday from 9:00 am to $2: 00 \mathrm{pm}$. However, due to the branch closures, the availability of low-cost or no-cost cash withdrawal services were negatively affected.

## Community Development Services

The bank provided an adequate level of CD services.
Bank records show that one employee provided technical assistance and/or job-specific expertise for 56 CD service activities to four organizations for a total of 65 qualified hours of service within the AA over a six-year period. Much of the bank's assistance was to organizations that provide community services
to low- and moderate-income individuals and families. The CD services provided were responsive to the identified need to homebuyer education. The following is an example of CD services provided in the AA:

- The bank employee provided 19 hours of homebuyer education to 36 moderate-income individuals on homeownership and the home loan approval process.


## State Rating

## State of Arizona

CRA rating for the State of Arizona ${ }^{8}$ : Satisfactory
The Lending Test is rated: High Satisfactory
The Investment Test is rated: High Satisfactory
The Service Test is rated: Outstanding
The major factors that support this rating include:

- An excellent level of lending activity.
- Adequate geographic distribution of home mortgage loans and small loans to businesses.
- Good borrower distribution of home mortgage loans and small loans to businesses.
- A relatively high level of CD loans, which positively affected the rating.
- The extensive use of innovative/flexible products, which positively affected the rating.
- A significant level of qualified investments that displayed excellent responsiveness to community development needs.
- The extensive use of complex investments.
- Retail service delivery systems that are readily accessible to geographies and individuals of different income levels.
- A high level of CD services that are responsive to AA needs.


## Description of Institution's Operations in Arizona

The state of Arizona is Chase's $7^{\text {th }}$ largest rating area based on aggregate deposits of $\$ 33.3$ billion, representing 2.5 percent of the bank's total deposits. As of December 31, 2019, the bank operated 227 branches and 648 deposit-taking ATMs within the rating area, representing 4.7 percent of total branches and 3.9 percent of total ATMs. The bank originated and purchased approximately $\$ 22.8$ billion in loans or 3.2 percent of total bank loan originations and purchases during the evaluation period in the state.

According to FDIC Deposit Market Share Data, as of June 30, 2019, there were 68 banks operating 1,157 branches in the state of Arizona. Chase ranked first in deposit market share with 23.5 percent. Major competitors in the state based on deposit market share include Wells Fargo Bank N.A. (21.5 percent); Bank of America, N.A. (17.5 percent), and Western Alliance Bank ( 6.7 percent).

The bank delineated eight AAs in Arizona. The Phoenix-Mesa-Chandler MSA and Tucson MSA, which respectively account for 77.0 percent and 11.3 percent of the bank's deposits in Arizona, received fullscope reviews. The Flagstaff MSA, Lake Havasu City-Kingman MSA, Prescott Valley-Prescott MSA, Sierra Vista-Douglas MSA, Yuma MSA, and AZ Non-MSA AA received limited-scope reviews. Refer to appendix A for a complete description of the AAs.

## Description of Full-Scope AAs

## Phoenix-Mesa-Chandler, AZ MSA

[^106]The following table provides a summary of the demographics that includes housing and business information for the Phoenix MSA AA. Table A indicates that the volume of OOUs is very small in lowincome CTs and over 21.9 percent of families in the AA are low-income. The area's median housing value in the Phoenix MSA AA is three times the MSA median income, but four times the moderate- and more than six times low-income, indicating a limited proportion of OOUs are affordable to LMI. Median rents and the significant percentage of families below poverty level suggest rental housing is also unaffordable for many low-income residents.

| Table A - Demographic Information of the Assessment Area Assessment Area: Phoenix-Mesa-Chandler AZ MSA 2017-2019 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Demographic Characteristics | \# | Low <br> \% of \# | Moderate \% of \# | Middle \% of \# | Upper \% of \# | $\begin{gathered} \text { NA* } \\ \text { \% of \# } \end{gathered}$ |
| Geographies (Census Tracts) | 991 | 11.1 | 23.3 | 32.9 | 31.4 | 1.3 |
| Population by Geography | 4,407,915 | 10.6 | 23.5 | 33.7 | 31.9 | 0.3 |
| Housing Units by Geography | 1,832,045 | 9.4 | 23.9 | 35.6 | 31.1 | 0.1 |
| Owner-Occupied Units by Geography | 967,478 | 4.5 | 19.6 | 37.1 | 38.7 | 0.0 |
| Occupied Rental Units by Geography | 602,639 | 16.7 | 29.7 | 32.6 | 20.8 | 0.2 |
| Vacant Units by Geography | 261,928 | 10.7 | 26.4 | 36.5 | 26.3 | 0.1 |
| Businesses by Geography | 439,910 | 6.1 | 16.3 | 30.0 | 47.1 | 0.5 |
| Farms by Geography | 8,508 | 5.9 | 19.4 | 32.2 | 42.2 | 0.3 |
| Family Distribution by Income Level | 1,036,417 | 21.9 | 17.3 | 19.5 | 41.3 | 0.0 |
| Household Distribution by Income Level | 1,570,117 | 23.4 | 16.5 | 17.9 | 42.2 | 0.0 |
| Median Family Income MSA - 38060 Phoenix-Mesa-Chandler, AZ MSA |  | \$63,686 | Median Housing Value |  |  | \$197,320 |
|  |  |  | Median Gross Rent |  |  | \$991 |
|  |  |  | Families Below Poverty Level |  |  | 12.5\% |
| Source: 2015 ACS and 2019 D\&B Data <br> Due to rounding, totals may not equal 100.0\% <br> (*) The NA category consists of geographies that have not been assigned an income classification. |  |  |  |  |  |  |

## Economic Data

According to Moody's Analytics November 2019 report, the strengths of the Phoenix-Mesa-Chandler, AZ MSA include robust population growth and in-migration; a hub for the relocation and expansion of financial and business services firms; and lower business costs than California. The large construction industry as well as undersize manufacturing and transportation and warehousing are propelling the economy, with each expanding headcount by more than 6.0 percent in the past year. The area remains a magnet for relocating residents and expanding businesses. There is ample demand to build new homes, healthcare facilities, stores, restaurants, offices, factories, and warehouses. Construction makes up an above-average 6.0 percent of total jobs. Major employment industries include professional and business services; education and health services; and government. The area is heavily reliant on finance jobs because its reasonable costs, large and fast-growing labor pool, and friendly business environment make it ideal for back-office and operations roles. Major employers in the area include Banner Health System; Walmart; Wells Fargo Bank, N.A.; and Arizona State University. Home price growth in the area has slowed in 2019 but is still faster than the nation. Some of the deceleration is due to a greater supply of single-family homes as housing starts accelerating.

## Community Contacts

Examiners considered four community contacts completed during the review period with entities serving the area. The contacts were with organizations focused on providing financing for affordable housing and economic development, and technical assistance to small businesses. Contacts noted that the area has a growing wealth gap. While there continues to be an influx of older and affluent individuals, many low-income residents struggle. There is a large population of young, Hispanic residents that is struggling and underserved. Housing costs in the city center are increasing and many low-income individuals must relocate to suburban areas and commute into Phoenix for work. According to the contacts, small businesses need access to smaller dollar loans for working capital purposes. Many smaller businesses utilize credit cards to meet short term smaller dollar amount credit needs. Also, nonprofit organizations in the area need support to help expand their capacity.

## Tucson, AZ MSA

The following table provides a summary of the demographics that includes housing and business information for the Tucson CSA AA. Table A below indicates that the volume of OOUs is very small in low-income CTs and over 39 percent of families in the AA are LMI. The area's median housing value in the Tucson CSA AA is three times the MSA median income, but over four times moderate-income, and more than six times low-income, indicating a limited proportion of OOUs are affordable to LMI. Median rents and the significant percentage of families below poverty level suggest rental housing is also unaffordable for many low-income residents.

| Table A - Demographic Information of the Assessment Area Assessment Area: 536 Tucson-Nogales AZ CSA 2017-2019 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Demographic Characteristics | \# | Low <br> \% of \# | Moderate \% of \# | Middle \% of \# | Upper <br> \% of \# | $\begin{aligned} & \text { NA* } \\ & \text { \% of \# } \end{aligned}$ |
| Geographies (Census Tracts) | 241 | 7.9 | 27.8 | 32.0 | 31.5 | 0.8 |
| Population by Geography | 998,537 | 9.1 | 27.1 | 31.2 | 32.1 | 0.5 |
| Housing Units by Geography | 446,769 | 8.8 | 27.1 | 31.6 | 32.4 | 0.1 |
| Owner-Occupied Units by Geography | 238,329 | 4.7 | 21.4 | 32.9 | 41.0 | 0.0 |
| Occupied Rental Units by Geography | 151,329 | 14.9 | 35.4 | 29.3 | 20.2 | 0.3 |
| Vacant Units by Geography | 57,111 | 10.0 | 28.4 | 32.1 | 29.4 | 0.1 |
| Businesses by Geography | 77,415 | 6.3 | 23.3 | 29.6 | 39.8 | 1.0 |
| Farms by Geography | 1,741 | 4.8 | 22.8 | 34.2 | 37.9 | 0.2 |
| Family Distribution by Income Level | 239,972 | 22.2 | 17.3 | 19.1 | 41.4 | 0.0 |
| Household Distribution by Income Level | 389,658 | 24.7 | 16.1 | 16.9 | 42.3 | 0.0 |
| Median Family Income MSA - 46060 Tucson, AZ MSA |  | \$57,457 | Median Housing Value |  |  | \$172,844 |
|  |  |  | Median Gross Rent |  |  | \$846 |
|  |  |  | Families Below Poverty Level |  |  | 13.3\% |
| Source: 2015 ACS and 2019 D\&B Data <br> Due to rounding, totals may not equal $100.0 \%$ <br> (*) The NA category consists of geographies that have not been assigned an income classification. |  |  |  |  |  |  |

## Economic Data

According to Moody's Analytics November 2019 report, the Tucson area economy is expanding. The area has a highly educated workforce thanks to the presence of the University of Arizona. The area has significant healthcare and hospitality industries due to robust tourism and retirement inflows. The area also has strength in defense related aerospace manufacturing as it is the location of the headquarters and factory of Raytheon's Missile Systems Division. The aerospace industry has accounted for 12.0 percent of the net job creation in the Tucson area since 2015. Since aerospace roles in Arizona pay an average annual wage of more than $\$ 100,000$, spending by aerospace workers in the area boosts the construction, healthcare, hospitality, and retail industries. Raytheon plans to add 1,000 employees during the next couple of years. Major employment industries include government; education and health services; and professional and business services. Major employers in the area include the University of Arizona, Raytheon Missile Systems; Davis Monthan Airforce Base, Walmart, Inc., and U.S. Customs and Border Patrol. House price gains exceed those nationally, however, this is due in part to a lack of supply. In addition, single-family homebuilding is flat despite accelerating population growth.

## Community Contacts

Examiners considered information from a Community contact completed during the examination period. The contact was with an organization focused on affordable housing and small business support and development. The contact noted that Hispanic small business owners are underserved and need assistance and support to gain access to mainstream banking services. The contact also noted that there is a need to bring equity to the community. Other needs identified in the community include affordable housing, fair wages, financial literacy, employee ownership, access to healthy food, and support for environmental sustainability initiatives.

## Scope of Evaluation in Arizona

The Phoenix-Mesa-Chandler, AZ MSA and Tucson, AZ MSA received full-scope reviews. The two MSAs combined account for 88.3 percent of the deposits and 90.3 percent of lending in the state. The Phoenix-Mesa Chandler, AZ MSA received greater weight based on the volume of deposits and lending. The remaining six AAs received a limited-scope review. Performance in limited-scope AAs and its effect on the CRA rating is discussed at the end of each test.

## CONCLUSIONS WITH RESPECT TO PERFORMANCE TESTS IN ARIZONA

## LENDING TEST

The bank's performance under the Lending Test in the state of Arizona is rated High Satisfactory.
Performance in AAs receiving limited-scope reviews was factored together with performance from AAs receiving full-scope reviews to determine the state's overall High Satisfactory Lending Test rating. Limited-scope conclusions did not significantly affect the initial overall conclusions based on the AAs receiving full-scope review.

## Conclusions for Areas Receiving Full-Scope Reviews

Based on full-scope reviews, the bank's performance in the Phoenix-Mesa-Chandler and TucsonNogales MSAs is good. Overall excellent lending levels and good borrower distribution of loans offset
weaker adequate geographic distribution. Product innovation and flexibility was considered favorably, and the relatively high level of CD lending positively affected the rating.

## Lending Activity

Lending levels reflect an excellent responsiveness to the credit needs in the bank's AAs.
Examiners considered the number and amount of home mortgage, small business, and small farm loans originated or purchased relative to Chase's capacity based on deposits, competition, and market presence. Lending activity for home mortgage and small loans to businesses received the most weight in reaching conclusions. Respectively, home mortgage lending and small loans to businesses account for 38.4 percent and 61.1 percent of the loan volume in the state by number and 86.2 and 12.4 percent of loan volume by dollar. Small farm lending is not a strategic focus of the bank and received minimal weight in reaching conclusions. Farm loans represented 0.45 percent of the loan volume in the state by number and 0.05 percent loan volume by dollar.

| Number of Loans* | Home <br> Mortgage | Small <br> Business | Small <br> Farm | Community <br> Development | Total | \% State <br> Loans | \% State <br> Deposits |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ahoenix-Mesa-Chandler <br> MSA | 61,239 | 99,860 | 628 | 27 | 161,754 | 78.0 | 77.0 |
| Tucson MSA | 10,479 | 14,887 | 77 | 9 | 25,452 | 12.3 | 11.3 |
| Flagstaff MSA | 1,186 | 2,212 | 15 | 0 | 3,413 | 1.6 | 1.0 |
| Lake Havasu City- <br> Kingman MSA | 1,694 | 2,396 | 16 | 0 | 4,106 | 2.0 | 2.2 |
| Prescott Valley-Prescott <br> MSA | 1,537 | 3,068 | 38 | 0 | 4,643 | 2.2 | 3.3 |
| Sierra Vista-Douglas <br> MSA | 506 | 843 | 38 | 0 | 1,387 | 0.7 | 0.8 |
| Yuma MSA | 1,123 | 1,124 | 64 | 2 | 2,313 | 1.1 | 1.4 |
| Arizona Non-MSA | 1,926 | 2,412 | 62 | 0 | 4,400 | 2.1 | 3.0 |
| Total | 79,690 | 126,802 | 938 | 38 | 207,468 | 100.0 | 100.0 |

*The tables present the data for all assessment areas. The narrative below addresses performance in full-scope areas only.

| Dollar Volume of Loans (\$000's)* |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home <br> Mortgage | Small <br> Business | Small <br> Farm | Community <br> Development | \% <br> Total | State* <br> Loans | \% State <br> Deposits |
| Phoenix-Mesa- <br> Chandler MSA | $15,355,222$ | $2,144,240$ | 8,655 | 226,836 | $17,734,953$ | 80.3 | 77.0 |
| Tucson MSA | $2,126,317$ | 327,989 | 874 | 52,911 | $2,508,091$ | 11.4 | 11.3 |
| Flagstaff MSA | 377,690 | 47,471 | 417 | 0 | 425,578 | 1.9 | 1.0 |
| Lake Havasu City- <br> Kingman MSA | 276,478 | 49,383 | 122 | 0 | 325,983 | 1.5 | 2.2 |
| Prescott Valley- <br> Prescott MSA | 360,138 | 60,719 | 291 | 0 | 421,148 | 1.9 | 3.3 |
| Sierra Vista-Douglas <br> MSA | 67,792 | 18,728 | 523 |  | 0 | 87,043 | 0.4 |
| Yuma MSA | 160,858 | 26,554 | 613 | 10,935 | 198,960 | 0.9 | 1.4 |
| Arizona Non-MSA | 313,406 | 67,066 | 883 | 0 | 381,355 | 1.7 | 3.0 |
| Total | $19,037,901$ | $2,742,150$ | 12,378 | 290,682 | $22,083,111$ | 100.0 | 100.0 |

[^107]Chase ranked first in deposits out of 63 institutions with 23.2 percent market share.
In overall home mortgage lending, Chase ranked second with 5.0 percent market share placing it in the top one percent of lenders. This is a very competitive market with 929 lenders and no single lender dominated the market. Other major home lenders with respective market shares are Wells Fargo Bank, N.A. (7.0 percent), U.S. Bank, N.A. (4.5 percent), and Quicken Loans (3.6 percent). The volume of loan originations made by non-banks to low- and moderate-income borrowers in Arizona increased by 22.0 percent between 2010 and 2018.

Chase ranked first in small loans to businesses with 20.9 percent market share. There were 208 lenders in the MSA. Other major lenders and market share are American Express National Bank (16.6 percent), Citibank, N.A. (14.4 percent), and Wells Fargo Bank, N.A. (10.5 percent).

Chase ranked first in small loans to farms with 33.5 percent market share. There were 30 lenders in the MSA. Other major lenders and market share are Wells Fargo Bank, N.A. (29.9 percent) and John Deere Financial, F.S.B. (10.9 percent).

## Tucson, AZ MSA

Chase ranked second in deposits out of 20 institutions with 23.2 percent market share.
In overall home mortgage lending, Chase ranked fourth with 4.4 percent market share placing it in the top 1 percent of lenders. This is a very competitive market with 557 home mortgage lenders. The top three lenders and market share are Nova Financial (10.6 percent), Wells Fargo Bank, N.A. (8.0 percent), and Sunstreet Mortgage ( 4.9 percent). The volume of loan originations made by non-banks to low- and moderate-income borrowers in Arizona increased by 22.0 percent between 2010 and 2018.

In small loans to business, Chase ranked first with 18.7 percent market share. There were 110 lenders in the MSA. Other major lenders and their market share are Citibank, N.A. (15.1 percent), American Express National Bank (14.1 percent), and Wells Fargo Bank, N.A. (12.1 percent).

Chase ranked first in small loans to farms with 38.6 percent market share. There were 13 lenders in the MSA. Other major lenders and market share are Wells Fargo Bank, N.A. (30.1 percent), Capital One , N.A. (9.9 percent), and U.S. Bank, N.A. (7.23 percent).

## Distribution of Loans by Income Level of the Geography

The bank exhibits an adequate geographic distribution of loans in its AAs.

## Home Mortgage Loans

Refer to Table O in the state of Arizona section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of home mortgage loan originations and purchases is adequate. The following information was taken into consideration when determining this rating.

## Phoenix-Mesa-Chandler MSA

- The limited proportion of housing units in low-income geographies, particularly OOUs (4.5 percent) and constrained lending opportunities were noted; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of OOUs in those geographies.
- The high level of competition in the AA (930 home mortgage lenders) was also considered and examiners placed greater significance on performance compared to the aggregate of lenders.
- Between 2017 and 2019, the proportion of loans in low-income geographies was below the percentage of OOUs and the aggregate distribution of lenders. In moderate-income geographies, the proportion of loans was below the percentage of OOUs and near to the aggregate distribution.
- Performance in low- and moderate-income geographies during the 2014 to 2016 period was consistent with performance during the 2017 to 2019 period.


## Tucson MSA

- The limited proportion of housing units in low-income geographies, particularly OOUs (4.7 percent) and constrained lending opportunities was noted; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of OOUs in those geographies.
- The high level of competition in the AA (930 home mortgage lenders) was also considered and examiners placed greater significance on performance compared to the aggregate of lenders.
- Between 2017 and 2019, the proportion of loans in low-income geographies was below the percentage of OOUs and the aggregate distribution of lenders. In moderate-income geographies, the proportion of loans was below the percentage of OOUs and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was weaker than performance in 2017 to 2019. The proportion of loans in low- income geographies was well below the percentage of OOUs and the aggregate distribution of lenders. In moderate-income areas, the distribution was below the percentage of OOUs and substantially met the aggregate distribution of lenders.


## Small Loans to Businesses

Refer to Table Q in the state of Arizona section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to businesses.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to businesses is adequate. The following information was taken into consideration when determining this rating.

## Phoenix-Mesa-Chandler MSA

- Between 2017 and 2019, the proportion of loans to small businesses in low- and moderate-income geographies was below the proportion of businesses in those geographies and the aggregate distribution.
- Performance in low- and moderate-income geographies during the 2014 to 2016 period was consistent with performance during the 2017 to 2019 period.


## Tucson MSA

- Between 2017 and 2019, the proportion of loans to small businesses in low- and moderate-income geographies was near to the proportion of businesses in those geographies and substantially met the aggregate distribution.
- During 2014 to 2016, the bank's performance was generally consistent with performance in 2017 to 2019. The 2014 to 2016 performance in low- and moderate-income geographies substantially met the proportion of businesses and respectively met and exceeded the aggregate distribution.


## Small Loans to Farms

Refer to Table S in the state of Arizona section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to farms.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to farms is good. The following information was taken into consideration when determining this rating.

## Phoenix-Mesa-Chandler MSA

- The limited percentage of farms in low-income geographies (5.5 percent) constrained lending opportunities; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of farms in those geographies.
- The high level of competition in the AA (30 lenders) and the fact that farm lending is not a focus of the bank was also considered and examiners placed greater significance on performance compared to the aggregate of lenders.
- Between 2017 and 2019, the proportion of loans to small farms in low- and moderate-income geographies was respectively well below and below the proportion of farms in those geographies and below the aggregate distribution.
- Performance in low- and moderate-income geographies during the 2014 to 2016 period was generally consistent with performance during the 2017 to 2019 period. The proportion of loans to small farms in low- and moderate-income geographies was respectively well below and below the proportion of farms in those geographies and below the aggregate distribution.


## Tucson MSA

- The limited percentage of farms in low-income geographies (4.4 percent) constrained lending opportunities; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of farms in those geographies.
- The high level of competition in the AA (13 lenders) and the fact that farm lending is not a focus of the bank was also considered and examiners placed greater significance on performance compared to the aggregate of lenders.
- Between 2017 and 2019, the bank made no small farm loans in low-income geographies. The proportion of loans to small farms in moderate-income geographies was near to the proportion of farms in those geographies and significantly exceeded the aggregate distribution.
- Performance in low- and moderate-income geographies during the 2014 to 2016 period was generally consistent with performance during the 2017 to 2019 period. The bank made no small farm loans in low-income geographies. The proportion of loans to small farms in moderate-income geographies was well below the proportion of farms in those geographies and the aggregate distribution.


## Lending Gap Analysis

A review of home mortgage loans, small loans to business, and small loans to farms including summary reports and AA maps did not identify any unexplained conspicuous lending gaps in the bank's activities.

## Distribution of Loans by Income Level of the Borrower

The bank exhibits a good distribution of loans among individuals of different income levels and business of different sizes.

## Home Mortgage Loans

Refer to Table P in the state of Arizona section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall borrower distribution of home mortgage loan originations and purchases for this evaluation is good. The following information was taken into consideration when determining this rating.

## Phoenix-Mesa-Chandler MSA

- Greater significance was placed on performance against the aggregate distribution as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Economic Data for this full-scope AA.
- Between 2017 and 2019, the proportion of loans to low-income borrowers was well below the percentage of low-income families and exceeded the aggregate distribution of lenders. The proportion of moderate-income loans exceeded both the proportion of moderate-income families and the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 to 2019. The proportion of loans to low-income borrowers was well below the percentage of lowincome families and exceeded the aggregate distribution of lenders. The proportion of moderateincome loans exceeded both the proportion of moderate-income families and the aggregate distribution.


## Tucson-Nogales MSA

- Greater significance was placed on performance against the aggregate distribution as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of the Full-Scope AA.
- Between 2017 and 2019, the proportion of loans to low-income borrowers was well below the percentage of low-income families and exceeded the aggregate distribution of lenders. The proportion of moderate-income loans exceeded both the proportion of moderate-income families and the aggregate distribution.
- During 2014 to 2016, the lending performance to low-income borrowers was generally consistent with the 2017 to 2019 performance while lending performance to moderate-income borrowers was slightly weaker. The proportion of loans to low-income borrowers was well below the percentage of low-income families and exceeded the aggregate distribution of lenders. The proportion of moderate-income loans met both the proportion of moderate-income families and the aggregate distribution.


## Small Loans to Businesses

Refer to Table R in the state of Arizona section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to businesses.

Based on the data in the table and the following considerations, the distribution of the bank's originations and purchases of small loans to businesses by revenue category is good. The following information was taken into consideration when determining this rating.

## Phoenix-Mesa-Chandler MSA

- Greater significance was placed on performance against the aggregate distribution of lenders as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of the Full-Scope AA.
- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 and 2019. The bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was well below the percentage of businesses and exceeded the aggregate distribution.


## Tucson-Nogales MSA

- Greater significance was placed on performance against the aggregate distribution lenders as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of the Full-Scope AA.
- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 and 2019. The bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.


## Small Loans to Farms

Refer to Table T in the state of Arizona section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to farms.

Based on the data in the table and the following considerations, the distribution of the bank's originations and purchases of small loans to farms by revenue category is good. The following information was taken into consideration when determining this rating.

## Phoenix-Mesa-Chandler MSA

- The high level of competition in the AA (30 lenders) and the fact that farm lending is not a focus of the bank was considered and examiners placed greater significance on performance compared to the aggregate of lenders.
- Between 2017 and 2019, the bank's percentage of loans to farms with revenues of $\$ 1$ million or less was below the percentage of businesses and substantially exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 and 2019. The bank's percentage of loans to farms with revenues of $\$ 1$ million or less was below the percentage of businesses and substantially exceeded the aggregate distribution.


## Tucson MSA

- The high level of competition in the AA (13 lenders) and the fact that farm lending is not a focus of the bank was considered and examiners placed greater significance on performance compared to the aggregate of lenders.
- Between 2017 and 2019, the bank's percentage of loans to farms with revenues of $\$ 1$ million or less was well below the percentage of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 and 2019. The bank's percentage of loans to farms with revenues of $\$ 1$ million or less was well below the percentage of businesses and exceeded the aggregate distribution.


## Community Development Lending

The bank has made a relatively high level of CD loans.
The Lending Activity Tables, shown above, set forth the information and data used to evaluate the bank's level of CD lending. These tables include all CD loans, including multifamily loans that also qualify as CD loans.

## Phoenix-Mesa-Chandler MSA

The bank made 27 CD loans in the AA for a total of $\$ 227$ million, which represents 6.9 percent of the tier 1 capital allocated to the AA. The bank's CD loans within the AA were responsive to identified community needs with the primary purposes of affordable housing and community service. The bank's CD loans for affordable housing helped create or retain approximately 900 affordable housing units.

Examples of CD loans include:

- In December 2018, the bank originated a $\$ 12$ million loan to finance the purchase of tax-exempt construction bonds. Proceeds of the purchase of the bonds were used to finance the new construction of an affordable housing development in Surprise, AZ. The project provided 100 affordable housing units that are restricted to households with income of 60 percent or less of the AMI.
- In May 2018, the bank originated a $\$ 3.8$ million loan to a school district. The school district serves a student population where 85 percent are from low- and moderate-income families. The funding was used to construct and renovate school facilities, including acquisition of land, improvement of the general facility and grounds, purchase of pupil transportation vehicles, and payment of costs associated with the issuance of the bonds.
- In April 2015, the bank funded a $\$ 3.7$ million Taxable Qualified School Construction Bond. The financing was used for the lease-purchase of equipment for three of the schools in district 210.


## Tucson-Nogales MSA

The bank made nine CD loans in the AA for a total of $\$ 53$ million, which represents 10.9 percent of the tier 1 capital allocated to the AA. The bank's CD loans within the AA were for the primary purposes of affordable housing and community service. The bank's CD loans were responsive in providing affordable housing and educational opportunities to meet the needs of those in the AA.

Examples of CD loans include:

- In June 2017, the bank provided a $\$ 1$ million loan to a non-profit organization that serves the rural poor throughout the state of Arizona, including the bank's AA. The entity offers education, training, and practical life skills.
- In June 2017, the bank funded an $\$ 11$ million loan for the construction of 70 units of housing in Tucson. All units were for individuals earning 60 percent or less of the AMI.
- In September 2017, the bank originated a $\$ 4.7$ million loan for construction of 80 affordable housing units in a multifamily project in the AA. The project consists of 100 multifamily units restricted to individuals earning 60 percent or less of the AMI.


## Product Innovation and Flexibility

The bank makes extensive use of innovative and/or flexible lending practices to serve credit needs in each of the full-scope AAs reviewed. Refer to the comments in the Product Innovation and Flexibility section in the front of this performance evaluation for program details.

## Phoenix-Mesa-Chandler MSA

The bank funded 10,237 loans totaling $\$ 2$ billion under the following innovative and/or flexible programs.

| Loan Type | Number of <br> Loans | Dollar Amount <br> $\mathbf{( \$ 0 0 0 ’ s )}$ |
| :--- | :---: | :---: |
| DreaMaker | 2,209 | 418,041 |
| FHA | 2,301 | 362,460 |
| HARP | 1,839 | 269,270 |
| VA | 1,956 | 474,197 |
| SBA | 642 | 268,729 |
| USDA | 1,290 | 180,610 |

## Tucson-Nogales MSA

The bank funded 2,648 loans totaling $\$ 432.7$ million under the following innovative and/or flexible programs.

| Loan Type | Number of <br> Loans | Dollar Amount <br> $\mathbf{( \$ 0 0 0 ’ s )}$ |
| :--- | :---: | :---: |
| DreaMaker | 190 | 27,588 |
| FHA | 699 | 95,629 |
| HARP | 483 | 59,134 |
| VA | 613 | 133,787 |
| SBA | 92 | 28,216 |
| USDA | 571 | 88,346 |

## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall High Satisfactory Lending Test rating and did not significantly change the initial overall conclusions based on the AAs receiving full-scope review. Based on limited-scope reviews, the bank's performance under the Lending Test in the Sierra Vista-Douglas MSA and Yuma MSA is consistent with the bank's overall good performance. The bank's performance in the Flagstaff MSA, Lake Havasu City-Kingman MSA, Prescott ValleyPrescott MSA, and Arizona Non-MSA is weaker than the bank's overall good performance due to weaker geographic distribution of loans and neutral CD lending.

Refer to Tables O through T in the state of Arizona section of appendix D for the facts and data that support these conclusions.

## INVESTMENT TEST

The bank's performance under the Investment Test in the state of Arizona is rated High Satisfactory.

## Conclusions for Areas Receiving Full-Scope Reviews

Based on full-scope reviews, the bank's performance in the Phoenix-Mesa-Chandler MSA and Tucson MSA is good.

## Phoenix-Mesa-Chandler MSA

The bank has a significant level of qualified CD investments and grants particularly those that are not routinely provided by private investors, although not in a leadership position. The current and prior period qualified investments represent 5.1 percent of tier 1 capital allocated to the AA. A large majority (75 percent) of total qualified investments were current period investments.

The bank exhibits excellent responsiveness to credit and community economic development needs. Ninety-two percent of investments support affordable housing, four percent support community services, and four percent support economic development. These categories are CD needs in the MSA. Fifty-five grants totaled $\$ 12$ million with 54.0 percent, 36.0 percent, and 8.0 percent, supporting revitalization/stabilization, community services and affordable housing, respectively. CD investments created or retained 4,592 affordable housing units.

The bank makes extensive use of complex investments to support CD initiatives. Eleven current period investments, or 73.6 percent of the total dollar of current investments are considered complex and are primarily Direct Investor LIHTCs. Direct Investor LIHTCs require bank expertise and capacity in selecting projects and partners, negotiating agreements, overseeing project development and operations, and ensuring compliance. One CD investment and five grants, or 7.5 percent of the total dollar of current investments are catalyst investment as they are related to NMTC financing or are for other community development activities that will encourage future growth and improvements in the area.

Examples of community development investments in the AA include:

- In 2019, the bank provided a $\$ 425$ thousand grant to a community development corporation based in Phoenix for its workforce and transit-oriented housing project. Funding is for predevelopment costs associated with the construction of 190 units of workforce and affordable housing in a low-income area. The project is located on an unoccupied site that is blighted and part of a transit-oriented development, near the Ed Pastor Transit Center (a major bus hub) and the future location of the light rail extension. The project aligns with the City of Phoenix's General Plan (2015), that has a specific component for transit-oriented development that speaks to including affordable and accessible housing for areas around light rail stations, and transit centers and hubs. This involved complex financing due to the number of sources required to support the program. This activity serves as a catalyst for other community development activities as it is part of a local government plan for revitalization or stabilization that will encourage future growth and improvements in the area.
- In 2015, the bank invested $\$ 14.5$ million in a LIHTC affordable housing project. The project is for the redevelopment of a distressed office building and the creation of a 74- units of affordable housing.


## Tucson MSA

The bank has an adequate level of qualified CD investments and grants particularly those that are not routinely provided by private investors, although not in a leadership position. Current and prior period qualified investments represent 2.8 percent of tier 1 capital allocated to the AA. A significant majority, or 98 percent, were current period investments.

The bank exhibits excellent responsiveness to credit and community economic development needs, including community services and affordable housing. All CD investments focused on affordable housing. Thirteen grants totaled $\$ 1.5$ million, with 89.0 percent and 11.0 percent supporting community services and affordable housing, respectively. CD investments created or retained 301 affordable housing units.

The bank makes extensive use of complex investments to support CD initiatives. An $\$ 11$ million Direct Investor LIHTC or 84.0 percent of current period investments was considered complex. Direct Investor transactions require bank expertise and capacity in selecting projects and partners, negotiating agreements, overseeing project development and operations, and ensuring compliance.

An example of a complex community development investments in the AA follows:

- In September 2019, the bank originated a $\$ 11$ million LIHTC equity investment for the new construction of a permanent supportive housing project in Tucson. The project will provide 50 units for homeless and formerly homeless individuals and families with a preference for veterans. Thirty units will be offered at 30 percent of AMI, eleven units at 50 percent and nine units at 60 percent of AMI. There will be 46 units covered by a project-based Section 8 rental assistance from the City of Tucson. An associated nonprofit organization will provide social and supportive services for the project along with the Arizona Department of Veterans Services and the Southern Arizona VA Health Care system. In addition, the bank will provide a $\$ 10.2$ million construction loan and a $\$ 2.2$ million permanent loan to complete the project.

| Qualified Investments - State of Arizona |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area (AA) | Prior Period* |  | Current Period |  | Total |  |  |  | Unfunded <br> Commitments** |  |
|  | \# | \$(000's) | \# | \$(000's) | \# | \% of Total \# | \$(000's) | \% of Total \$ | \# | \$(000's) |
| Full Review: |  |  |  |  |  |  |  |  |  |  |
| Phoenix-Mesa-Chandler MSA | 32 | 40,457 | 69 | 128,317 | 101 | 53.16 | 168,775 | 79.19 | 0 | 0 |
| Tucson-Nogales CSA | 4 | 308 | 15 | 13,076 | 19 | 10.00 | 13,384 | 6.28 | 0 | 0 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |
| Flagstaff MSA | 4 | 3,197 | 3 | 230 | 7 | 3.68 | 3,427 | 1.61 | 0 | 0 |
| Lake Havasu City-Kingman MSA | 4 | 334 | 3 | 1,030 | 7 | 3.68 | 1,364 | 0.64 | 0 | 0 |
| Prescott Valley-Prescott MSA | 7 | 4,292 | 0 | 0 | 7 | 3.68 | 4,292 | 2.01 | 0 | 0 |
| Sierra Vista-Douglas MSA | 1 | 34 | 1 | 2,025 | 2 | 1.05 | 2,059 | 0.97 | 0 | 0 |
| Yuma MSA | 4 | 6,131 | 3 | 2,444 | 7 | 3.68 | 8,686 | 4.08 | 0 | 0 |
| AZ Non-Metro AAs | 15 | 1,906 | 8 | 2,928 | 23 | 12.11 | 4,834 | 2.27 | 0 | 0 |
| Statewide Investments with Purpose, Mandate or Function (P/M/F) to Serve AAs | 0 | 0 | 16 | 6,302 | 16 | 8.42 | 6,302 | 2.96 | 0 | 0 |
| Statewide Investments with No Purpose, Mandate or Function (P/M/F) to Serve AAs | 1 | 9 | 0 | 0 | 1 | 0.53 | 9 | 0.00 | 0 | 0 |

* Prior Period Investments' means investments made in a previous evaluation period that are outstanding as of the examination date.
** Unfunded Commitments' means legally binding investment commitments that are tracked and recorded by the institution's financial reporting system.


## Statewide Investments in State of Arizona

The bank has qualified investments throughout the state of Arizona whose $\mathrm{P} / \mathrm{M} / \mathrm{F}$ include serving the AAs. All are grants to community development organizations supporting community services and economic development. There is one broader statewide investment with no $\mathrm{P} / \mathrm{M} / \mathrm{F}$ to serve a specific AA supporting affordable housing. The level of investments in the broader statewide area further supports the bank's overall good performance under the Investment Test in the state of Arizona.

## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall High Satisfactory Investment Test rating and did not significantly change the initial overall conclusions based on the AAs receiving full-scope review. Based on limited-scope reviews, the bank's performance under the Investment Test in the Sierra Vista-Douglas MSA is consistent with the bank's good performance in the full-scope areas. The bank's performance under the Investment Test in the Yuma MSA and Flagstaff MSA is stronger than the good in the full-scope areas due to higher levels of qualified investments. The bank's performance in the Lake Havasu City-Kingman MSA, Prescott Valley-Prescott MSA, and Arizona NonMSA AA is weaker than the bank's performance in the full-scope areas due to lower level of investments.

## SERVICE TEST

The bank's performance under the Service Test in the state of Arizona is rated Outstanding.

## Conclusions for Areas Receiving Full-Scope Reviews

Based on the full-scope reviews, the bank's performance in the Phoenix-Mesa-Chandler, AZ MSA is excellent and the performance in the Tucson-Nogales, AZ CSA is good. More weight was given to the Phoenix-Mesa-Chandler, AZ AA due to the bank's larger deposit base and branch presence.

## Retail Banking Services

Service delivery systems are readily accessible to geographies and individuals of different income levels in the bank's full-scope AAs.

Examiners evaluated the data as outlined in the Scope section at the front of this document including bank-provided data on usage of branches adjacent to low-and moderate-income geographies by individuals residing in those geographies and on increases in the usage of alternative delivery systems.

## Phoenix-Mesa-Chandler, AZ MSA

Based on the data in the table below and performance context, the branch distribution is excellent. In low- and moderate-income geographies the distribution is respectively below and near to the percentage of the population. The bank had nine branches in low-income geographies and 29 branches in moderate-income geographies. The distribution was augmented by three MUI tract branches that serve low-income tracts and 27 MUI tract branches that serve moderate-income tracts. Examiners reviewed data on the accounts held and transactions conducted at the MUI branches and confirmed they were serving the adjacent low- and moderate-income populations.

## Tucson-Nogales, AZ CSA

Based on the data in the table below and performance context, the branch distribution is good. In lowand moderate-income geographies, the distribution is respectively well below and exceeds the percentage of the population. The bank had one branch in a low-income geography and 12 branches in moderate-income geographies. The distribution was augmented by seven MUI tract branches that serve two low- and seven moderate-income tracts. Examiners reviewed data on the accounts held and transactions conducted at the adjacent MUI branches and confirmed they were serving those low- and moderate-income populations.

| Distribution of Branch Delivery System |  |  |  |  |  |  |  | As of December 31, 2019 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Deposits | Branches |  |  |  |  |  | Population |  |  |  |
|  | \% of Rated Area | $\begin{gathered} \text { \# of } \\ \text { BANK } \end{gathered}$ | \% of Rated | Location of Branches by Income of Geographies (\%) |  |  |  | \% of Population within Each Geography |  |  |  |
|  | AA |  | Branches <br> in AA | Low | Mod | Mid | Upp | Low | Mod | Mid | Upp |
| Phoenix- <br> Mesa- <br> Chandler MSA | 76.0 | 157 | 69.16 | 5.7 | 18.5 | 31.8 | 43.9 | 10.6 | 23.5 | 33.7 | 31.9 |
| TucsonNogales CSA | 11.3 | 37 | 16.29 | 2.7 | 32.4 | 24.3 | 37.8 | 9.1 | 27.1 | 31.2 | 32.1 |

*May not add up to 100 percent due to geographies with unknown tract income level and rounding.

## Phoenix-Mesa-Chandler, AZ MSA

Alternative delivery systems enhanced the delivery of banking services to geographies and individuals of all income levels. The OCC considered the availability and use of alternative delivery systems over the evaluation period. This included review of the bank's 466 deposit-taking ATMs, online banking, mobile banking, and telephone banking to determine the effectiveness of these systems to make retail banking services available to individuals in low- and moderate-income geographies. The bank increased the deposit-taking ATMs in low- and moderate-income geographies by 23.3 percent over the prior rating period to 36 ( 7.7 percent) deposit-taking ATMs in low-income geographies and 93 ( 20.0 percent) ATMs in moderate-income geographies. Additionally, bank-provided data on use of online, mobile, and telephone banking showed increases in the adoption of these services by low- and moderate-income individuals from the prior rating period.

## Tucson-Nogales, AZ CSA

Alternative delivery systems enhanced the delivery of banking services to geographies and individuals of all income levels. The OCC considered alternative delivery systems, including the bank's 153 deposit-taking ATMs, online banking, mobile banking, and telephone banking in evaluating the bank's ability to deliver retail banking services to individuals in LMI geographies. The bank increased the deposit-taking ATMs in low- and moderate-income geographies by 25.9 percent over the prior rating period to two ( 2.3 percent) deposit-taking ATMs in low-income geographies and 32 (36.4 percent) ATMs in moderate-income geographies. Bank-provided data for online, mobile, and telephone banking
showed increases in the adoption of these services by low- and moderate-income individuals from the prior rating period.

| Distribution of Branch Openings/Closings |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment <br> Area | \# of Branch <br> Openings | \# of Branch <br> Closings | Net change in Location of Branches <br> $(+$ or -$)$ |  |  |  |
|  |  | Low | Mod | Mid | Upp |  |
| Phoenix- <br> Mesa- <br> Chandler <br> MSA | 1 | 42 | 0 | -7 | -20 | -14 |
| Tucson- <br> Nogales CSA | 1 | 7 | -2 | -1 | -1 | -2 |

Phoenix-Mesa-Chandler, AZ MSA
The bank's opening and closing of branches has generally not adversely affected the accessibility of its delivery systems, particularly in low- and moderate-income geographies and/or to low- and moderateincome individuals. The bank did not open or close any branches in the low-income geographies and closed seven branches in moderate-income geographies. Branch closures were due to the bank's strategy to exit the market, reduced customer usage, and proximity to other Chase branches. Despite the branch closures, branch locations remained accessible to geographies and individuals of different income levels in the bank's AA.

Services, including where appropriate, business hours, do not vary in a way that inconveniences the AA, particularly low- and moderate-income geographies and/or individuals. Generally, branches are open Monday through Friday from 9:00 am to 6:00 pm and on Saturday from 9:00 am to 2:00 pm. All retail banking services are available at all branches within the low- and moderate-income geographies.

## Tucson-Nogales, AZ CSA

The bank's opening and closing of branches has generally not adversely affected the accessibility of its delivery systems, particularly in low- and moderate-income geographies and/or to low- and moderateincome individuals. The bank closed two branches in low-income geographies and one branch in a moderate-income geography. Branch closures were due to reduced customer usage and proximity to other Chase branches. Bank data indicated the use of nearby branches by individuals residing in lowand moderate-income geographies. The accessibility of the nearby branches to low-income individuals mitigates the impact of the branch closures.

Services, including where appropriate, business hours, do not vary in a way that inconveniences its AA, particularly low- and moderate-income geographies and/or individuals. Generally, branches are open Monday through Friday from 9:00 am to 6:00 pm and Saturday from 9:00 am to 1:00 pm. All retail banking services are available at all branches within the low- and moderate-income geographies.

## Community Development Services

## Phoenix-Mesa-Chandler, AZ MSA

The bank is a leader in providing CD services that are responsive to identified needs in the AA.

Bank employees provided financial, job-specific expertise, or technical assistance for 1,742 CD activities to 30 groups for a total of 8,058 hours during the evaluation period. The majority of the bank's assistance went to organizations that provide services to low- and moderate-income individuals and families. These services were responsive to the needs for financial literacy and affordable housing. The following are examples of CD services provided in this AA.

- Bank employees provided 139 homeownership and financial literacy seminars for low- and moderate-income customers through partnership with a non-profit organization.
- Bank employees provided more than 3,200 hours of financial literacy training through a partnership with a non-profit dedicated to educating students about entrepreneurship, work readiness, and financial literacy.


## Tucson-Nogales, AZ CSA

The bank is a leader in providing CD services that are responsive to identified needs in the AA.
Review of bank records show that employees provided financial or job-specific expertise and/or technical assistance for 240 CD services to eight organizations, for a total of 750 hours. A substantial amount of the bank's assistance was to organizations that provide community services to low- and moderate-income individuals and families. These services were responsive to the identified needs in the AA, including financial literacy, homebuyer education, and financial capability building. The following are examples of CD services provided in this AA.

- A bank employee provided a first-time homebuyer seminar for 26 low- and moderate-income individuals interested in homeownership in coordination with a nonprofit that served the low- and moderate-income community.
- A bank employee provided a financial literacy seminar to 20 low- and moderate-income individuals covering the basic concepts of financial literacy as it relates to everyday economics and how they apply this information into adulthood.


## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall Outstanding Service Test rating and did not significantly change the initial overall conclusions based on the AAs receiving fullscope review. Based on limited-scope reviews, the bank's performance under the Service Test in the Prescott, AZ and Yuma, AZ AAs is stronger than the bank's overall performance under the Service Test in the full-scope areas due to better branch distribution in low- and moderate-income geographies. The bank's performance under the Service Test in the Flagstaff, AZ; Lake Havasu City-Kingman, AZ; Sierra Vista-Douglas, AZ; and Arizona Non-Metropolitan AAs is weaker than the bank's overall performance under the Service Test in the full-scope areas due to weaker percentage of branch distribution in lowand moderate-income geographies.

## State Rating

## State of California

CRA rating for the State of California ${ }^{9}$ : Outstanding
The Lending Test is rated: Outstanding
The Investment Test is rated: Outstanding
The Service Test is rated: High Satisfactory
The major factors that support this rating include:

- An excellent level of lending activity.
- Excellent geographic distribution of home mortgage loans and small loans to businesses.
- Good borrower distribution of home mortgage loans and small loans to businesses.
- A leader in making CD loans, which positively affected the rating.
- The extensive use of innovative/flexible products, which positively affected the rating.
- An excellent level of qualified CD investments that displayed excellent responsiveness to community economic development needs.
- The significant use of complex investments.
- Broader statewide investments, which positively affected the rating.
- Retail service delivery systems that are accessible to geographies and individuals of different income levels.
- Leadership in providing CD services that are responsive to AA needs.


## Description of Institution's Operations in California

The state of California is Chase's $3^{\text {rd }}$ largest rating area based on aggregate deposits of $\$ 157.7$ billion, representing 11.2 percent of the bank's total deposits. As of December 31, 2019, the bank operated 977 branches and 3,875 ATMs within the rating area, representing 20 percent of total branches and 23.5 percent of total ATMs. The bank originated and purchased approximately $\$ 255.9$ billion in loans or 36.7 percent of total bank loan originations and purchases during the evaluation period in the state.

According to FDIC Deposit Market Share Data, as of June 30, 2019, there were 199 banks operating 6,734 branches in the state of California. Chase ranks third in deposit market share with 10.8 percent. Major competitors in the state based on deposit market share include Bank of America, N.A. ranked first (21.3 percent) and Wells Fargo Bank, N.A. ranked second (17.6 percent).

The bank delineated 15 AAs in the state of California. The Los Angeles-Long Beach, CA CSA (Los Angeles or LA CSA), San Jose-San Francisco-Oakland, CA CSA (San Francisco or SF CSA), and Bakersfield MSA, which combined account for nearly 82 percent of the deposits and 79 percent of lending in the state, received full-scope reviews. The Chico MSA, El Centro MSA Fresno-Madera CSA, Modesto-Merced CSA, Redding-Red Bluff CSA, Sacramento-Roseville CSA, Salinas MSA, San Diego-Chula Vista-Carlsbad MSA, San Luis Obispo-Paso Robles MSA

[^108]Santa Maria-Santa Barbara MSA, Visalia-Porterville-Hanford CSA, and the California Non-MSA received limited-scope reviews. The Refer to appendix A for a complete description of each AA.

## Description of Full-Scope AAs

## Los Angeles CSA

The following table provides a summary of the demographics that includes housing and business information for the Los Angeles CSA. Table A indicates that the volume of OOUs is small in lowincome census tracts ( 2.6 percent) and over 23.9 percent of families in the AA are low-income. The Los Angeles CSA's high cost of housing also limits access to affordable homeownership among LMI borrowers. The median housing value in the Los Angeles CSA ranges from five to seven times the median income, over ten times the moderate-income, and up to 14 times the low-income, indicating a limited proportion of OOUs are affordable to low- and moderate-income borrowers. The NAR 4Q2019 median sales price was $\$ 617,300$ for the Los Angeles CSA. One simplistic method used to determine housing affordability assumes a maximum monthly principal and interest payment of no more than 30 percent of the applicant's income.

In the Los Angeles CSA, assuming a 30-year mortgage with a 5 percent interest rate, and not accounting for down payment, homeowners insurance, real estate taxes, or any additional monthly expenses, a lowincome borrower making $\$ 38,576$ per year (or less than 50 percent of the FFIEC adjusted median family income in the MSA) could afford a $\$ 179,650$ mortgage with a payment of $\$ 964$ per month; a moderateincome borrower earning $\$ 61,726$ per year (or less than 80 percent of the FFIEC adjusted median family income in the AA) could afford a $\$ 287,460$ mortgage with a payment of $\$ 1,543$ per month.

Median rents and the significant percentage of families below poverty level suggest rental housing is also unaffordable for many low-income residents.

| Table A - Demographic Information of the Assessment Area Assessment Area: Los Angeles CSA 2017-2019 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Demographic Characteristics | \# | $\begin{aligned} & \text { Low } \\ & \text { \% of \# } \end{aligned}$ | Moderate \% of \# | Middle \% of \# | Upper <br> \% of \# | $\begin{gathered} \text { NA* } \\ \text { \% of \# } \end{gathered}$ |
| Geographies (Census Tracts) | 3,925 | 8.1 | 28.5 | 28.6 | 33.2 | 1.6 |
| Population by Geography | 18,388,091 | 7.6 | 28.6 | 29.4 | 33.8 | 0.5 |
| Housing Units by Geography | 6,346,543 | 6.7 | 26.2 | 29.2 | 37.5 | 0.4 |
| Owner-Occupied Units by Geography | 3,074,292 | 2.6 | 18.6 | 30.8 | 47.9 | 0.1 |
| Occupied Rental Units by Geography | 2,780,656 | 11.3 | 34.6 | 27.1 | 26.4 | 0.6 |
| Vacant Units by Geography | 491,595 | 6.4 | 26.1 | 31.5 | 35.3 | 0.7 |
| Businesses by Geography | 1,537,819 | 4.7 | 19.9 | 27.2 | 46.6 | 1.5 |
| Farms by Geography | 19,819 | 3.7 | 20.7 | 31.7 | 43.3 | 0.6 |
| Family Distribution by Income Level | 4,090,774 | 23.9 | 16.5 | 17.6 | 42.0 | 0.0 |
| Household Distribution by Income Level | 5,854,948 | 25.3 | 15.6 | 16.5 | 42.6 | 0.0 |

Charter Number: 8

| Median Family Income MSA - <br> 11244 Anaheim-Santa Ana-Irvine, <br> CA | $\$ 86,003$ | Median Housing Value | $\$ 449,452$ |
| :--- | :--- | :--- | :---: |
| Median Family Income MSA - <br> 31084 Los Angeles-Long Beach- <br> Glendale, CA | $\$ 62,703$ | Median Gross Rent | $\$ 1,330$ |
| Median Family Income MSA - <br> 37100 Oxnard-Thousand Oaks- <br> Ventura, CA MSA | $\$ 86,766$ | Families Below Poverty Level | $13.1 \%$ |
| Median Family Income MSA - <br> 40140 Riverside-San Bernardino- <br> Ontario, CA MSA | $\$ 61,507$ |  |  |
| Source: 2015 ACS and 2019 D\&B Data <br> Due to rounding, totals may not equal I lon.0\% <br> () The NA category consists of geographies that have not been assigned an income classification. |  |  |  |

## Economic Data

According to the Moody's Analytics November 2019 report, the strengths of the Los Angeles area include a strong healthcare base and growing technology presence that provides well-paying jobs: and global links through tourism, entertainment, and tourism. However, the labor market is tight, and at 4.4 percent the jobless rate is at a historic low. Difficulty finding labor is driving up wages and pressuring profits. The area has a high cost of living and a high cost of doing business and is prone to disasters such as drought, wildfires, and earthquakes; all issues that can impact population migration.

The Los Angeles area has long been the epicenter of the entertainment industry, however, the outlook for the area's entertainment industry is uncertain. Los Angeles is losing out to North Carolina, Michigan, Georgia, Louisiana, and other localities that have spent millions to attract film productions.

Major employment sectors include education and health services; professional and business services; government; and leisure and hospitality services. Major employers in the Los Angeles area include University of California Los Angeles; Kaiser Permanente; University of Southern California; and Northrup Grumman Corp. In terms of housing, labor shortages and higher material costs are limiting new residential construction. Multifamily starts are flat this year and single-family starts, though up since the first quarter, are below the 2018 average.

## Community Contacts

Four community contacts completed during the examination period were reviewed to gain an understanding of the needs in the community. Contacts were completed with organizations focused on affordable housing and economic development/small business. Contacts noted that the Los Angeles area has an extremely diverse population. Gentrification and displacement are a concern as low-income individuals get pushed out of certain communities and must relocate to more affordable areas within the region. Parts of the area such as Los Angeles and the Oxnard-Thousand Oaks-Ventura area have a very high cost of living which poses multiple challenges for low-income residents. Contacts also noted that there is a lack of private capital flowing into low- and moderate-income areas. Credit and community development needs mentioned for the area include:

- Affordable rental housing in areas experiencing population growth
- Homebuyer counseling
- Support for financial education/literacy and self-sufficiency programs for low-income households and individuals
- Technical assistance for small businesses
- Flexible capital resources for newer small businesses; and
- More financing for affordable multi-family housing development.

Contacts noted that there are numerous opportunities for banks to help address credit and community development needs by offering flexible lending products for both affordable housing and small businesses; grant support; and technical assistance to non-profit organizations.

## $\underline{\text { San Francisco CSA }}$

The following table provides a summary of the demographics that includes housing and business information for the San Francisco CSA. Table A indicates that the volume of OOUs is small in lowincome census tracts ( 3.9 percent) and over 23.9 percent of families in the AA are low-income. The San Francisco CSA's high cost of housing also limits access to affordable homeownership among LMI borrowers. The area's median housing value in the San Francisco CSA ranges from five to ten times the median income. The NAR 4Q2019 median sales price was $\$ 990,000$ for the San Francisco CSA. One simplistic method used to determine housing affordability assumes a maximum monthly principal and interest payment of no more than 30 percent of the applicant's income.

Using the same assumptions as above for the San Francisco CSA, a low-income borrower making $\$ 57,486$ per year (or less than 50 percent of the FFIEC adjusted median family income in the MSA) could afford a $\$ 267,715$ mortgage with a payment of $\$ 1,437$ per month; a moderate-income borrower earning $\$ 91,985$ per year (or less than 80 percent of the FFIEC adjusted median family income in the AA) could afford a $\$ 428,378$ mortgage with a payment of $\$ 2,300$ per month.

| Table A - Demographic Information of the Assessment Area Assessment Area: San Francisco CSA 2017-2019 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Demographic Characteristics | \# | Low percent of \# | Moderate percent of \# | Middle percent of \# | Upper percent of \# | $\begin{gathered} \text { NA* } \\ \text { percent } \\ \text { of \# } \end{gathered}$ |
| Geographies (Census Tracts) | 1,791 | 9.9 | 22.2 | 34.4 | 32.3 | 1.3 |
| Population by Geography | 8,493,558 | 9.3 | 22.5 | 35.8 | 32.0 | 0.4 |
| Housing Units by Geography | 3,185,146 | 8.9 | 21.3 | 36.0 | 33.4 | 0.3 |
| Owner-Occupied Units by Geography | 1,659,837 | 3.9 | 17.0 | 37.4 | 41.6 | 0.1 |
| Occupied Rental Units by Geography | 1,333,808 | 14.7 | 26.5 | 34.4 | 23.7 | 0.6 |
| Vacant Units by Geography | 191,501 | 12.1 | 21.9 | 35.8 | 29.6 | 0.6 |
| Businesses by Geography | 729,357 | 8.7 | 18.4 | 32.9 | 39.5 | 0.5 |
| Farms by Geography | 14,870 | 4.9 | 17.5 | 39.6 | 38.0 | 0.1 |
| Family Distribution by Income Level | 1,986,669 | 23.9 | 16.2 | 18.4 | 41.5 | 0.0 |
| Household Distribution by Income Level | 2,993,645 | 25.7 | 15.1 | 16.7 | 42.5 | 0.0 |
| Median Family Income MSA - 34900 Napa, CA MSA |  | \$80,921 | Median Housing Value |  |  | \$600,004 |
| Median Family Income MSA - 36084 Oakland-Berkeley-Livermore, CA |  | \$93,822 | Median Gross Rent |  |  | \$1,512 |

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| Median Family Income MSA - 41884 San <br> Francisco-San Mateo-Redwood City, CA | $\$ 103,742$ | Families Below Poverty Level | $8.0 \%$ |
| :--- | :--- | :--- | :--- |
| Median Family Income MSA - 41940 San Jose- <br> Sunnyvale-Santa Clara, CA MSA | $\$ 107,126$ |  |  |
| Median Family Income MSA - 42034 San <br> Rafael, CA | $\$ 121,130$ |  |  |
| Median Family Income MSA - 42100 Santa <br> Cruz-Watsonville, CA MSA | $\$ 81,912$ |  |  |
| Median Family Income MSA - 42220 Santa <br> Rosa-Petaluma, CA MSA | $\$ 77,587$ |  |  |
| Median Family Income MSA - 44700 Stockton, <br> CA MSA | $\$ 59,946$ |  |  |
| Median Family Income MSA - 46700 Vallejo, <br> CA MSA | $\$ 77,061$ |  |  |

Source: 2015 ACS and 2019 D\&B Data
Due to rounding, totals may not equal 100.0 percent
(*) The NA category consists of geographies that have not been assigned an income classification.

## Economic Data

According to Moody's Analytics November 2019 Report, the economy in the area is strong. The unemployment rate is historically low. The San Francisco and San Jose portions of the AA have a welleducated and highly skilled workforce. Technology firms are the driving force of the economy, particularly in Silicon Valley, located in the southern portion of the region. The Oakland portion of the assessment area benefits from its proximity to Silicon Valley and is a more affordable option for technology firms looking for a Bay Area address with lower cost industrial and office space. The Bay Area is the world's premier destination for the development of new tech products and services, and Oakland is an escape valve for neighboring San Francisco. Educational attainment is also among the nation's highest and the area boasts major universities, national laboratories, and many private sector technology firms. Weaknesses within these portions of the AA include high living costs, congestion, and the high cost of housing. Housing affordability is a significant concern in this portion of the AA. The housing market is tight and low affordability is weighing on housing demand. Major employment industries in the area include professional and business services and education and health services. Major employers include Apple, Inc.; Alphabet; Stanford University; University of California San Francisco, Genentech; and Wells Fargo Bank, N.A.

## Community Contacts

Six community contacts completed with organizations serving the area during the examination period were reviewed to ascertain credit and community development needs. Contacts were completed with organizations focused on affordable housing; small business and economic development; community services; youth services; and workforce development. Contacts noted that housing costs in the area are skyrocketing and that households need incomes more than $\$ 150,000$ to qualify for a mortgage, provided they can even find a house to purchase. This is especially a challenge in Oakland and San Francisco. Many low- and moderate-income households are being displaced as higher wage-earning individuals move into areas that have previously been deemed affordable. There is a growing wealth gap in the area. The "gig economy" (without benefits) is taking the place of full-time employment. Commercial space is hard to find, impacting small businesses. Small mom and pop businesses in what had traditionally been low-income neighborhoods are being displaced. Employees of smaller businesses can
no longer afford to live in the city centers and are being forced to move further away to areas that are more affordable thereby increasing commute times and congestion. Contacts identified multiple community needs and indicated that there are ample opportunities for financial institutions to support these needs. Needs identified include the following:

- Grants for a variety of needs including operations, loan loss reserves, small business, foreclosure prevention, financial education, and technical assistance providers were mentioned;
- Multi-year grant commitments;
- Financial literacy education by partnering with non-profit organizations that is customized for various community needs such as refugees, small businesses, and consumers;
- Small dollar loans for small businesses (\$500-\$50,000);
- Funding for Micro-lending Programs;
- Small business loans including term loans and lines of credit;
- Consumer loans tailored for low- and/or moderate-income;
- Pilot special programs with nonprofits for first time home buyers and small businesses;
- Down Payment Assistance programs;
- CDFI investments; and
- Equity equivalent investments to provide low cost capital.


## Bakersfield MSA

The following table provides a summary of the demographics that includes housing and business information for the Bakersfield MSA. Table A indicates that the volume of OOUs is small in lowincome census tracts ( 5.6 percent) and over 24.8 percent of families in the AA are low-income. The Bakersfield MSA's cost of housing is generally more reasonable than the nearby Los Angeles area making access to homeownership generally more affordable for moderate-income borrowers, though a challenge for low-income borrowers. The median housing value in the Bakersfield MSA $(\$ 160,795)$ is three times the median income. One simplistic method used to determine housing affordability assumes a maximum monthly principal and interest payment of no more than 30 percent of the applicant's income.

Using the similar assumptions as above for the Bakersfield MSA, a low-income borrower making $\$ 26,324$ per year (or less than 50 percent of the FFIEC adjusted median family income in the MSA) could afford a $\$ 74,213$ mortgage with a payment of $\$ 789$ per month; a moderate-income borrower earning $\$ 42,119$ per year (or less than 80 percent of the FFIEC adjusted median family income in the AA) could afford a 154,113 mortgage with a payment of $\$ 1,263$ per month.

| Table A - Demographic Information of the Assessment Area Assessment Area: Bakersfield MSA 2017-2019 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Demographic Characteristics | \# | Low percent of \# | Moderate percent of \# | Middle percent of \# | Upper percent of \# |  |
| Geographies (Census Tracts) | 151 | 9.3 | 26.5 | 29.1 | 31.8 | 3.3 |
| Population by Geography | 865,736 | 9.7 | 23.3 | 31.8 | 33.0 | 2.3 |
| Housing Units by Geography | 289,529 | 9.9 | 21.6 | 32.9 | 35.5 | 0.1 |
| Owner-Occupied Units by Geography | 147,125 | 5.6 | 15.8 | 32.3 | 46.2 | 0.1 |

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| Occupied Rental Units by Geography | 112,575 | 14.8 | 29.3 | 31.9 | 23.9 | 0.1 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Vacant Units by Geography | 29,829 | 13.1 | 21.4 | 39.3 | 26.1 | 0.1 |
| Businesses by Geography | 43,852 | 5.7 | 19.9 | 27.5 | 46.1 | 0.7 |
| Farms by Geography | 1,732 | 4.5 | 20.9 | 32.2 | 40.3 | 2.1 |
| Family Distribution by Income Level | 196,097 | 24.8 | 16.4 | 16.1 | 42.7 | 0.0 |
| Household Distribution by Income Level | 259,700 | 25.5 | 16.2 | 15.8 | 42.6 | 0.0 |
| Median Family Income MSA - 12540 <br> Bakersfield, CA MSA | $\$ 52,649$ | Median Housing Value | $\$ 160,795$ |  |  |  |
|  |  | Median Gross Rent | $\$ 927$ |  |  |  |
|  | Families Below Poverty Level | $19.4 \%$ |  |  |  |  |

Source: 2015 ACS and 2019 D\&B Data
Due to rounding, totals may not equal 100.0 percent
(*) The NA category consists of geographies that have not been assigned an income classification.

## Economic Data

According to Moody's Analytics November 2019 report, the Bakersfield area's strengths include a favorable location for warehousing and distribution: abundant farmland, and a young population with improving migration. The area's weaknesses include low industrial diversity; low educational attainment; and high poverty. The area has fallen behind Fresno as the state's largest agriculturalproducing county, and the area's farming sector will require fewer workers over the short term. Table grapes, the metro area's largest crop, will likely see a smaller harvest in 2019 than in the previous year. Prices hit a five-year low earlier in 2019 and remain below the long-term average, pressuring farmers’ bottom lines. Bakersfield is the world's largest almond producer and according to government estimates, the almond harvest will be similarly reduced. Labor costs remain high, exacerbated by stricter immigration policies that disproportionately affect agriculture by limiting access to seasonal migrant workers. Bakersfield does have a large military presence, which helps to provide some economic stability to the area. Major employers in the area include Edwards Airforce Base; China Lake Naval Weapons Center; Grimmway Farms; and Bolthouse Farms. Despite a stable number of housing starts and steady, above-average price appreciation, low affordability in this high-poverty metro area is holding back stronger growth.

## Community Contacts

Two community contacts completed during the examination period with organizations serving the AA were reviewed. Contacts were completed with organizations focused on affordable housing and small business. Contacts noted that the area has a high percentage of very low-income households. Opportunities exist for local financial institutions to provide direct services like flexible branch hours, low cost savings accounts, and other products tailored to low-income individuals. Contacts indicated that there is a huge need for affordable housing. The county has lower housing costs relative to the rest of the state; however, income levels are also very low. The supply of affordable housing has not kept up with demand. In addition to affordable housing, other needs identified in the area include:

- Small business lending; particularly micro-loans and smaller dollar business loans;
- Collaboration for regional economic development;
- Financial support for start-up businesses; and
- Grants, loan capital or land to non-profit organizations to help with operating costs and other financing programs.


## Scope of Evaluation in California

The Los Angeles CSA, San Francisco CSA, and Bakersfield MSA received full-scope reviews. The Los Angeles CSA and San Francisco CSA combined account for nearly 82 percent of the deposits and 79 percent of lending in the state. More weight was placed on performance in the Los Angeles CSA based on the bank's higher level of deposits and lending. The Bakersfield MSA was also evaluated using fullscope procedures as it has not received a full-scope review in prior performance evaluations. The remaining 12 AAs in the state of California received limited-scope reviews. Performance in limitedscope AAs and their effect on the CRA rating are discussed at the end of each test.

## CONCLUSIONS WITH RESPECT TO PERFORMANCE TESTS IN CALIFORNIA

## LENDING TEST

The bank's performance under the Lending Test in the state of California is rated Outstanding.
Performance in AAs receiving limited-scope reviews was factored together with performance from AAs receiving full-scope reviews to determine the state's overall Outstanding Lending Test rating. Limitedscope conclusions did not significantly affect the initial overall conclusions based on the AAs receiving full-scope review.

## Conclusions for Areas Receiving Full-Scope Reviews

Based on full-scope reviews, the bank's performance in the Los Angeles CSA and the San Francisco CSA is excellent and performance in the Bakersfield MSA is good. Overall excellent lending levels, geographic distribution of loans, and CD lending offset weaker but good borrower distribution. Product innovation and flexibility was considered favorably.

## Lending Activity

Lending levels reflect an excellent responsiveness to the credit needs in the bank's AAs.
Examiners considered the number and amount of home mortgage, small business, and small farm loans originated or purchased relative to Chase's capacity based on deposits, competition, and market presence. Lending activity for home mortgage and small loans to businesses received the most weight in reaching conclusions. Respectively, home mortgage lending and small loans to businesses account for 27.4 percent and 71.7 percent of the loan volume in the state by number and 89.3 and 6.5 percent of loan volume by dollar. Small farm lending is not a strategic focus of the bank and received minimal weight in reaching conclusions. Farm loans represented 0.5 percent of the loan volume in the state by number and 0.03 percent loan volume by dollar.

| Number of Loans* |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home Mortgage | Small <br> Business | Small <br> Farm | Community <br> Development | Total |  | \% State <br> Deposits |
| Los Angeles-Long Beach CSA | 167,068 | 479,243 | 1,321 | 2,616 | 650,248 | 49.7 | 53.6 |
| San Jose-San Francisco-Oakland CSA | 105,067 | 271,815 | 1,510 | 842 | 379,234 | 29.0 | 28.2 |
| Bakersfield MSA | 3,240 | 7,990 | 200 | 13 | 11,443 | 0.9 | 0.8 |
| Sacramento-Roseville CSA | 20,641 | 47,093 | 547 | 194 | 68,475 | 5.2 | 3.5 |
| Fresno-Madera CSA | 4,988 | 10,619 | 670 | 24 | 16,301 | 1.3 | 1.0 |
| Modesto-Merced CSA | 4,954 | 5,558 | 460 | 4 | 10,976 | 0.8 | 0.8 |
| Visalia-Porterville-Hanford CSA | 1,506 | 1,280 | 130 | 0 | 2,932 | 0.2 | 0.1 |
| Redding-Red Bluff CSA | 1,245 | 2,755 | 72 | 4 | 4,076 | 0.3 | 0.2 |
| Salinas MSA | 3,375 | 5,292 | 109 | 25 | 8,801 | 0.7 | 1.1 |
| San Diego-Carlsbad MSA | 36,614 | 85,799 | 444 | 526 | 123,383 | 9.4 | 8.2 |
| San Luis Obispo-Paso Robles MSA | 3,142 | 6,294 | 155 | 8 | 9,599 | 0.7 | 0.7 |
| Santa Maria-Santa Barbara MSA | 3,932 | 8,257 | 144 | 28 | 12,361 | 0.9 | 0.9 |
| Chico MSA | 975 | 2,618 | 111 | 7 | 3,711 | 0.3 | 0.5 |
| El Centro MSA | 649 | 809 | 52 | 5 | 1,515 | 0.1 | 0.1 |
| California Non-MSA | 1,364 | 3,810 | 167 | 6 | 5,347 | 0.4 | 0.5 |
| Total | 358,760 | 939,232 | 6,092 | 4,302 | 1,308,386 | 100.0 | 100.0 |

*Due to rounding, totals may not equal $100.0 \%$. The tables present the data for all assessment areas. The narrative below addresses performance in fullscope areas only.

## Dollar Volume of Loans* (\$000s)

| Assessment Area | Home <br> Mortgage | Small <br> Business | Small <br> Farm | Community <br> Development | Total | State <br> Loans | \% State <br> Deposits |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Los Angeles-Long Beach CSA | $113,225,890$ | $9,120,145$ | 17,269 | $4,890,864$ | $127,254,168$ | 49.7 | 53.6 |
| San Jose-San Francisco-Oakland <br> CSA | $74,692,069$ | $4,380,661$ | 17,083 | $3,138,949$ | $82,228,762$ | 32.1 | 28.2 |
| Bakersfield MSA | 693,896 | 160,848 | 3,872 | 42,644 | 901,259 | 0.4 | 0.8 |
| Sacramento-Roseville CSA | $8,965,703$ | 739,510 | 5,754 | 597,973 | $10,308,940$ | 4.0 | 3.5 |
| Fresno-Madera CSA | $1,140,225$ | 200,063 | 9,620 | 90,917 | $1,440,825$ | 0.6 | 1.0 |
| Modesto-Merced CSA | $1,075,741$ | 89,542 | 5,421 | 9,186 | $1,179,890$ | 0.5 | 0.8 |
| Visalia-Porterville-Hanford CSA | 283,404 | 23,597 | 1,715 | 0 | 308,716 | 0.1 | 0.1 |
| Redding-Red Bluff CSA | 252,444 | 43,799 | 564 | 9,721 | 306,528 | 0.1 | 0.2 |
| Salinas MSA | $1,877,577$ | 91,665 | 2,034 | 73,308 | $2,044,584$ | 0.8 | 1.1 |
| San Diego-Carlsbad MSA | $21,451,722$ | $1,547,137$ | 5,621 | $1,314,893$ | $24,319,373$ | 9.5 | 8.2 |
| San Luis Obispo-Paso Robles <br> MSA | $1,409,194$ | 107,926 | 1,679 | 19,738 | $1,538,537$ | 0.6 | 0.7 |
| Santa Maria-Santa Barbara MSA | $2,956,717$ | 139,501 | 1,964 | 105,779 | $3,203,961$ | 1.3 | 0.9 |
| Chico MSA | 278,389 | 51,358 | 1,819 | 30,342 | 361,908 | 0.1 | 0.5 |
| El Centro MSA | 108,234 | 16,499 | 708 | 28,054 | 153,495 | 0.1 | 0.1 |
| California Non-MSA Total <br> (Ukiah, Eureka-Arcata, Inyo | 316,368 | 50,133 | 2,018 | 12,585 | 381,104 | 0.2 | 0.5 |


|  |  |  |  |  | Charter Number: 8 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| County, Siskiyou County, Clearlake, and Crescent City) |  |  |  |  |  |  |  |
| Total | 228,727,573 | 16,762,384 | 77,141 | 10,364,950 | 255,932,050 | 100.0 | 100.0 |

*Due to rounding, totals may not equal $100.0 \%$. The tables present the data for all assessment areas. The narrative below addresses performance in fullscope areas only.

## $\underline{\text { Los Angeles CSA }}$

Chase ranked third in deposits out of 130 institutions with a market share of 13.2 percent.
In overall home mortgage lending, Chase ranked third out of 1,057 lenders with a 5.5 percent market share. No single lender dominated the market. The two lenders ranked first and second in the market are respectively Wells Fargo Bank, N.A. ( 7.7 percent) and Bank of America, N.A. ( 6.9 percent).

In small loans to businesses, Chase ranked second out of 275 lenders with 18.1 percent market share. Other major lenders are American Express National Bank (21.8 percent), Bank of America, N.A. (13.6 percent, and Citibank, N.A. (12.3 percent).

In small loans to farms, Chase ranked first out of 30 lenders with a 29.5 percent market share. The other major lenders and respective market shares are Wells Fargo Bank, N.A. (21.7 percent), Bank of America, N.A. (17.8 percent), and U.S. Bank, N.A. (14.1 percent).

## San Francisco CSA

Chase ranked fifth in deposits out of 92 institutions with a 7.7 percent market share.
In overall home mortgage lending, Chase ranked third out of 855 home mortgage lenders with 6.0 percent market share placing it in the top one percent of lenders. This is a very competitive market. The two lenders ranked first and second in the market are respectively Wells Fargo Bank, N.A. (11.6 percent), and Bank of America, N.A. (8.9 percent).

In small loans to businesses, Chase ranked first out of 208 lenders with 22.7 percent market share. The other major lenders are American Express National Bank (17.9 percent), Bank of America, N.A. (13.1 percent), and Wells Fargo Bank, N.A. (11.4 percent).

In small loans to farms, Chase ranked first out of 32 lenders with a 24.5 percent market share. The other major lenders and respective market shares are Wells Fargo Bank, N.A. (18.4 percent), Bank of America, N.A. (11.0 percent), and Farmers \& Merchants Bank. (10.5 percent).

## Bakersfield MSA

Chase ranked third in deposits out of 20 institutions with 12.9 percent market share.
In overall home mortgage lending, Chase ranked ninth out of 526 lenders with 2.7 percent market share placing it in the top 2 percent of lenders. This is a very competitive market with no single lender dominating. The top four lenders with market share are Wells Fargo Bank, N.A. ( 6.6 percent), Quicken Loans ( 3.7 percent), Loan Depot.com LLC ( 3.6 percent), and Kern Schools Federal Credit Union (3.4 percent).

In small loans to businesses, Chase ranked third out of 95 lenders with 12.2 percent market share. The two lenders ranked first and second in the market are respectively American Express National Bank (15.1 percent) and Citibank, N.A. (14.0 percent).

In small loans to farms, Chase ranked second out of 18 lenders with a 21.9 percent market share. The other major lenders and respective market shares are Wells Fargo Bank, N.A. (31.8 percent), Bank of America, N.A. (14.3 percent), and Capital One, N.A. (9.9 percent).

## Distribution of Loans by Income Level of the Geography

The bank exhibits an excellent geographic distribution of loans in its AAs.

## Home Mortgage Loans

Refer to Table O in the state of California section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of home mortgage loan originations and purchases is excellent. The following information was taken into consideration when determining this rating.

## Los Angeles CSA

- The limited proportion of housing units in low-income geographies, particularly OOUs ( 2.5 percent), and constrained lending opportunities were noted; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of OOUs in those geographies.
- The high level of competition in the AA (1,057 home mortgage lenders) was also considered and examiners placed greater significance on performance compared to the aggregate of lenders.
- Between 2017 and 2019, the proportion of loans in low-income areas exceeded the percentage of owner-occupied units and aggregate distribution of loans. In moderate-income areas, the proportion of loans substantially met the percentage of owner-occupied units and aggregate distribution of loans.
- During 2014 through 2016, performance in low-income geographies exceeded the percentage of owner-occupied units and aggregate distribution of loans, while performance in moderate-income geographies was below the percentage of owner-occupied units and near to the aggregate distribution of loans.


## $\underline{\text { San Francisco CSA }}$

- The limited proportion of housing units in low-income geographies, particularly OOUs (3.9 percent), and constrained lending opportunities were noted; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of OOUs in those geographies.
- The high level of competition in the AA (855 home mortgage lenders) was also considered and examiners placed greater significance on performance compared to the aggregate of lenders.
- Between 2017 and 2019, the proportion of loans in low- and moderate-income geographies respectively exceeded and substantially met the percentage of owner-occupied units and was near to the aggregate distribution of all lenders.
- Between 2014 and 2016, the proportion of loans in low- and moderate-income areas was respectively near to and below the percentage of owner-occupied units and was below the aggregate distribution of loans for low- and moderate-income geographies.


## Bakersfield MSA

- The limited proportion of housing units in low-income geographies, particularly OOUs ( 5.6 percent), and constrained lending opportunities was noted; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of OOUs in those geographies.
- The high level of competition in the AA (526 home mortgage lenders) was also considered and examiners placed greater significance on performance compared to the aggregate of lenders.
- Between 2017 and 2019, the proportion of loans in low-income areas was well below the percentage of owner-occupied units and below the aggregate distribution of loans. The proportion of loans in moderate-income areas was below the percentage of owner-occupied units and near to the aggregate distribution of loans.
- Between 2014 and 2016, the proportion of loans in low-income areas was well below the percentage of owner-occupied units and near to the aggregate distribution of loans. The proportion of loans in moderate-income areas was below the percentage of owner-occupied units and exceeded the aggregate distribution of loans.


## Small Loans to Businesses

Refer to Table Q in the state of California section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to businesses.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to businesses for this evaluation is good. The following information was taken into consideration when determining this rating.

## Los Angeles CSA

- The small proportion of businesses in low-income geographies (4.7 percent) and competition between 275 lenders constrained lending opportunities to existing businesses. Therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of businesses in those geographies.
- Performance against the aggregate distribution of lenders was given additional consideration as it reflects the difficulties all lenders are experiencing due to the economic constraints discussed above
under the Description of the Full-Scope AA. The economic data particularly indicates the high cost of doing business and limited labor force as challenges for businesses.
- Between 2017 and 2019, the proportion of small loans to businesses in low-income geographies was below both the proportion of businesses and the aggregate distribution, while the proportion of small loans to businesses in moderate-income geographies was near to both the proportion of businesses and the aggregate distribution
- During 2014 to 2016, the bank's proportion of small loans to businesses in low- and moderateincome geographies was below the proportion of businesses and near to the aggregate distribution.


## San Francisco CSA

- Performance against the aggregate distribution of lenders was given additional consideration as it reflects the difficulties all lenders are experiencing due to the economic constraints discussed above under the Description of the Full-Scope AA. The economic data particularly indicates the high cost of doing business and limited affordable commercial space.
- Between 2017 and 2019, the proportion of small loans to businesses in low-income geographies was below both the proportion of businesses and the aggregate distribution, while the proportion of small loans to businesses in moderate-income geographies was near to both the proportion of businesses and the aggregate distribution.
- During 2014 to 2016, the bank's proportion of small loans to businesses in low-income geographies was below the proportion of businesses and exceeded the aggregate distribution, while the proportion of small loans to businesses in moderate-income geographies was near to both the proportion of businesses and the aggregate distribution.


## Bakersfield MSA

- Performance against the aggregate distribution of lenders was given additional consideration as it reflects the difficulties all lenders are experiencing due to the economic constraints discussed above under the Description of the Full-Scope AA. The economic data particularly indicates the high cost of doing business, high wage costs and limited migrant workforce needed for some businesses.
- Between 2017 and 2019, the proportion of small loans to businesses in low-income geographies was below both the proportion of businesses and the aggregate distribution, while the proportion of small loans to businesses in moderate-income geographies was respectively below and near to near to both the proportion of businesses and the aggregate distribution.
- During 2014 to 2016, the bank's proportion of small loans to businesses in low-income geographies was respectively well below the proportion of businesses and below the aggregate distribution, while the proportion of small loans to businesses in moderate-income geographies was below both the proportion of businesses and the aggregate distribution.


## Small Loans to Farms

Refer to Table S in the state of California section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to farms.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to farms is good. The following information was taken into consideration when determining this rating.

## Los Angeles CSA

- The limited number of farms in low-income geographies, (3.7 percent), and constrained lending opportunities were noted; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher number of farms in those geographies.
- The fact that farm lending is not a focus of the bank was also considered.
- Between 2017 and 2019, the proportion of loans to small farms in low-income geographies met the proportion of farms in those geographies and exceeded the aggregate distribution of all lenders. The proportion of loans to small farms in moderate-income geographies was below the proportion of farms in those geographies and near to the aggregate distribution of all lenders.
- Performance in low- and moderate-income geographies during the 2014 to 2016 period was weaker than performance during the 2017 to 2019 period. The proportion of loans to small farms in lowand moderate-income geographies was below the proportion of farms in those geographies and well below and below the aggregate distribution for the respective geographies.


## San Francisco CSA

- The limited percentage of farms in low-income geographies, (4.9 percent), and constrained lending opportunities were noted; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of farms in those geographies.
- The fact that farm lending is not a focus of the bank was also considered.
- Between 2017 and 2019, the proportion of loans to small farms in low-income geographies was well below the proportion of farms and exceeded the aggregate distribution of all lenders. The proportion of loans to small farms in moderate-income geographies was below the proportion of farms and exceeded the aggregate distribution.
- Performance in low- and moderate-income geographies during the 2014 to 2016 period was generally consistent with performance during the 2017 to 2019 period. The proportion of loans to small farms in low-income geographies was well below the proportion of farms and near to the aggregate distribution. The proportion of loans to small farms in moderate-income geographies was near to both the proportion of farms and the aggregate distribution.


## Bakersfield MSA

- The limited percentage of farms in low-income geographies, (4.5 percent), and constrained lending opportunities were noted; therefore, performance in moderate-income geographies was given more consideration due to the higher percentage of farms in those geographies.
- The fact that farm lending is not a focus of the bank was also considered.
- Between 2017 and 2019, the proportion of loans to small farms in low-income geographies was well below the proportion of farms and near to the aggregate distribution of all lenders. The proportion of loans to small farms in moderate-income geographies was near to the proportion of farms and below the aggregate distribution.
- Performance in low- and moderate-income geographies during the 2014 to 2016 period was weaker in low-income geographies and stronger in moderate-income geographies than performance during the 2017 to 2019 period. The percentage of farms in low-income geographies was very low during the 2014 to 2016 period and the bank made no small loans to farms in low-income geographies. The proportion of loans to small farms in moderate-income geographies exceeded both the proportion of farms and the aggregate distribution.


## Lending Gap Analysis

A review of home mortgage loans, small loans to business, and small loans to farms including summary reports and AA maps did not identify any unexplained conspicuous lending gaps in the bank's activities.

## Distribution of Loans by Income Level of the Borrower

The bank exhibits good distribution of loans among individuals of different income levels and business and farms of different sizes.

## Home Mortgage Loans

Refer to Table P in the state of California section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall borrower distribution of home mortgage loan originations and purchases for this evaluation is good. The following information was taken into consideration when determining this rating.

## Los Angeles CSA

- Greater significance was placed on performance against the aggregate distribution as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of this Full-Scope AA.
- Examiners particularly considered housing affordability challenges for low- and moderate-income borrowers.
- Between 2017 and 2019, the proportion of loans to low-income borrowers was well below the percentage of low-income families and below the aggregate distribution of lenders. The proportion of moderate-income loans was below the proportion of moderate-income families and significantly exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was generally consistent with performance between 2017 to 2019. The proportion of loans to low-income borrowers was well below the percentage of low-income families and exceeded the aggregate distribution of lenders. The proportion of moderate-income loans was below the proportion of moderate-income families and was near to the aggregate distribution.


## $\underline{\text { San Francisco CSA }}$

- Greater significance was placed on performance against the aggregate distribution as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of this Full-Scope AA.
- Examiners particularly considered housing affordability challenges for low- and moderate-income borrowers.
- Between 2017 and 2019, the proportion of loans to low-income borrowers was well below the percentage of low-income families and below the aggregate distribution of lenders. The proportion of moderate-income loans was below the proportion of moderate-income families and near to the aggregate distribution.
- During 2014 to 2016, the bank's performance was weaker than performance between 2017 to 2019 . The proportion of loans to low-income borrowers was well below the percentage of low-income families and near to the aggregate distribution of lenders. The proportion of moderate-income loans was well below both the proportion of moderate-income families and the aggregate distribution.


## Bakersfield MSA

- Greater significance was placed on performance against the aggregate distribution as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of this Full-Scope AA.
- Examiners particularly considered housing affordability challenges for low-income borrowers.
- Between 2017 and 2019, the proportion of loans to low-income borrowers was well below the percentage of low-income families and exceeded the aggregate distribution of lenders. The proportion of moderate-income loans was below the proportion of moderate-income families and near to the aggregate distribution.
- During 2014 to 2016, the bank's performance was stronger than performance between 2017 to 2019 . The proportion of loans to low-income borrowers was well below the percentage of low-income families and exceeded the aggregate distribution of lenders. The proportion of moderate-income loans exceeded both the proportion of moderate-income families and the aggregate distribution.


## Small Loans to Businesses

Refer to Table R in the state of California section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to businesses.

Based on the data in the table and the following considerations, the distribution of the bank's originations and purchases of small loans to businesses by revenue category is good. The following information was taken into consideration when determining this conclusion.

## Los Angeles CSA

- Greater significance was placed on performance against the aggregate distribution of lenders as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of the Full-Scope AA.
- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was weaker than performance between 2017 and 2019. The bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was well below the percentage of businesses and exceeded the aggregate distribution.


## San Jose-San Francisco-Oakland CSA

- Greater significance was placed on performance against the aggregate distribution of lenders as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of the Full-Scope AA.
- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 and 2019. The bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.


## Bakersfield MSA

- Greater significance was placed on performance against the aggregate distribution of lenders as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of the Full-Scope AA.
- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was weaker than performance between 2017 and 2019. The bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.


## Small Loans to Farms

Refer to Table T in the state of California section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to farms.

Based on the data in the table and the following considerations, the distribution of the bank's originations and purchases of small loans to farms by revenue category is good. The following information was taken into consideration when determining this rating.

## Los Angeles CSA

- Greater significance was placed on performance against the aggregate distribution of lenders as it reflects the difficulties all lenders are experiencing due to the economic constraints discussed above under the Description of the Full-Scope AA.
- The fact that farm lending is not a focus of the bank was considered.
- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 and 2019. The bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.


## San Francisco CSA

- Greater significance was placed on performance against the aggregate distribution of lenders as it reflects the difficulties all lenders are experiencing due to the economic constraints discussed above under the Description of the Full-Scope AA.
- The fact that farm lending is not a focus of the bank was considered.
- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 and 2019. The bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.


## Bakersfield MSA

- Greater significance was placed on performance against the aggregate distribution of lenders as it reflects the difficulties all lenders are experiencing due to the economic constraints discussed above under the Description of the Full-Scope AA.
- The fact that farm lending is not a focus of the bank was also considered.
- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was well below the percentage of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 and 2019. The bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was well below the percentage of businesses and exceeded the aggregate distribution.


## Community Development Lending

The institution is a leader in making CD loans.
The Lending Activity Tables, shown above, set forth the information and data used to evaluate the institution's level of CD lending. These tables include all CD loans, including multifamily loans that also qualify as CD loans.

## Los Angeles CSA

The bank made 2,616 CD loans in the AA with a total of $\$ 4.9$ billion, which represents 44.9 percent of the tier 1 capital allocated to the AA. The bank's CD loans within the AA were responsive to identified community needs, particularly the critical need for affordable housing. The substantial majority ( 98.4 percent) of CD loans were for affordable housing.

Examples of CD loans in the AA include:

- In December 2014, the bank originated a $\$ 24.7$ million loan to a senior housing facility for the construction of a new 108 -unit affordable housing project. The project was a part of the Taylor Yard Transit Village Master Plan to redevelop one of the few remaining vacant areas in Los Angeles.
- In July 2015, the bank provided a $\$ 20$ million loan for improvements on a multifamily property consisting of 197 units, of which 189 units are affordable. The building is in a low-income census tract in Los Angeles.
- In February 2019, the bank originated a $\$ 500,000$ loan to a women's organization whose mission includes building economic mobility, particularly for low- and moderate-income women and their families, through wealth creation, housing, education, entrepreneurship, and civic engagement. A study by Mount Saint Mary's University showed that family households led by women in California were more likely to live in poverty.


## San Francisco CSA

The bank made 842 CD loans in the AA with a total of $\$ 3.1$ billion, which represents 54.9 percent of the tier 1 capital allocated to the AA. The bank's CD loans within the AA were responsive to identified community needs, particularly the critical need for affordable housing. The majority ( 73.1 percent) of CD loans were for affordable housing purposes and loans for economic revitalization and/or stabilization represented 25.6 percent of CD loans.

Examples of CD loans in the AA include:

- In August 2014, the bank funded a $\$ 6$ million loan to improve an existing multifamily property located in a moderate-income census tract of Santa Rosa. Nearly all of the 128 apartments are for low- and moderate-income households.
- In March 2016, the bank provided a $\$ 63$ million loan to a project aimed to revitalize Redwood City's downtown area. The proceeds were used to build a 132,500 square foot office building in a lowincome census tract in the oldest city on the San Francisco Peninsula. The project was part of the Downtown Precise Plan which aimed to revitalize 183 acres of the historic downtown area as hub of the overall city.
- In July 2017, the bank provided a $\$ 14$ million loan for a multifamily property, located in a lowincome census tract in Antioch. The property consists of 300 units, of which, 295 units are affordable to low- and moderate-income households.
- In October 2018, the bank originated a $\$ 73$ million loan for a new residential development in Oakland. The building will contain 324 units, of which, 321 will be for low- and moderate-income households.


## Bakersfield MSA

The bank made 13 CD loans in the AA totaling $\$ 42.6$ million, which represents 27.6 percent of the tier 1 capital allocated to the AA. The bank's CD loans within the AA were responsive to identified community needs, particularly the critical need for affordable housing. The majority ( 75.2 percent) of CD loans were for affordable housing purposes and 22.0 percent of CD lending supported community services, which is also a need for the AA.

Examples of CD loans in the AA include:

- In July 2014, the bank originated a $\$ 5$ million loan to the Taft City Elementary School District (TCESD) in Taft, CA. Funding was used for general working capital. TCESD is comprised of seven school sites in grades K-8 that serve over 2,000 students, where according to the National Center for Education Statistics (NCES), the free and reduced lunch program participation rate is 94.7 percent. The district has a commitment to provide effective instructional practices and a professional work and learning environment for low- and moderate-income students.
- In July 2017, the bank provided a $\$ 7.5$ million loan for a multifamily property. This property is comprised of 129 affordable units for low- and moderate-income households and is in a moderateincome census tract in Bakersfield. By providing the financing, Chase helped to preserve the availability of affordable housing for low- and moderate-income households.
- In May 2017, the bank funded a $\$ 7.8$ million construction loan to acquire and rehabilitate two separate properties in McFarland and Wasco. A total of 88 housing units are affordable to low- and moderate-income families and helped to produce much-needed housing for families in areas with very few multiple housing units.


## Product Innovation and Flexibility

The bank makes extensive use of innovative and/or flexible lending practices to serve AA credit needs in each of the full-scope AAs reviewed. Refer to the comments in the Product Innovation and Flexibility section in the front of this performance evaluation for program details.

Los Angeles-Long Beach CSA
A total of 15,641 loans were funded totaling $\$ 4.5$ billion under the following innovative and/or flexible programs.

| Loan Type | Number of <br> Loans | Dollar Amount <br> (\$000's) |
| :--- | :---: | :---: |
| DreaMaker | 1,748 | 539,456 |
| FHA | 2,945 | 855,889 |
| HARP | 5,292 | $1,053,179$ |
| VA | 2,010 | 749,717 |
| SBA | 2,980 | $1,246,014$ |
| USDA | 666 | 102,213 |

## San Jose-San Francisco-Oakland CSA

A total of 4,863 loans were funded totaling nearly $\$ 1.6$ billion under the following innovative and/or flexible programs.

| Loan Type | Number of <br> Loans | Dollar Amount <br> $\mathbf{( \$ 0 0 0 ' s )}$ |
| :--- | :---: | :---: |
| DreaMaker | 490 | 173,831 |
| FHA | 963 | 358,126 |
| HARP | 1,736 | 369,078 |
| VA | 675 | 300,781 |
| SBA | 897 | 380,914 |
| USDA | 102 | 29,864 |

## Bakersfield, CA MSA

A total of 995 loans were funded totaling $\$ 173.5$ million under the following innovative and/or flexible programs.

| Loan Type | Number of <br> Loans | Dollar Amount <br> $\mathbf{( \$ 0 0 0 ' s )}$ |
| :--- | :---: | :---: |
| DreaMaker | 76 | 12,952 |
| FHA | 263 | 42,510 |
| HARP | 165 | 23,273 |
| VA | 132 | 32,485 |
| SBA | 84 | 15,824 |
| USDA | 275 | 46,443 |

## Conclusions for Areas Receiving a Limited-Scope Review

Performance in the limited-scope AAs was factored into the state's overall Outstanding Lending Test rating and did not significantly affect the initial overall conclusions based on the AAs receiving fullscope review. Based on limited-scope reviews, the bank's performance under the Lending Test in the Sacramento-Roseville CSA and Chico MSA is consistent with the bank's overall excellent performance under the Lending Test in the full-scope areas. The Fresno-Madera CSA, Modesto-Merced CSA, Redding-Red Bluff CSA, Salinas MSA, San Diego-Carlsbad MSA, San Luis Obispo-Paso Robles MSA, Santa Maria-Santa Barbara MSA, Visalia-Porterville-Hanford CSA, El Centro MSA and the California Non-MSA is weaker than the bank's overall performance under the Lending Test in the full-scope areas due to weaker geographic and borrower distributions.

Refer to Tables O through T in the state of California section of appendix D for the facts and data that support these conclusions.

## INVESTMENT TEST

The bank's performance under the Investment Test in the state of California is rated Outstanding. Stronger performance in the majority of limited-scope AAs and statewide investments enhanced good performance in the full-scope AAs.

## Conclusions for Areas Receiving Full-Scope Reviews

Based on full-scope reviews, the bank's performance under the Investment Test in the Los AngelesLong Beach CSA, San Jose-San Francisco-Oakland CSA, and Bakersfield MSA is excellent.

## Los Angeles-Long Beach CSA,

Based on a full-scope review, the bank's performance in the Los Angeles-Long Beach CSA is excellent.
The bank has an excellent level of qualified CD investments and grants, rarely in a leadership position, particularly those that are not routinely provided by private investors. The current and prior period investments dollar volume represents 7.5 percent of tier 1 capital allocated to the AA. A majority (81.2 percent) of total investments represents current period investments.

The bank's exhibits excellent responsiveness to credit and community economic development needs identified in the AA. Of total qualified investments, 70.8 percent focused on affordable housing, 23.7 percent on community services, 5.4 percent on revitalization/stabilization and less than one percent on economic development. Of these, 228 totaling $\$ 20$ million consisted of grants, with 73.8 percent and 15.6 percent supporting community services and affordable housing, respectively. The remaining 5.3 percent support economic development, and the same, 5.3 percent, support revitalization/stabilization.

The bank makes significant use of complex investments to support CD initiatives. Eighty-five qualified CD investments totaling $\$ 509.6$ million, or 61 percent of total area investments were complex. Transactions consist of Direct Investment LIHTCs, the use of many layers of financing (LITHC investment, construction loan, and permanent loan), complex financing structure that require multiple funding sources from multiple entities in order to implement and support the programs, and NMTC financings. Almost 12.0 percent of total qualified investments serve as a catalyst for future growth and other area improvements. The bank demonstrated leadership with one qualified investment.

Examples of community development investments in the AA include:

- The bank invested $\$ 44.8$ million in school district General Obligation Bonds. The general obligation bonds were approved for the purpose of construction of new school facilities and the modernization of existing school facilities.
- The bank originated a $\$ 13.9$ million NMTC equity investment for the redevelopment of 120,000 square feet of retail space in a shopping center. Located in two low-income census tracts, the project aligns with redevelopment plans created by the Housing Authority of the City of Los Angeles and the City of Los Angeles Department of City Planning.
- The bank invested $\$ 20$ million in Freddie Mac multifamily certificate bonds. Proceeds were used for the acquisition of a multifamily property geared to senior citizens, located in Santa Fe Springs. The property consists of 280 units, of which 160 are affordable to those earning less than 80 percent AMI.


## San Jose-San Francisco-Oakland CSA

Based on a full-scope review, the bank's performance in the San Jose-San Francisco-Oakland, CA CSA is excellent.

The bank has an excellent level of qualified CD investments and grants, rarely in a leadership position, particularly those that are not routinely provided by private investors. The current and prior period investments dollar volume represents 12.1 percent of tier 1 capital allocated to the AA. A significant majority or 85.5 percent of total investments represents current period investments.

The bank exhibits excellent responsiveness to credit and community economic development needs identified in the AA. Of total qualified investments, 87.8 percent supports affordable housing and 8.1 percent supports community services while less than one percent supports economic development. These are primary community development needs in the AA. Revitalization/stabilization represents 3.4 percent of total qualified investments. Included in the total is 181 grants totaling $\$ 22.6$ million, 87.8 percent support affordable housing, 8.2 percent support community services, 3.4 percent support revitalization/stabilization, and less than one percent supporting economic development.

The bank makes extensive use of complex investment to support CD initiatives. Fifty-two qualified investments totaling $\$ 564.4$ million or 81.0 percent of total investments were complex. Complex transactions consist of Direct Investment LIHTCs and NMTC financings. Of the 52, 25 are prior period qualified investments, and almost all are Direct Investment LIHTCs. Eight percent of total qualified investments serve as a catalyst for future growth and other area improvements.

Examples of community development investments in the AA include:

- The bank originated a $\$ 12$ million NMTC investment for construction of a kitchen and food manufacturing facility for an organization that delivers meals to homebound seniors. The bank partnered with San Francisco Community Investment Fund, Capital Impact Partners and Community Vision for this project. The facilities' production capacity will increase from 6,000 to 20,000 meals per day. The organization serves 3,600 low-income, homebound seniors. The project created 21 full time positions, filled by individuals in low-income communities due to an agreement to maintain a percentage of low-income employees.
- The bank invested $\$ 1.1$ million in a LIHTC fund, contributing to the creation of 100 affordable housing units.
- The bank provided $\$ 35.1$ million in a LIHTC investment, contributing to the creation of 287 affordable housing units.


## Bakersfield MSA

Based on a full-scope review, the bank's performance in the Bakersfield, CA MSA is excellent.
The bank has an excellent level of qualified CD investments and grants, often in a leadership position, particularly those that are not routinely provided by private investors. The current and prior period investments dollar volume represents 19.5 percent of tier 1 capital allocated to the AA. A majority ( 76.2 percent) of total investments represents current period investments.

The bank exhibits excellent responsiveness to credit and community economic development needs identified in the AA. Of total qualified investments, 80.9 percent supports affordable housing, 18.6 percent supports revitalization/stabilization, and less than one percent supports community services. Included is one grant supporting community services.

The bank occasionally uses of complex investments to support CD initiatives in this AA. Two current period investments or 18.6 percent of total area investments are considered complex supporting revitalization/stabilization. Almost 19 percent of total qualified investments serve as a catalyst for future growth and other area improvements.

Examples of community development investments in the AA include:

- The bank provided a $\$ 3$ million NMTC investment for a project which involves the development/new construction of a movie theater in a low-income census tract in Delano. This project helped to revitalize a low-income tract and acts as a catalyst for future retail development and investment. It also helped to increase local employment for low-income individuals within the City of Delano, including the creation of 115 permanent positions and 170 construction jobs.
- The bank provided $\$ 515,000$ through a LIHTC investment, which contributed to the creation of 204 affordable housing units.
- The bank provided $\$ 15.6$ million through a LIHTC investment, which contributed to the creation of 81 affordable housing units.

| Qualified Investments - State of California |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area (AA) | Prior Period* |  | Current Period |  | Total |  |  |  | UnfundedCommitments** |  |
|  | \# | $\$(000 \text { 's }$ | \# | \$(000's) | \# | $\%$ of <br> Total <br> \# | \$(000's) | $\%$ of Total \$ | \# | \$(000's) |
| Full Review: |  |  |  |  |  |  |  |  |  |  |
| Los Angeles-Long Beach CSA | 162 | 153,878 | 313 | 664,658 | 475 | 37.1 | 818,536 | 31.7 | 0 | 0 |
| San Jose-San FranciscoOakland CSA | 125 | 101,292 | 225 | 595,520 | 350 | 27.4 | 696,813 | 1.4 | 0 | 0 |
| Bakersfield MSA | 15 | 7,204 | 8 | 23,059 | 23 | 1.8 | 30,262 | 37.3 | 0 | 0 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |
| Chico MSA | 4 | 1,021 | 4 | 19,295 | 8 | 0.6 | 20,316 | 0.9 | 0 | 0 |
| El Centro MSA | 11 | 1,274 | 9 | 40,472 | 20 | 1.6 | 41,746 | 1.9 | 0 | 0 |
| Fresno-Madera-Hanford CSA | 25 | 5,357 | 24 | 19,168 | 49 | 3.8 | 24,524 | 1.1 | 0 | 0 |
| Modesto-Merced CSA | 3 | 8,480 | 1 | 3,756 | 4 | 0.3 | 12,236 | 0.6 | 0 | 0 |
| Redding-Red Bluff CSA | 7 | 1,045 | 0 | 0 | 7 | 0.5 | 1,045 | 0.1 | 0 | 0 |
| Sacramento-Roseville CSA | 26 | 21,398 | 37 | 118,179 | 63 | 4.9 | 139,577 | 6.4 | 0 | 0 |
| Salinas MSA | 5 | 2,827 | 10 | 28,139 | 15 | 1.2 | 30,966 | 1.4 | 0 | 0 |
| San Diego-Chula VistaCarlsbad MSA | 36 | 27,714 | 57 | 217,928 | 93 | 7.3 | 245,642 | 11.2 | 0 | 0 |
| San Luis Obispo-Paso Robles MSA | 3 | 905 | 2 | 15,458 | 5 | 0.4 | 16,363 | 0.7 | 0 | 0 |
| Santa Maria-Santa Barbara MSA | 6 | 3,877 | 12 | 52,018 | 18 | 1.4 | 55,896 | 2.5 | 0 | 0 |
| Visalia-Porterville-Hanford CSA | 4 | 483 | 0 | 0 | 4 | 0.3 | 483 | 0.1 | 0 | 0 |

Charter Number: 8

| CA Non-Metro AAs | 13 | 747 | 4 | 9,252 | 17 | 1.3 | 9,999 | 0.5 | 0 | 0 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Other: |  |  |  |  |  |  |  |  |  |  |
| Statewide Investments with <br> Purpose, Mandate or Function <br> to Serve AA | 0 |  |  |  |  |  |  |  |  |  |
| Statewide Investments with No <br> Purpose, Mandate or Function <br> to Serve AA | 4 | 0 | 124 | 51,838 | 124 | 9.7 | 51,836 | 2.4 | 0 | 0 |

Prior Period Investments' means investments made in a previous evaluation period that are outstanding as of the examination date.
Unfunded Commitments' means legally binding investment commitments that are tracked and recorded by the institution's financial reporting system.

## Statewide Investments in State of California

The bank has qualified investments throughout the state of California with and without a $\mathrm{P} / \mathrm{M} / \mathrm{F}$ to serve AAs. These investments represent 2.0 percent of total qualified investment in the state of California. Seventy-one percent support community services, 19.0 percent support affordable housing, and 10.0 percent support economic development. Almost all statewide investments have a P/M/F to serve AAs. The broader statewide investments enhanced the bank's overall performance under the Investment Test for the state of California.

## Conclusions for Areas Receiving Limited-Scope Reviews

Based on limited-scope reviews, the bank's performance under the Investment Test in the Chico MSA, Fresno-Madera CSA, Modesto-Merced CSA, Sacramento-Roseville CSA, Salinas MSA, San DiegoCarlsbad MSA, San Luis Obispo-Paso Robles MSA, Santa Maria-Santa Barbara MSA, El Centro MSA and CA Non-Metro AAs is consistent than the bank's excellent performance under the Investment Test in full-scope areas. Strong performance is due to high levels of qualified investments in relation to tier 1 capital. The bank's performance under the Investment Test in the Visalia-Porterville-Hanford CSA, and Redding-Red Bluff CSA is weaker than the bank's excellent performance under the Investment Test in full-scope areas. Weaker performance is due to a lower level of investments. Overall, performance in limited-scope AAs did not affect the Investment Test rating for the state of California.

## SERVICE TEST

The bank's performance under the Service Test in the state of California is rated High Satisfactory.

## Conclusions for Areas Receiving Full-Scope Reviews

Based on the full-scope reviews, the bank's performance in the San Jose-San Francisco-Oakland CSA and Bakersfield MSA are excellent and the bank's performance in the Los Angeles-Long Beach CSA is good.

## Retail Banking Services

Service delivery systems are accessible to geographies and individuals of different income levels in the bank's full-scope AAs.

Examiners evaluated the data as outlined in the Scope section at the front of this document including bank-provided data on usage of branches adjacent to low- and moderate-income geographies by individuals residing in those geographies and on increases in the usage of alternative delivery systems.

## Los Angeles-Long Beach CSA

Based on the data in the table below and performance context, the branch distribution is good. In lowand moderate-income geographies, the distribution is below the percentage of the population in these respective geographies. The bank had 25 branches in low-income geographies and 90 branches in moderate-income geographies. The distribution was augmented by five MUI tract branches that serve low-income tracts and 74 MUI tract branches that serve moderate-income tracts. Examiners reviewed data on the accounts held and transactions conducted at the MUI branches and confirmed they were serving the adjacent low- and moderate-income populations.

## San Jose-San Francisco-Oakland CSA

Based on the data in the table below and performance context, the branch distribution is excellent. In low-income geographies the distribution is near to and in moderate-income geographies approximates the percentage of the population in these respective geographies. The bank had 19 branches in lowincome geographies and 55 branches in moderate-income geographies. The distribution was augmented by eight MUI tract branches that serve low-income tracts and 37 MUI tract branches that serve moderate-income tracts. Examiners reviewed data on the accounts held and transactions conducted at the MUI branches and confirmed they were serving the adjacent low- and moderate-income populations.

## Bakersfield MSA

Based on the data in the table below and performance context, the branch distribution is good. In lowincome geographies the distribution is near to and in moderate-income geographies is below the percentage of the population in these respective geographies. The bank had one branch in low-income geographies and two branches in moderate-income geographies. The distribution was augmented by one MUI tract branch that serves low-income tracts and three MUI tract branches that serve moderateincome tracts. Examiners reviewed data on the accounts held and transactions conducted at the MUI branches and confirmed they were serving the adjacent low- and moderate-income populations.

| Distribution of Branch Delivery System |  |  |  |  |  |  |  | As of December 31, 2019 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Deposits | Branches |  |  |  |  |  | Population |  |  |  |
| Assessment | \% of Rated Area <br> Deposits in AA | \# of <br> BANK <br> Branches | \% of <br> Rated <br> Area <br> Branches in AA | Location of Branches by Income of Geographies (\%) |  |  |  | \% of Population within Each Geography |  |  |  |
| Area |  |  |  | Low | Mod | Mid | Upp | Low | Mod | Mid | Upp |
| Los <br> Angeles- <br> Long Beach <br> CSA | 53.6 | 492 | 50.4 | 5.1 | 18.3 | 26.4 | 48.8 | 7.6 | 28.6 | 29.4 | 33.8 |
| San José- <br> San <br> Francisco- <br> Oakland CSA | 28.2 | 247 | 25.3 | 7.7 | 22.3 | 28.7 | 40.5 | 9.3 | 22.5 | 35.8 | 32.0 |
| Bakersfield MSA | 0.8 | 13 | 1.3 | 7.7 | 15.4 | 38.5 | 38.5 | 9.7 | 23.3 | 31.8 | 33.0 |

* May not add up to 100 percent due to geographies with unknown tract income level and rounding


## Los Angeles-Long Beach CSA

Alternative delivery systems enhanced the delivery of banking systems to geographies and individuals of all income levels. The OCC considered the availability and use of alternative delivery systems over the evaluation period. This included review of the bank's 2,302 deposit-taking ATMs, online banking, mobile banking, and telephone banking to determine the effectiveness of these systems to make retail banking services available to individuals in low- and moderate-income geographies. The bank increased the deposit-taking ATMs in low- and moderate-income geographies by 87.4 percent over the prior rating period to 148 ( 6.4 percent) deposit-taking ATMs in low-income geographies and 508 (22.1 percent) ATMs in moderate-income geographies. Additionally, bank-provided data on use of online, mobile, and telephone banking showed increases in the adoption of these services by low- and moderate-income individuals from the prior rating period.

## San Jose-San Francisco-Oakland CSA

Alternative delivery systems enhanced the delivery of banking services to geographies and individuals of all income levels. The OCC considered the availability and use of alternative delivery systems over the evaluation period. This included review of the bank's 786 deposit-taking ATMs, online banking, mobile banking, and telephone banking to determine the effectiveness of these systems to make retail banking services available to individuals in low- and moderate-income geographies. The bank increased the deposit-taking ATMs in low- and moderate-income geographies by 46.7 percent over the prior rating period to 68 ( 8.7 percent) deposit-taking ATMs in low-income geographies and 202 ( 25.7 percent) ATMs in moderate-income geographies. Additionally, bank-provided data on use of online, mobile, and telephone banking showed increases in the adoption of these services by low- and moderate-income individuals from the prior rating period.

## Bakersfield MSA

Alternative delivery systems enhanced the delivery of banking services to geographies and individuals of all income levels. The OCC considered the availability and use of alternative delivery systems over the evaluation period. This included review of the bank's 51 deposit-taking ATMs, online banking, mobile banking, and telephone banking to determine the effectiveness of these systems to make retail banking services available to individuals in low- and moderate-income geographies. The bank increased the deposit-taking ATMs in low- and moderate-income geographies by 30.0 percent over the prior rating period to six ( 11.8 percent) deposit-taking ATMs in low-income geographies and seven (13.7 percent) ATMs in moderate-income geographies. Additionally, bank-provided data on use of online, mobile, and telephone banking showed increases in the adoption of these services by low- and moderate-income individuals from the prior rating period.

| Distribution of Branch Openings/Closings |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | \# of <br> Branch <br> Openings | \# of <br> Branch <br> Closings | Net change in Location of Branches$(+ \text { or }-)$ |  |  |  |
|  |  |  | Low | Mod | Mid | Upp |
| Los Angeles-Long Beach CSA | 39 | 53 | 0 | +6 | -12 | -8 |
| San José-San Francisco-Oakland CSA | 25 | 26 | -1 | -3 | -5 | +8 |
| Bakersfield MSA | 0 | 3 | 0 | 0 | -1 | -2 |

## Los Angeles-Long Beach CSA

The bank's opening of branches has improved the accessibility of its delivery systems in low- and moderate-income geographies and/or to low- and moderate-income individuals. The bank opened one branch and closed one branch in low-income geographies. It closed four branches and opened ten branches in moderate-income geographies. The bank closed a net of 20 branches in MUI geographies. Closures were due to reduced customer usage, close proximity to other Chase branches, the exiting of in-store locations, and safety issues. Despite the branch closures in MUI geographies, branch locations remained accessible to geographies and individuals of different income levels in the bank's AA.

Services, including where appropriate, business hours, do not vary in a way that inconveniences the AA, particularly low- and moderate-income geographies and/or individuals. Generally, branches are open Monday through Friday from 9:00 am to 6:00 pm and Saturday from 9:00 am to 4:00 pm. All retail banking services are available at all branches within the low- and moderate-income geographies.

## San Jose-San Francisco-Oakland CSA

To the extent changes have been made, the bank's opening and closing of branches has not adversely affected the accessibility of its delivery systems, particularly in low- and moderate-income geographies or to low- and moderate-income individuals. The bank closed three branches and opened two branches in low-income geographies and closed six branches and opened three branches in moderate-income geographies. The bank opened a net of three branches in MUI areas. Closures were due to reduced customer usage and close proximity to other Chase branches. Despite the branch closures, branch locations remained accessible to geographies and individuals of different income levels in the bank's AA.

Services, including where appropriate, business hours, do not vary in a way that inconveniences its AA, particularly low- and moderate-income geographies and/or individuals. Generally, branches are open Monday through Friday from 9:00 am to 6:00 pm and Saturday from 9:00 am to 4:00 pm. All retail banking services are available at all branches within the low- and moderate-income geographies.

## Bakersfield MSA

The bank did not open or close any branches in low- and moderate-income geographies during the evaluation period.

Services, including where appropriate, business hours, do not vary in a way that inconveniences the AA, particularly low- and moderate-income geographies or individuals. Generally, branches are open Monday through Friday from 9:00 am to 6:00 pm and Saturday from 9:00 am to 4:00 pm. All retail banking services are available at all branches within the low- and moderate-income geographies.

## Community Development Services

Chase was a leader in providing CD services in the Los Angeles-Long Beach and San Jose-San Francisco-Oakland CSAs and provided a relatively high level of CD services in the Bakersfield MSA. The services were responsive to the needs of the full-scope AAs.

## Los Angeles-Long Beach CSA

Bank employees provided technical assistance and/or job-specific expertise for 2,270 CD service activities to 97 organizations for a total of 6,515 hours during the evaluation period. A majority of the of the bank's assistance was to organizations that provide community services to low- and moderateincome individuals and families. The services provided were responsive to identified needs in the community, particularly financial literacy, and homebuyer counseling. The following are examples of CD services provided in the AA:

- Bank employees provided 42 first time home-buyers seminars in conjunction with an affordable housing organization to benefit low- and moderate-income families. The number of participants was not indicated in records.
- Bank employees provided 59 financial literacy workshops to low- and moderate-income individuals and families with a non-profit organization that focuses on promoting financial health in the community. The number of participants was not indicated in records.


## San Jose-San Francisco-Oakland CSA

Bank employees provided technical assistance and/or job-specific expertise for 1,630 CD service activities to 76 organizations for a total of 8,292 hours during the evaluation period. Most of the bank's assistance was to organizations that provide community services to low- and moderate-income individuals and families. The services provided were responsive to identified needs in the community, particularly financial literacy, and homebuyer counseling. The following are examples of CD services provided in the AA:

- Bank employees provided 34 financial literacy seminars for low- and moderate-income youth through partnership with an organization focused on educating students. The number of participants was not indicated in records.
- Bank employees conducted 57 homebuyer education events in partnership with a local affordable housing non-profit. The number of participants was not indicated in records.


## Bakersfield MSA

Bank employees provided technical assistance and/or job-specific expertise for 78 CD service activities to five organizations for a total of 288 hours. A majority of the bank's assistance was to organizations that provide community services to low- and moderate-income individuals and families. The services provided were responsive to identified needs in the community, particularly homebuyer counseling. The following is an example of a CD service provided in the AA:

- Bank employees provided 21 pre-purchase homebuyer education events for low- and moderateincome consumers. The number of participants was not indicated in records.


## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall High Satisfactory Service Test rating and did not significantly change the initial overall conclusions based on the AAs receiving full-scope review. Based on limited-scope reviews, the bank's performance under the Service Test in
the Redding-Red Bluff MSA, Salinas MSA, Sacramento-Roseville MSA, Santa Maria-Santa Barbara MSA, and CA Non-MSA AA is stronger than the bank's overall performance under the Service Test in the full-scope areas due to better branch distribution in low- and moderate-income geographies. The bank's performance under the Service Test in the Fresno-Madera MSA and San Luis Obispo-Paso Robles MSA, is consistent with the bank's overall performance under the Service Test in the full-scope areas. The bank's performance under the Service Test in the Chico MSA, El Centro MSA, ModestoMerced MSA, San Diego-Carlsbad MSA, and Visalia-Porterville-Hanford CSA is weaker than the bank's overall performance under the Service Test in the full-scope area due to worse branch distribution in low- and moderate-income geographies.

## State Rating

## State of Colorado

CRA rating for the State of Colorado ${ }^{\mathbf{1 0}}$ : Outstanding
The Lending Test is rated: Outstanding
The Investment Test is rated: Outstanding
The Service Test is rated: Outstanding
The major factors that support this rating include:

- An excellent level of lending activity.
- Overall good geographic distribution of home mortgage loans and small loans to businesses.
- Overall good borrower distribution of home mortgage loans and small loans to businesses.
- A leader in making CD loans, which positively affected the rating.
- The extensive use of flexible products, which positively affected the rating.
- An excellent level of CD investments that displayed excellent responsiveness to credit and community economic development needs.
- The extensive use of innovative and/or complex qualified investments.
- Retail service delivery systems are readily available to geographies and individuals of different income levels.
- Chase is a leader in providing CD services that are responsive to AA needs.


## Description of Institution's Operations in Colorado

The state of Colorado is Chase's $12^{\text {th }}$ largest rating area based on aggregate deposits of $\$ 14.0$ billion, representing 1.0 percent of the bank's total deposits. As of December 31, 2019, the bank operated 115 branches and 281 deposit-taking ATMs within the rating area, representing 2.3 percent of total branches and 1.7 percent of total ATMs. The bank originated and purchased approximately $\$ 27.5$ billion in loans or 3.9 percent of total bank loan originations and purchases during the evaluation period in the state.

According to the FDIC Deposit Market Share Data, as of June 30, 2019, there were 131 banks operating 1,446 branches in the state of Colorado. Chase ranked fourth in deposit market share with 10.0 percent. Major competitors in the state based on deposit market share include Wells Fargo Bank N.A. (22.4 percent), FirstBank (11.5 percent), and U.S. Bank, N.A. (10.7 percent).

The bank delineated four AAs in the state of Colorado. The Denver-Aurora, CO CSA (Denver CSA) received a full-scope review, accounting for 86.0 percent of the bank's deposits in Colorado. The Colorado Springs MSA, Fort Collins MSA, and Colorado Non-MSA received limited-scope reviews. Refer to appendix A for a complete description of the AA.

## Description of Full-Scope AA

## Denver CSA

[^109]The following table provides a summary of the demographic that includes housing and business information for the Denver CSA. Table A indicates that the volume of OOUs is very small in lowincome CTs and over 21.3 percent of families in the AA are low-income with 7.9 percent below the poverty level. The median housing value in the Denver CSA ranges from three to four times the median income, five times the moderate-income and eight times the low-income, indicating a limited proportion of OOUs are affordable to low-income borrowers. One simplistic method used to determine housing affordability assumes a maximum monthly principal and interest payment of no more than 30 percent of the applicant's income.

In the Denver CSA, assuming a 30-year mortgage with a five percent interest rate and three percent down payment, while not accounting for homeowners insurance, real estate taxes, or any additional monthly expenses, a low-income borrower making $\$ 35,229$ per year (or less than 50 percent of the FFIEC adjusted median family income in the CSA) could afford a $\$ 116,656$ mortgage loan with a payment of $\$ 1,057$ per month; a moderate-income borrower earning $\$ 56,357$ per year (or less than 80 percent of the FFIEC adjusted median family income in the CSA) could afford a $\$ 217,444$ mortgage loan with a payment of $\$ 1,691$ per month.

Median rents and the significant percentage of families below poverty level suggest rental housing is also unaffordable for many low- and moderate-income residents.

| Table A - Demographic Information of the Assessment Area Assessment Area: Denver-Aurora CO CSA 2017-2019 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Demographic Characteristics | \# | Low percent of \# | Moderate percent of \# | Middle percent of \# | $\begin{gathered} \text { Upper } \\ \text { percent of } \\ \# \end{gathered}$ | $\begin{gathered} \text { NA* } \\ \text { percent of } \\ \# \end{gathered}$ |
| Geographies (Census Tracts) | 766 | 8.2 | 23.5 | 34.1 | 33.0 | 1.2 |
| Population by Geography | 3,284,952 | 8.6 | 23.9 | 34.4 | 33.0 | 0.1 |
| Housing Units by Geography | 1,334,388 | 8.2 | 23.3 | 36.2 | 32.3 | 0.0 |
| Owner-Occupied Units by Geography | 800,469 | 4.3 | 18.7 | 36.0 | 40.9 | 0.0 |
| Occupied Rental Units by Geography | 458,444 | 14.7 | 31.2 | 35.6 | 18.4 | 0.0 |
| Vacant Units by Geography | 75,475 | 10.1 | 23.9 | 41.2 | 24.7 | 0.0 |
| Businesses by Geography | 436,971 | 6.2 | 19.1 | 33.4 | 41.1 | 0.3 |
| Farms by Geography | 9,772 | 6.3 | 18.3 | 37.0 | 38.0 | 0.3 |
| Family Distribution by Income Level | 799,082 | 21.3 | 17.5 | 20.5 | 40.7 | 0.0 |
| Household Distribution by Income Level | 1,258,913 | 23.7 | 16.4 | 18.0 | 41.9 | 0.0 |
| Median Family Income MSA - 14500 Boulder, CO MSA |  | \$96,926 | Median Housing Value |  |  | \$286,161 |
| Median Family Income MSA - 19740 Denver-Aurora-Lakewood, CO MSA |  | \$80,820 | Median Gross Rent |  |  | \$1,078 |
| Median Family Income MSA - 24540 Greeley, CO MSA |  | \$70,457 | Families Below Poverty Level |  |  | 7.9\% |

Source: 2015 ACS and 2019 D\&B Data
Due to rounding, totals may not equal 100.0 percent
(*) The NA category consists of geographies that have not been assigned an income classification.

## Economic Data

According to Moody's Analytics February 2020 report, the Denver area economy is strong. The area has a high concentration of knowledge-based industries; strong in-migration and population growth; a skilled workforce and high employment diversity. The pace of job growth in the area has been robust, with strong gains in professional services, healthcare, and construction. The unemployment rate has dropped to 2.4 percent, the lowest level on record. While this decline is partially because of slower labor force growth, the tight labor market and favorable mix of job creation are rapidly driving up average hourly earnings. Technology and professional services have propelled the area's economy. The area's share of white-collar workers is among the top 5 percent nationally. Major employment industries in the area include professional and business services; health and education services; and government. Major employers in the area include HealthOne; University of Colorado Hospital; Lockheed Martin Corp.; and Centra Health. Although the area economy is strong, the area has an elevated cost of living and a significantly over-valued housing market with low and falling affordability.

## Community Contacts

Examiners considered three community contacts completed during the review period with entities serving the area. The contacts were with organizations focused on providing financing for affordable housing and technical assistance to small business. Contacts noted that despite the strong economy; housing affordability and the tight labor market are growing concerns in the area; making it more difficult to attract lower level and mid-level skilled workers such as trade workers and workers with certifications. The area is served by several non-profit organizations; community-based organizations; and community development entities that provided opportunities for area financial institutions to help meet the needs of the community. Other needs identified in the community include access to affordable housing, education and technical assistance for small businesses, particularly minority-owned small businesses, financial education classes and access to traditional banking retail products.

## Scope of Evaluation in Colorado

The Denver CSA received a full-scope review. The CSA account for 86.0 percent of the deposits and 83.6 percent of the lending in the state. The remaining three AAs received a limited-scope review. Performance in limited-scope AAs and its effect on the CRA rating are discussed at the end of each test.

## CONCLUSIONS WITH RESPECT TO PERFORMANCE TESTS IN COLORADO

## LENDING TEST

The bank's performance under the Lending Test in the state of Colorado is rated Outstanding.
Performance in AAs receiving limited-scope reviews was factored together with performance from AAs receiving full-scope reviews to determine the state's overall Outstanding Lending Test rating. Limitedscope conclusions did not affect the initial overall conclusions based on the AAs receiving full-scope review.

## Conclusions for Areas Receiving Full-Scope Reviews

Based on a full-scope review, the bank's performance in the Denver CSA is excellent. Overall excellent lending levels and excellent geographic and borrower distribution of loans. The bank's leadership in
making CD loans affected the rating positively while product innovation and flexibility were also considered favorably.

## Lending Activity

Lending levels reflect an excellent responsiveness to the credit needs in the bank's AAs.
Examiners considered the number and amount of home mortgage, small business, small farm loans originated or purchased relative to Chase's capacity based on deposits, competition, and market presence. Lending activity for home mortgage and small loans to businesses received the most weight in reaching conclusions. Respectively, home mortgage lending and small loans to businesses account for 34.5 percent and 64.9 percent of the loan volume in the state by number and 90.0 and 8.0 percent of loan volume by dollar. Small farm lending is not a strategic focus of the bank and received minimal weight in reaching conclusions. Farm loans represented 0.52 percent of the loan volume in the state by number and 0.05 percent loan volume by dollar.

| Number of Loans* |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home <br> Mortgage | Small <br> Business | Small <br> Farm | Community <br> Development | \%otal | State <br> Loans | \% State <br> Deposits |
| Denver-Aurora CSA | 58,611 | 108,580 | 802 | 114 | 168,107 | 83.6 | 86.0 |
| Colorado Springs MSA | 5,904 | 10,736 | 83 | 2 | 16,725 | 8.3 | 7.8 |
| Fort Collins MSA | 4,736 | 10,434 | 152 | 1 | 15,323 | 7.6 | 6.1 |
| Colorado Non-MSA | 181 | 721 | 11 | 0 | 913 | 0.5 | 0.1 |
| Total | 69,432 | 130,471 | 1,048 | 117 | 201,068 | 100 | 100 |

*The tables present the data for all assessment areas. The narrative below addresses performance in full-scope areas only.

| Dollar Volume of Loans*(‘000's) |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home <br> Mortgage | Small <br> Business | Small <br> Farm | Community <br> Development | Total | \% <br> State* <br> Loans | \% State <br> Deposits |
| Denver-Aurora CSA | $21,295,857$ | $1,854,077$ | 11,750 | 491,907 | $23,653,591$ | 85.9 | 86.0 |
| Colorado Springs MSA | $1,608,987$ | 171,442 | 776 | 18,014 | $1,799,219$ | 6.5 | 7.8 |
| Fort Collins MSA | $1,400,141$ | 170,024 | 1,457 | 35,000 | $1,606,622$ | 5.7 | 6.1 |
| Colorado Non-MSA | 470,750 | 9,397 | 124 | 0 | 480,271 | 1.9 | 0.1 |
| Total | $24,775,735$ | $2,204,940$ | 14,107 | 544,920 | $27,539,702$ | 100.0 | 100.0 |

*The tables present the data for all assessment areas. The narrative below addresses performance in full-scope areas only.
Chase ranked third in deposits in the AA out of 76 institutions with 11.9 percent market share.
In overall home mortgage lending, Chase ranked fourth with 4.2 percent market share. This is a very competitive market with 924 home mortgage lenders and no single lender dominated the market. Other major home lenders with respective market shares are American Financing ( 7.0 percent), Wells Fargo Bank, N.A. (6.2 percent) and U.S. Bank, N.A. (4.3 percent).

Chase ranked first in small loans to businesses with 24.2 percent market share. There are 217 lenders in the CSA. Other major lenders and market share are American Express National Bank ( 14.5 percent), Wells Fargo Bank, N.A. (11.8 percent), and Citibank, N.A. (9.8 percent).

Chase ranked first in small loans to farms with 20.7 percent market share. There were 31 lenders in the MSA. Other major lenders and market share are Bank of Colorado ( 15.3 percent), Wells Fargo Bank, N.A. (12.6 percent) and TBK Bank, SSB (10.4 percent).

## Distribution of Loans by Income Level of the Geography

The bank exhibits an excellent geographic distribution of loans in its AA.

## Home Mortgage Loans

Refer to Table O in the state of Colorado section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of home mortgage loan originations and purchases is excellent. The following information was taken into consideration when determining this rating.

- Between 2017 and 2019, the proportion of loans in low- and moderate-income areas consistently exceeded or substantially met the percentage of OOUs and aggregate distribution of loans.
- Performance in low- and moderate-income geographies between 2014 and 2016 was slightly weaker than the performance during the 2017-2019 period. The proportion of loans in low- and moderateincome areas was below both the percentage of OOUs and aggregate distribution of loans.


## Small Loans to Businesses

Refer to Table Q in the state of Colorado section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to businesses.

Based on the data in the table and the following considerations, the bank's overall geographic distribution of small loans to businesses is good. The following information was taken into consideration when determining this rating.

- Between 2017 and 2019, the proportion of loans to small businesses in low- and moderate-income areas was near to the percentage of small businesses located in those geographies but had weaker performance in comparison to the aggregate distribution.
- Performance in low- and moderate-income geographies during the 2014 and 2016 time periods was generally consistent with 2017 to 2019. Between 2104 and 2016, the proportion of loans to small businesses in low- and moderate-income areas was near to the percentage of small businesses located in those geographies and near to the aggregate distribution of loans.


## Small Loans to Farms

Refer to Table S in the state of Colorado section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to farms.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to farms is good. The following information was taken into consideration when determining this rating.

- The limited percentage of farms in low-income geographies, ( 6.3 percent) and constrained lending opportunities were noted; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of farms in those geographies.
- The high level of competition in the AA (31 lenders) and the fact that farm lending is not a focus of the bank, therefore examiners placed greater significance on performance compared to aggregate of lender.
- Between 2017 and 2018, the proportion of loans to small farms in low- and moderate-income geographies was well below and below the proportion of farms in those geographies and below the aggregate distribution.
- Performance in low- and moderate-income geographies during the 2014 to 2016 period was consistent with performance during the 2017 to 2019 period. The proportion of loans to small farms in low- and moderate-income geographies was well below and below the proportion of farms in those geographies and below the aggregate distribution.


## Lending Gap Analysis

A review of home mortgage loans, small loans to business, and small loans to farms including summary reports and AA maps did not identify any unexplained conspicuous lending gaps in the bank's activities.

## Distribution of Loans by Income Level of the Borrower

The bank exhibits a good distribution of loans among individuals of different income levels and businesses of different sizes.

## Home Mortgage Loans

Refer to Table $P$ in the state of Colorado section of appendix $D$ for the facts and data used to evaluate the borrower distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall borrower distribution of home mortgage loan originations and purchases for this evaluation is good. The following information was taken into consideration when determining this rating.

- Market profile data indicates housing affordability was a challenge for low- and moderate-income borrowers.
- Market profile information for the AA indicates the population of Denver is increasing faster than the housing supply, which has caused housing prices to substantially increase and outpace income of the low- and moderate-income population, making it difficult for low- and moderate-income to afford housing.
- Greater significance was placed on lending performance to moderate-income borrowers due to the challenges limiting opportunities in lending to low-income borrowers.
- Between 2017 and 2019, the proportion of loans to moderate-income borrowers exceeded both the percentage of moderate-income families in the AA and the aggregate distribution of loans.
- Between 2017 and 2019, the proportion of loans to low-income borrowers was well-below the percentage of low-income families in the AA. The proportion of loans to low-income borrowers met the aggregate distribution of loans, which offsets the weaker performance as a proportion of lowincome families in the AA.
- Performance in low-income geographies between 2014 and 2016 was consistent with 2017 to 2019 and moderate-income performance was slightly weaker than 2017 to 2019. The performance in the 2014-2016 period had no effect on the overall good lending performance.


## Small Loans to Businesses

Refer to Table R in the state of Colorado section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to businesses.

Based on the data in the tables and the following factors, the distribution of the bank's originations and purchases of small loans to businesses by revenue category is good. The following information was taken into consideration when determining this rating.

- Greater significance was placed on performance against the aggregate distribution of lenders as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of the Full-Scope AA.
- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 and 2019. The bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was well below the percentage of businesses and exceeded the aggregate distribution.


## Small Loans to Farms

Refer to Table T in the state of Denver section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to farms.

Based on the data in the table and the following considerations, the distribution of the bank's originations and purchases of small loans to farms by revenue category is good. The following information was taken into consideration when determining this rating.

- The high level of competition in the AA (31 lenders) and the fact that farm lending is not a focus of the bank was considered and examiners placed greater significance on performance compared to the aggregate of lenders.
- Between 2017 and 2019, the bank's percentage of loans to farms with revenues of $\$ 1$ million or less was below the percentage of businesses and substantially exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 and 2019. The bank's percentage of loans to farms with revenues of $\$ 1$ million or less was below the percentage of businesses and substantially exceeded the aggregate distribution.


## Community Development Lending

The bank is a leader in making CD loans.

The Lending Activity Tables, shown above, set forth the information and data used to evaluate the institution's level of CD lending. These tables include all CD loans, including multifamily loans that also qualify as $C D$ loans.

The bank made 114 CD loans in the AA for a total of $\$ 492$ million, which represents 31.5 percent of the tier 1 capital allocated to the AA. The bank's CD loans were responsive to identified community needs with nearly 61.0 percent of CD loans were for affordable housing purposes and 38.5 percent were for revitalization purposes.

Examples of CD loans include:

- Chase originated a $\$ 19$ million loan for the new construction of apartments in Denver CSA. The project consisted of 130 units and a ground level shelter in Arroyo Village. The housing project has 35 permanent supportive housing units and 95 work force housing units. The permanent supportive housing units benefit from project-based vouchers and serve individuals and families earning up to 30 percent of the AMI and the workforce housing units serve families earning up to 50 percent of the AMI. Supportive services are provided to residents, which will also operate a homeless shelter on site including a kitchen, dining area, space for programs, dormitory-style sleeping area, community bathrooms, and showers.
- Chase originated a $\$ 350,000$ loan for a health services organization whose mission is to be the medical, behavioral health, and dental care provider of choice for low-income and other underserved people in south Boulder, Broomfield, and West Adams counties since 1977.


## Product Innovation and Flexibility

The bank makes extensive use of innovative and/or flexible lending practices to serve credit needs in the full-scope AA reviewed. Refer to the comments in the Product Innovation and Flexibility section in the front of this performance evaluation for program details.

The bank funded 7,442 loans totaling $\$ 1.9$ billion under the following innovative and/or flexible programs.

| Loan Type | Number of <br> Loans | Dollar Amount <br> $\mathbf{( \$ 0 0 0 ' s )}$ |
| :--- | :---: | :---: |
| DreaMaker | 1,514 | 438,453 |
| FHA | 1,932 | 461,941 |
| HARP | 1,252 | 181,700 |
| VA | 1,862 | 584,597 |
| SBA | 497 | 174,281 |
| USDA | 385 | 85,957 |

## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall Outstanding Lending Test rating and did not change the initial overall conclusions based on the AAs receiving the full-scope review. Based on limited-scope reviews, the bank's performance under the Lending Test in the Colorado Springs MSA, Fort Collins MSA and Colorado Non-MSA is weaker than the overall excellent performance under the Lending Test in the full-scope AA. Weaker performance is due to weaker
geographical and borrower lending distributions. Performance in the limited-scope areas did not affect the overall Lending Test rating in the state of Colorado.

Refer to Tables O through T in the state of Colorado section of appendix D for the facts and data that support these conclusions.

## INVESTMENT TEST

The bank's performance under the Investment Test in the state of Colorado is rated Outstanding.
Performance in AAs receiving limited-scope reviews was factored together with performance from the AA receiving a full-scope review to determine the state's overall Outstanding Investment Test rating. Limited-scope conclusions did not affect the initial overall conclusions based on the AA receiving a fullscope review

## Conclusions for Area Receiving a Full-Scope Review

Based on a full-scope review, the bank's performance in the Denver CSA is excellent.
The bank has an excellent level of qualified CD investments and grants, but not in a leadership position, particularly those that are not routinely provided by private investors. Current and prior period investments dollar volume represent 18.3 percent of tier 1 capital allocated to the AA. A large majority ( 86.2 percent) of total investments represent current period investments.

The bank exhibits excellent responsiveness to the needs identified in the AA including affordable housing, community services, and economic development. Ninety-six percent ( $\$ 275$ million) of current and prior period CD investments focused on affordable housing, while 4 percent ( $\$ 10.5$ million) related to community service. Affordable housing investments created 6,142 low- and moderate-income housing units for individuals and families. The bank provided 48 grants totaling $\$ 7$ million to a variety of organizations primarily supporting community service through workforce development. In some occurrence's grants were made in multiple years.

The bank makes extensive use of innovative and/or complex investments to support CD initiatives. Current and prior period investments included 25 ( $\$ 286.1$ million) complex investments, primarily single or Direct Investor LIHTC transactions with participations from federal and state governments, local housing agencies, and real estate developers. Five investments were a catalyst for future growth and other improvements.

Examples of CD investments in the AA include:

- The bank invested $\$ 22.8$ million in a LIHTC fund for affordable housing development in the AA. After origination, the bank monitors construction quality, lease-up and performance of the property through stabilization. The bank also manages the asset for the entire fifteen-year hold period, ensuring compliance with the LIHTC program and conducting annual on-site inspection. The LIHTC provides a tax incentive to construct or rehabilitate affordable rental housing for low- and moderate-income households. It subsidizes the acquisition, construction, and rehabilitation of affordable rental housing for low- and moderate-income tenants.
- The bank partnered with a housing authority and made a $\$ 7.9$ million single investor fund and direct LIHTC investment to provide 41 affordable rental units to low- and moderate-income individuals and families in the AA. After origination, the bank will monitor construction quality, lease-up and performance of the property through stabilization. Additionally, the bank will manage the asset for the entire fifteen-year hold period, ensuring compliance with the LIHTC program and conducting annual on-site inspections.
- From October 2016 to December 2018, three grants totaling $\$ 4$ million were provided to a publicschool foundation. The grants will help the foundation assist the school system with its career program expansion by providing high school students with exposure to learning that links their school studies to future college and career pathways. Most students participating in this program are eligible for the Federal Free or Reduced Lunch program.
- The bank originated a $\$ 4.9$ million NMTC equity investment for a family health center located in southwest Denver, a Health Resources and Services Administration medically underserved community. The facility consists of approximately 40,000 square feet of building space dedicated to medical and dental services for low-income patients. The project also allows the hospital to hire approximately 142 new full-time employees including doctors, nurses, administration, food service, and cleaning/maintenance personnel.

| Qualified Investments - State of Colorado |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area (AA) | Prior Period* |  | Current Period |  | Total |  |  |  | Unfunded Commitments ** |  |
|  | \# | \$(000's) | \# | \$(000's) | \# | \% of <br> Total \# | \$(000's) | \% of <br> Total \$ | \# | \$(000's) |
| Full Review: |  |  |  |  |  |  |  |  |  |  |
| Denver-Aurora CSA | 44 | 39,499 | 74 | 246,566 | 118 | 72.4 | 286,065 | 76.3 | 0 | 0 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |
| Colorado Springs MSA | 3 | 6,875 | 4 | 22,940 | 7 | 4.3 | 29,814 | 7.9 | 0 | 0 |
| Fort Collins MSA | 4 | 2,265 | 3 | 49,029 | 7 | 4.3 | 51,294 | 13.7 | 0 | 0 |
| Colorado Non-MSA Total (Glenwood Springs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Statewide Investments with (P/M/F) to Serve AAs | 0 | 0 | 13 | 5,379 | 13 | 8.0 | 5,379 | 1.4 | 0 | 0 |
| Statewide Investments with No (P/M/F) to Serve AAs | 18 | 2,505 | 0 | 0 | 18 | 11.0 | 2,505 | 0.7 | 0 | 0 |

* Prior Period Investments' means investments made in a previous evaluation period that are outstanding as of the examination date.
** Unfunded Commitments' means legally binding investment commitments that are tracked and recorded by the institution's financial reporting system.


## Statewide Investments in the State of Colorado

The bank has qualified investments throughout the state of Colorado whose $\mathrm{P} / \mathrm{M} / \mathrm{F}$ includes serving the AAs. Ninety-one percent support community services and 9.0 percent support economic development. Of these, 12 grants totaling $\$ 2.2$ million were provided to a variety of organizations administering small business, financial education, and food programs. Investments with no $P / M / F$ to serve AAs support affordable housing. Investments with and without a $\mathrm{P} / \mathrm{M} / \mathrm{F}$ to serve AAs represent 2.1 percent of total
state qualified investments. The level of investments in the broader statewide area supported the bank's overall performance under the Investment Test for the state of Colorado.

## Conclusions for Area Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall Outstanding Investment Test rating and did not significantly change the initial overall conclusions based on the AA receiving fullscope review. Based on limited-scope reviews, the bank's performance under the Investment Test in the Colorado Springs MSA and the Fort Collins MSA is consistent with the bank's overall performance under the Investment Test in the full-scope AA. The bank's performance under the Investment Test in the Colorado Non-MSA AA is weaker than the bank's overall performance under the Investment Test in the full-scope area due to the absence of CD investments. The Colorado Non-MSA AA comprises one branch that was opened in December 2018. Performance in the limited-scope AAs did not affect the Investment Test rating for the state of Colorado.

## SERVICE TEST

The bank's performance under the Service Test in the state of Colorado is rated Outstanding.

## Conclusions for Area Receiving a Full-Scope Review

Based on a full-scope review, the bank's performance in the Denver CSA is excellent.

## Retail Banking Services

Service delivery systems are readily accessible to geographies and individuals of different income levels in the bank's full-scope AA.

Examiners evaluated the data as outlined in the Scope section at the front of this document including bank-provided data on usage of branches adjacent to low-and moderate-income geographies by individuals residing in those geographies and on increases in the usage of alternative delivery systems.

Based on the data in the table below and performance context, the branch distribution is excellent. In low- and moderate-income geographies, the distribution is respectively near to and exceeds the percentage of the population. The bank had seven branches in low-income geographies and 22 branches in moderate-income geographies. The distribution was augmented by one MUI tract branch that serves low-income tracts and 13 MUI tract branches that serve moderate-income tracts. Examiners reviewed data on the accounts held and transactions conducted at the MUI branches and confirmed they were serving the adjacent low- and moderate-income populations.

| Distribution of Branch Delivery System |  |  |  |  |  |  |  | As of December 31, 2019 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Deposits | Branches |  |  |  |  |  |  |  |  |  |
|  | $\begin{gathered} \% \text { of Rated } \\ \text { Area } \end{gathered}$ | \# of <br> BANK <br> Branches | \% of <br> Rated <br> Area <br> Branches <br> in AA | Location of Branches by Income of Geographies (\%) |  |  |  | \% of Population within Each Geography |  |  |  |
|  | Deposits in AA |  |  | Low | Mod | Mid | Upp | Low | Mod | Mid | Upp |
| Denver- <br> Aurora CSA | 86.0 | 91 | 79.1 | 7.7 | 24.2 | 34.1 | 34.1 | 8.6 | 23.9 | 34.4 | 33.0 |

[^110]Alternative delivery systems enhance the delivery of banking services to geographies and individuals of all income levels. The OCC considered the availability and use of alternative delivery systems over the evaluation period. This included review of the bank's 232 deposit-taking ATMs, online banking, mobile banking, and telephone banking to determine the effectiveness of these systems to make retail banking services available to individuals in low- and moderate-income geographies. The bank increased the deposit-taking ATMs in low- and moderate-income geographies by 55.9 percent over the prior rating period to 22 ( 9.5 percent) deposit-taking ATMs in low-income geographies and 70 ( 30.2 percent) ATMs in moderate-income geographies. Additionally, bank-provided data on use of online, mobile, and telephone banking showed increases in the adoption of these services by low- and moderate-income individuals from the prior rating period.

| Distribution of Branch Openings/Closings |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | \# of Branch Openings | \# of Branch Closings | Net change in Location of Branches (+ or -) |  |  |  |
|  |  |  | Low | Mod | Mid | Upp |
| Denver-Aurora CSA | 4 | 5 | 0 | -2 | -1 | 2 |

The bank's opening and closing of branches has not adversely affected the accessibility of its delivery systems, particularly in low- and moderate-income geographies and/or to low- and moderate-income individuals. The bank did not open or close any branches in low-income geographies and the bank closed two branches in moderate-income geographies. Branch closures were due to reduced customer usage and proximity to other Chase branches. The branch closures in moderate-income geographies generally did not adversely affect the distribution of branches relative to the population residing in the geographies. Branch locations remained accessible to geographies and individuals of different income levels in the bank's AA.

Services, including where appropriate, business hours, do not vary in a way that inconveniences the AA, particularly low- and moderate-income geographies and/or individuals. Generally, branches are open Monday through Friday from 9:00 am to 6:00 pm and Saturday from 9:00 am to 1:00 pm. All retail banking services are available at all branches within the low- and moderate-income geographies.

## Community Development Services

The bank is a leader in providing CD services that are responsive to identified needs in the AA.
Bank employees provided technical assistance and/or job-specific expertise for 736 CD service activities to 46 organizations for a total of 3,134 hours of service, including 619 hours serving on boards. The majority of the bank's assistance was to organizations that provide community services to low- and moderate-income individuals and families. These services were particularly responsive to community needs for financial literacy and job training. The following are examples of CD services provided in this AA.

- A bank employee provided 239 hours of board service to a non-profit organization that provides job training to low-income women.
- Thirty bank employees provided 276 hours of financial literacy training to students.


## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall Outstanding Service Test rating and did not significantly change the initial overall conclusions based on the AA receiving fullscope review. Based on limited-scope reviews, the bank's performance under the Service Test in the Fort Collins, CO MSA is consistent with the bank's overall performance under the Service Test in the full-scope area and the bank's performance under the Service Test in the Colorado Springs, CO MSA was weaker than the bank's overall performance under the Service Test in the full-scope area. The branch distribution in the Colorado Springs, CO MSA was good and weaker than the excellent distribution in the full-scope AA. There were no low- and moderate-income census tracts in the Edwards-Glenwood Springs, CO MSA which, had a neutral effect on overall conclusions.

## State Rating

## State of Florida

CRA rating for the State of Florida ${ }^{11}$ : Outstanding
The Lending Test is rated: Outstanding
The Investment Test is rated: High Satisfactory
The Service Test is rated: High Satisfactory
The major factors that support this rating include:

- An excellent level of lending activity.
- Good geographic distribution of home mortgage loans and small loans to businesses
- Good borrower distribution of home mortgage loans and small loans to businesses.
- Leadership in making CD loans, that had a significantly positive affect on the rating.
- The extensive use of innovative/flexible products, which positively affected the rating.
- A good level of qualified CD investments that displayed excellent responsiveness to credit and community economic development needs.
- The significant use of innovative and/or complex qualified investments.
- Retail service delivery systems that are accessible to geographies and individuals of different income levels.
- Leadership in providing CD services that are responsive to AA needs.


## Description of Institution's Operations in Florida

The state of Florida is Chase's sixth largest rating area based on aggregate deposits of $\$ 38.4$ billion, representing 2.9 percent of the bank's total adjusted deposits. As of December 31, 2019, the bank operated 418 branches and 1,593 deposit-taking ATMs within the rating area, representing 8.4 percent of total branches and 9.7 percent of total ATMs. The bank originated and purchased approximately $\$ 32.7$ billion in loans or 4.7 percent of total bank loan originations and purchases during the evaluation period in the state.

According to FDIC Deposit Market Share Data, as of June 30, 2019, there were 206 institutions operating 4,816 branches in the state of Florida. Chase ranks fourth in deposit market share with 6.4 percent. Major competitors in the state based on deposit market share include Bank of America, N.A. (19.2 percent), Wells Fargo Bank, N.A. (13.1 percent), and SunTrust Bank (8 percent).

Chase has delineated 11 AAs in Florida. The Miami-Fort Lauderdale-Port St. Lucie, FL CSA (Miami CSA) and Orlando-Lakeland-Deltona, FL CSA (Orlando CSA), which combined account for over 75 percent of the deposits and 62 percent of lending in the state, received full-scope reviews. The Cape Coral-Fort Myers-Naples CSA, Gainesville MSA, Jacksonville MSA, Lakeland-Winter Haven MSA, North Port-Sarasota CSA, Ocala MSA, Palm Bay-Melbourne-Titusville MSA, Tampa-St. PetersburgClearwater MSA, and Tallahassee MSA received limited-scope reviews. Refer to appendix A for a complete description of each AA.

## Miami CSA

The following table provides a summary of the demographics that includes housing and business information for the Miami CSA. Table A indicates that the volume of OOUs is small in low-income census tracts ( 2.5 percent) and over 22.8 percent of families in the AA are low-income.

The Miami CSA is a high cost housing area, limiting access to affordable homeownership among LMI borrowers. The median housing value is $\$ 221,822$, while the NAR 4Q2019 median sales price of a single-family home is $\$ 368,500$. One simplistic method used to determine housing affordability assumes a maximum monthly principal and interest payment of no more than 30 percent of the applicant's income.

Assuming a 30 -year mortgage with a 5 percent interest rate, and not accounting for down payment, homeowners insurance, real estate taxes, or any additional monthly expenses, a low-income borrower making $\$ 32,173$ per year (or less than 50 percent of the FFIEC adjusted median family income in the AA) could afford a $\$ 149,831$ mortgage with a payment of $\$ 804$ per month; a moderate-income borrower earning $\$ 51,471$ per year (or less than 80 percent of the FFIEC adjusted median family income in the AA) could afford a $\$ 239,703$, mortgage with a payment of $\$ 1,287$ per month.

The poverty level across the AA was considered in the evaluation of lending performance. Families living below the stated poverty rate are identified as having difficulty meeting basic financial needs and as such are less likely to have the financial wherewithal to qualify for a home loan than those with income above poverty. In the Miami CSA, the overall household poverty level was 16 percent. However, in low-income geographies, the household poverty level increases to 40 percent and in moderate-income geographies it increases to 24 percent. In MUI geographies, the combined poverty level is 11 percent.

\left.| Table A - Demographic Information of the Assessment Area |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area: 370 Miami-Fort Lauderdale-Port St Lucie FL CSA 2017-2019 |  |  |  |  |  |  |$\right]$| Upper |
| :---: |
| Demographic Characteristics |

Charter Number: 8

| Median Family Income MSA - 33124 <br> Miami-Miami Beach-Kendall, FL | $\$ 49,264$ | Median Gross Rent | $\$ 1,178$ |
| :--- | :---: | :--- | :---: |
| Median Family Income MSA - 38940 <br> Port St. Lucie, FL MSA | $\$ 56,570$ | Families Below Poverty Level | $13.2 \%$ |
| Median Family Income MSA - 42680 <br> Sebastian-Vero Beach, FL MSA | $\$ 58,448$ |  |  |
| Median Family Income MSA - 48424 <br> West Palm Beach-Boca Raton-Boynton <br> Beach, FL | $\$ 65,914$ |  |  |

Source: 2015 ACS and 2019 D\&B Data
Due to rounding, totals may not equal $100.0 \%$
(*) The NA category consists of geographies that have not been assigned an income classification.

## Economic Data

According to Moody's Analytics November 2019, the Great Recession had a lasting impact on Miami's economy. At the height of the previous expansion 12 years ago, average hourly wages in the Miami MSA were $\$ 1.70$ above the U.S. average. Wages fell below the national average during the recession, and the gap between the local and national average has widened ever since. Today, the average hourly wage is $\$ 4.30$ less than the national level among major metro areas with more than one million residents. Construction jobs are set to grow twice as fast as the national average, and some of this new employment can be traced to activity at Port Miami, the world's busiest harbor for passenger ships. Over the next three years, cruise lines will build four separate terminals and two corporate offices at the port at a total cost of more than $\$ 1.5$ billion.

Major employers in the AA include University of Miami, Jackson Health System, Publix Super Markets, Baptist Health Systems of Southern Florida, and American Airlines.

The Miami MSA is transitioning into a sanctuary for affluent retirees and wealthy expatriates. Miami has the second-highest level of income inequality among major metro areas, behind New York City. Since the wealthy in Miami sustain their lifestyle with nonwage income, the area's gross domestic product has increased even as wage growth has stalled. But a looming domestic downturn and global slowdown will reduce corporate profits and stock market returns over the next couple of years. This shock will be hardest felt in the wealthy enclaves flanking the central business district and in Miami Beach, but it will impact the entire metro division.

## Community Contacts

Six community contacts completed during the examination period were reviewed to gain an understanding of the needs in the community. Contacts were completed with organizations focused on affordable housing, economic development, and community services. Low relative wages are a significant challenge for households in South Florida. The income levels are insufficient to meet housing, transportation, and other costs of living in the MSA. A community contact identified that Miami exhibits a larger income discrepancy than most other parts of the United States and the economic conditions of Miami demonstrate extreme polarization. On one hand, tourist areas and wealthy individuals provide a large economic spark, but on the other hand, many low-income individuals struggle. Housing in Miami-Dade County is very expensive, making it unaffordable to both homeowners and renters. The supply of housing stock for low- and moderate-income buyers is scarce. High student loan debt is also a barrier to affordable homeownership. Strategies to provide and preserve affordable housing are imperative for the area. Other needs mentioned for the area include:

- Affordable rental housing in areas experiencing population growth
- Financial education for individuals and small business
- Small business assistance
- Small dollar loan, working capital and lines of credit
- Support for community organizations


## Orlando CSA

The following table provides a summary of the demographics that includes housing and business information for the Orlando CSA. Table A indicates that the volume of OOUs is small in low-income census tracts ( 0.9 percent) and over 20.7 percent of families in the AA are low-income._The Orlando CSA's high cost housing area also limits access to affordable homeownership among LMI borrowers. The median housing value in the Orlando CSA $(\$ 160,770$, ) is approximately four times the median income, over ten times the moderate-income, and up to six times the low-income, indicating a limited proportion of OOUs are affordable to low- and moderate-income borrowers. One simplistic method used to determine housing affordability assumes a maximum monthly principal and interest payment of no more than 30 percent of the applicant's income.

Assuming a 30-year mortgage with a 5 percent interest rate, and not accounting for down payment, homeowners insurance, real estate taxes, or any additional monthly expenses, a low-income borrower making $\$ 32,173$ per year (or less than 50 percent of the FFIEC adjusted median family income in the AA) could afford a $\$ 149,831$ mortgage with a payment of $\$ 804$ per month; a moderate-income borrower earning $\$ 51,471$ per year (or less than 80 percent of the FFIEC adjusted median family income in the AA) could afford a $\$ 239,703$, mortgage with a payment of $\$ 1,287$ per month.

The poverty level across the AA was considered in the evaluation of lending performance. Families living below the stated poverty rate are identified as having difficulty meeting basic financial needs and as such are less likely to have the financial wherewithal to qualify for a home loan than those with income above poverty. In the Orlando CSA, the overall household poverty level was 11.9 percent.

\left.| Table A - Demographic Information of the Assessment Area |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area: 422 Orlando-Deltona-Daytona Beach FL CSA 2017-2019 |  |  |  |  |  |  |$\right]$| Upper |
| :---: |
| Demographic Characteristics |


| Median Family Income MSA - 36740 <br> Orlando-Kissimmee-Sanford, FL MSA | $\$ 57,304$ | Median Gross Rent | $\$ 1,034$ |
| :--- | :--- | :--- | :---: |
| Median Family Income MSA - 45540 The <br> Villages, FL MSA | $\$ 60,099$ | Families Below Poverty Level | $11.9 \%$ |

Source: 2015 ACS and 2019 D\&B Data
Due to rounding, totals may not equal 100.0\%
(*) The NA category consists of geographies that have not been assigned an income classification. $_{\text {in }}$

## Economic Data

According to Moody's Analytics February 2020 Report, the strengths of the Orlando CSA are in tourism, ample services related job opportunities, plentiful land for development and strong migration into the area. However, there is an abundance of low-wage jobs and low employment diversity. Also, Orlando has a high sensitivity to national and international economic conditions.

The major economic driver for the Orlando area is tourism. It is the home to Walt Disney World and Universal Orlando. These resorts house six of the eight most-visited theme parks in North America. Disney and Universal combined employ nearly 100,000 local employees. The Orange County Convention Center is the second largest conference center in the country. Among metro areas with more than 1 million residents, only the Las Vegas workforce has a larger share of employment in leisure/hospitality. The 2.8 percent unemployment rate is only fractionally higher than the lowest rate ever recorded. Major employment industries in the area include leisure and hospitality services, professional and business services, and education and health services. Major employers include Walt Disney World Resort, Universal Orlando (Comcast), Adventist Health System/Florida Hospital, Publix Super Markets Inc., and Orlando International Airport.

Although house price appreciation is slowing, the pace remains above average due to the rapid population growth.

## Community Contacts

Three community contacts completed with organizations serving the area during the examination period were reviewed to ascertain credit and community development needs. Contacts were completed with organizations focused on affordable housing, small business, and workforce development. Increased demand for housing and rising home prices has made affordable housing a primary concern for Orlando. Low-income households are cost burdened and pay more than 30 percent of their income for housing and some even pay more than 50 percent. Multi-family apartment complexes are being built at a rapid pace across Orlando. There is a lack of financial access in underserved communities. A community contact reported that financial education, poor credit scores and lack of equity are the biggest impediments to small business owner's access to capital. Other needs identified include the following:

- Affordable housing and financial education
- Affordable rental housing
- First-time homebuyer counseling
- Financial education for small businesses
- Loans to small businesses for working capital and general operations
- Workforce development
- Capacity building for nonprofits


## Scope of the Evaluation in Florida

The Miami CSA and the Orlando CSA received full-scope reviews. The two AAs combined account for over 75 percent of the deposits and 62 percent of lending in the state. More weight was placed on performance in the Miami CSA based on the bank's higher volume of deposits and lending. The remaining AAs in the state of Florida received limited-scope reviews. Performance in limited-scope AAs and its effect on the CRA rating are discussed at the end of each test.

## CONCLUSIONS WITH RESPECT TO PERFORMANCE TESTS IN FLORIDA

## LENDING TEST

The bank's performance under the Lending Test in the state of Florida is rated Outstanding.
Performance in AAs receiving limited-scope reviews was factored together with performance from AAs receiving full-scope reviews to determine the state's overall Outstanding Lending Test rating. Limitedscope conclusions did not significantly affect the initial overall conclusions based on the AAs receiving full-scope review.

## Conclusions for Areas Receiving a Full-Scope Review

Based on full-scope reviews, the bank's performance in the Miami CSA and the Orlando CSA is excellent. Overall excellent lending levels, good geographic distribution of loans, and good distribution of loans by income level of the borrower. CD lending had a significantly positive affect on the rating and product innovation and flexibility was considered favorably.

## Lending Activity

Lending levels reflect excellent responsiveness to AA credit needs in the bank's AAs.
Examiners considered the number and amount of home mortgage, small business, and small farm loans originated or purchased relative to Chase's capacity based on deposits, competition, and market presence. Lending activity for home mortgage and small loans to businesses received the most weight in reaching conclusions. Respectively, home mortgage lending and small loans to businesses account for 23.7 percent and 75.8 percent of the loan volume in the state by number and 79.3 and 17.9 percent of loan volume by dollar. Small farm lending is not a strategic focus of the bank and received minimal weight in reaching conclusions. Farm loans represented 0.45 percent of the loan volume in the state by number and 0.09 percent loan volume by dollar.

| Number of Loans* |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home <br> Mortgage | Small <br> Business | Small <br> Farm | Community <br> Development | Total |  | \% State <br> Deposits |
| $\begin{aligned} & \text { Miami- Port St. } \\ & \text { Lucie-Fort } \\ & \text { Lauderdale CSA } \end{aligned}$ | 35,987 | 161,626 | 783 | 35 | 198,431 | 46.9 | 61.0 |
| Orlando-Deltona- <br> Daytona Beach CSA | 18,715 | 50,172 | 296 | 9 | 69,192 | 16.3 | 14.5 |


| Cape Coral-Fort <br> Myers-Naples CSA | 7,131 | 16,080 | 120 | 1 | 23,332 | 5.5 | 4.8 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Gainesville MSA | 335 | 1,609 | 30 | 0 | 1,974 | 0.5 | 0.1 |
| Jacksonville MSA | 6,531 | 14,883 | 74 | 5 | 21,493 | 5.1 | 1.9 |
| Lakeland-Winter <br> Haven MSA | 2,808 | 4,115 | 92 | 1 | 7,016 | 1.7 | 0.7 |
| North Port-Sarasota <br> CSA | 6,909 | 15,632 | 106 | 6 | 22,653 | 5.4 | 4.4 |
| Ocala MSA | 736 | 1,514 | 69 | 0 | 2,319 | 0.5 | 0.2 |
| Palm Bay- <br> Melbourne- <br> Titusville MSA | 3,652 | 8,047 | 43 | 2 | 11,744 | 2.8 | 2.7 |
| Tallahassee MSA | 443 | 1,293 | 8 | 1 | 1,745 | 0.4 | 0.0 |
| Tampa-St, <br> Petersburg- <br> Clearwater MSA | 17,172 | 46,001 | 288 | 13 | 63,474 | 15.0 | 9.6 |
| Total | 100,419 | 320,972 | 1,909 | 73 | 423,373 | 100 | 100 |

*Due to rounding, totals may not equal $100.0 \%$. The tables present the data for all assessment areas. The narrative below addresses performance in fullscope areas only.

| Dollar Volume of Loans* (\$000s) |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home Mortgage | Small Business | Small <br> Farm | Community <br> Development | Total |  | \% State <br> Deposits |
| $\begin{aligned} & \hline \text { Miami-Port St. } \\ & \text { Lucie-Fort } \\ & \text { Lauderdale CSA } \\ & \hline \end{aligned}$ | 11,177,036 | 3,136,689 | 10,054 | 340,240 | 14,664,019 | 44.8 | 61.0 |
| Orlando-DeltonaDaytona Beach CSA | 3,941,093 | 853,758 | 3,248 | 208,490 | 5,006,589 | 15.3 | 14.5 |
| Cape Coral-Fort Myers-Naples CSA | 2,271,592 | 281,618 | 1,127 | 975 | 2,555,312 | 7.8 | 4.8 |
| Gainesville MSA | 68,132 | 18,755 | 279 | 0 | 87,166 | 0.3 | 0.1 |
| Jacksonville MSA | 1,511,059 | 252,489 | 1,266 | 59,397 | 1,824,211 | 5.6 | 1.9 |
| Lakeland-Winter Haven MSA | 463,210 | 68,498 | 6,454 | 5,000 | 543,162 | 1.7 | 0.7 |
| North Port-Sarasota CSA | 1,709,166 | 273,472 | 1,620 | 74,800 | 2,059,058 | 6.3 | 4.4 |
| Ocala MSA | 107,403 | 19,807 | 772 | 0 | 127,982 | 0.4 | 0.2 |
| Palm Bay- <br> Melbourne- <br> Titusville MSA | 719,692 | 149,678 | 439 | 12,700 | 882,509 | 2.7 | 2.7 |
| Tallahassee MSA | 92,658 | 15,241 | 71 | 10,700 | 118,670 | 0.4 | 0.0 |
| Tampa-St, PetersburgClearwater MSA | 3,904,639 | 811,371 | 3,134 | 135,107 | 4,854,251 | 14.8 | 9.6 |
| Total | 25,965,680 | 5,881,376 | 28,464 | 847,409 | 32,722,929 | 100 | 100 |

*Due to rounding, totals may not equal $100.0 \%$. The tables present the data for all assessment areas. The narrative below addresses performance in fullscope areas only.

## Miami CSA

The bank ranked third in deposits out of 90 institutions with a 9.2 percent market share.

In overall home mortgage lending, the bank ranked third out of 1,191 lenders with a 4.5 percent market share placing it in the top 1 percent of all lenders. There is strong competition for home mortgage lending. The top lenders were Wells Fargo Bank, N.A. (8.1 percent), Bank of America, N.A. (6.5 percent), and Quicken Loans (4.2 percent).

In small loans to businesses, the bank ranked third out of 248 lenders with a 15.3 percent market share placing it in the top 2 percent of all lenders. This is a very competitive market. The top lenders (and their market share) are nationwide lenders with substantial small business credit card portfolios and include American Express National Bank (27 percent), Bank of America, N.A. (14.7 percent), and Citibank, N.A. (7.9 percent).

In small loans to farms, Chase ranked first out of 26 lenders with a 31.4 percent market share. The other major lenders and respective market shares are Bank of America, N.A. (23.7 percent), Wells Fargo Bank, N.A. (15.3 percent), and U.S. Bank, N.A. (9.0 percent).

## Orlando CSA

The bank ranked fourth in deposits out of 50 institutions with an 8.2 percent market share.
In overall home mortgage lending, the bank ranked fifth out of 1,102 lenders with 3 percent market share placing it in the top 1 percent of all lenders. There is strong competition for home mortgage lending. The top lenders were Wells Fargo Bank, N.A. (7 percent), Quicken Loans (4.4 percent), and Bank of America, N.A. (4.2 percent).

In small loans to businesses, the bank ranked second out of 178 lenders with 14.4 percent market share placing it in the top 2 percent of all lenders. This is a very competitive market. The top lenders (and their market share) are nationwide lenders with substantial small business credit card portfolios and include American Express National Bank (27 percent), Bank of America, N.A. (14.7 percent), and Citibank, N.A. (7.9 percent).

In small loans to farms, Chase ranked first out of 19 lenders with a 32.2 percent market share. The other major lenders and respective market shares are Wells Fargo Bank, N.A. ( 16.5 percent), Bank of America, N.A. (15.5 percent), and U.S. Bank, N.A. (9.2 percent).

## Distribution of Loans by Income Level of the Geography

The bank exhibits good geographic distribution of loans in its AAs, relative to area demographics and aggregate lending data.

## Home Mortgage Loans

Refer to Table O in the state of Florida section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of home mortgage loan originations and purchases is good. The following information was taken into consideration when determining this rating.

## Miami CSA

- The limited proportion of housing units in low-income geographies, particularly OOUs ( 2.5 percent), constrained lending opportunities; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of OOUs in those geographies.
- The high level of poverty and competition in the AA (1,191 home mortgage lenders) was also considered and examiners placed greater significance on performance compared to the aggregate of lenders.
- Between 2017 and 2019, the proportion of loans in low- income areas were below the percentage of owner-occupied units and aggregate distribution of loans. In moderate-income areas the proportion of loans was below the percentage of owner-occupied units and near to the aggregate distribution of loans.
- During 2014 through 2016, performance in low-income geographies was well below both the percentage of owner-occupied units and aggregate distribution of loans, while performance in moderate-income geographies was well below the percentage of owner-occupied units and below the aggregate distribution of loans.


## Orlando CSA

- The limited proportion of housing units in low-income geographies, particularly OOUs ( 0.9 percent), constrained lending opportunities; therefore, performance in moderate-income geographies was given more consideration due to the higher percentage of OOUs in those geographies.
- The high level of competition in the AA (1,057 home mortgage lenders) was also considered and examiners placed greater significance on performance compared to the aggregate of lenders.
- Between 2017 and 2019, the proportion of loans in low- and moderate-income areas was below the percentage of owner-occupied units and near to the aggregate distribution of loans.
- During 2014 through 2016, performance in low-income geographies was well below the percentage of owner-occupied units and exceeded the aggregate distribution of loans, while performance in moderate-income geographies was below the percentage of owner-occupied units and near to the aggregate distribution of loans.


## Small Loans to Businesses

Refer to Table Q in the state of Florida section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to businesses.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to businesses for this evaluation is good. The following information was taken into consideration when determining this rating.

## Miami CSA

- The small proportion of businesses in low-income geographies (4.1 percent) and competition between 248 lenders constrained lending opportunities to existing businesses. Therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of businesses in those geographies.
- Between 2017 and 2019, the proportion of small loans to businesses in low-income geographies was below the proportion of businesses and the aggregate distribution, while the proportion of small loans to businesses in moderate-income geographies was near to both the proportion of businesses and the aggregate distribution
- During 2014 to 2016, the proportion of small loans to businesses in low-income geographies was below the proportion of businesses and near to the aggregate distribution, while the proportion of small loans to businesses in moderate-income geographies was near to both the proportion of businesses and the aggregate distribution


## Orlando CSA

- The small proportion of businesses in low-income geographies (1.6 percent) and competition between 178 lenders constrained lending opportunities to existing businesses. Therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of businesses in those geographies.
- Between 2017 and 2019, the proportion of small loans to businesses in low-income geographies was well below the proportion of businesses and near to the aggregate distribution, while the proportion of small loans to businesses in moderate-income geographies was near to both the proportion of businesses and the aggregate distribution.
- During 2014 to 2016, the bank's proportion of small loans to businesses in low-income geographies was well below both the proportion of businesses and the aggregate distribution. The proportion of small loans to businesses in moderate-income geographies was near to both the proportion of businesses and the aggregate distribution.


## Small Loans to Farms

Refer to Table S in the state of Florida section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to farms.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to farms is adequate. The following information was taken into consideration when determining this rating.

## Miami CSA

- The limited number of farms in low-income geographies (3.7 percent) constrained lending opportunities; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher number of farms in those geographies.
- The fact that farm lending is not a focus of the bank was also considered.
- Between 2017 and 2019, the proportion of loans to small farms in low-income geographies was well below the proportion of farms in those geographies and near to the aggregate distribution of all lenders. The proportion of loans to small farms in moderate-income geographies was well below both the proportion of farms in those geographies and the aggregate distribution of all lenders.
- Performance in low- and moderate-income geographies during the 2014 to 2016 period was weaker than performance during the 2017 to 2019 period. The bank had no farm loans in low-income geographies. The proportion of loans to small farms in moderate-income geographies was well below both the proportion of farms in those geographies and the aggregate distribution for the respective geographies.


## Orlando CSA

- The limited number of farms in low-income geographies, ( 3.7 percent in 2017-2019; 0.84 percent in 2014 to 2016), constrained lending opportunities; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher number of farms in those geographies.
- The fact that farm lending is not a focus of the bank was also considered.
- Between 2017 and 2019, the bank made no loans in low-income geographies. The proportion of loans to small farms in moderate-income geographies was well below both the proportion of farms in those geographies and near to the aggregate distribution of all lenders.
- Performance in low- and moderate-income geographies during the 2014 to 2016 period was weaker than performance during the 2017 to 2019 period. The proportion of loans to small farms in lowand moderate-income geographies was well below and below the proportion of farms in those geographies and well below and near to the aggregate distribution for the respective geographies.


## Lending Gap Analysis

A review of home mortgage loans, small loans to business, and small loans to farms including summary reports and AA maps did not identify any unexplained conspicuous lending gaps in the bank's activities.

## Distribution of Loans by Income Level of the Borrower

The bank exhibits good distribution of loans among individuals of different income levels and business and farms of different sizes, given the product lines offered by the institution.

## Home Mortgage Loans

Refer to Table P in the state of Florida section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall borrower distribution of home mortgage loan originations and purchases for this evaluation is good. The following information was taken into consideration when determining this rating.

## Miami CSA

- Greater significance was placed on performance against the aggregate distribution as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of this Full-Scope AA.
- Examiners particularly considered housing affordability challenges for low- and moderate-income borrowers. Particularly, the high housing cost, limited availability of housing that low-income borrowers can afford to acquire, and poverty levels within the AA constrained lending opportunities to low-income borrowers.
- Between 2017 and 2019, the proportion of loans to low-income borrowers was well below the percentage of low-income families and exceeded the aggregate distribution of lenders. The proportion of moderate-income loans was below the proportion of moderate-income families and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was generally consistent with performance between 2017 to 2019. The proportion of loans to low-income borrowers was well below the percentage of low-income families and exceeded the aggregate distribution of lenders. The proportion of moderate-income loans was below the proportion of moderate-income families and was near to the aggregate distribution.


## Orlando CSA

- Greater significance was placed on performance against the aggregate distribution as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of this Full-Scope AA.
- Examiners particularly considered housing affordability challenges for low- income borrowers. Particularly, the high housing cost and limited availability of housing that low-income borrowers can afford to acquire constrained lending opportunities to low-income borrowers.
- Between 2017 and 2019, the proportion of loans to low-income borrowers was well below the percentage of low-income families and exceeded the aggregate distribution of lenders. The proportion of moderate-income loans was near to the proportion of moderate-income families and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was generally consistent with performance between 2017 to 2019. The proportion of loans to low-income borrowers was well below the percentage of low-income families and significantly exceeded the aggregate distribution of lenders. The proportion of moderate-income loans was near to the proportion of moderate-income families and the aggregate distribution.


## Small Loans to Businesses

Refer to Table R in the state of Florida section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to businesses.

Based on the data in the table and the following considerations, the distribution of the bank's originations and purchases of small loans to businesses by revenue category is good. The following information was taken into consideration when determining this conclusion.

## Miami CSA

- Greater significance was placed on performance against the aggregate distribution of lenders as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of the Full-Scope AA.
- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was near to the percentage of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was weaker than performance between 2017 and 2019. The bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.


## Orlando CSA

- Greater significance was placed on performance against the aggregate distribution of lenders as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of the Full-Scope AA.
- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was near to the percentage of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 and 2019. The bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.


## Small Loans to Farms

Refer to Table T in the state of Florida section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to farms.

Based on the data in the table and the following considerations, the distribution of the bank's originations and purchases of small loans to farms by revenue category is good. The following information was taken into consideration when determining this rating.

## Miami CSA

- The fact that farm lending is not a focus of the bank was considered.
- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 and 2019. The bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.


## Orlando CSA

- The fact that farm lending is not a focus of the bank was considered.
- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 and 2019. The bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was well below the percentage of businesses and exceeded the aggregate distribution.


## Community Development Lending

The institution is a leader in making CD loans.
The Lending Activity Tables, shown above, set forth the information and data used to evaluate the institution's level of CD lending. These tables include all CD loans, including multifamily loans that also qualify as $C D$ loans.

CD lending had a significantly positive affect on the Lending Test rating for the state of Florida.

## Miami CSA

The bank made 35 CD loans in its AA for a total of $\$ 340.2$ million, which represents 11.3 percent of the tier 1 capital allocated to the AA. Of total CD lending, 77.5 percent supported affordable housing, and 11.9 percent supported community services.

Examples of CD loans in the AA include:

- In December 2014, the bank provided an $\$ 8.1$ million loan to finance affordable housing as the National Low-Income Housing Coalition determined there was a shortage of affordable housing in this AA.
- In May 2017, the bank provided a $\$ 1.0$ million loan to an academic organization focused on implementing best practices regarding curriculum, academic intervention, and school improvement for low- and moderate-income students.
- In April 2019, the bank provided a $\$ 36.0$ million loan to the City of Pompano to assist in completing its plans that focus on low- and moderate-income individuals and reducing poverty among its residents. The city lost more than 250 jobs when a long-established manufacturing company relocated its plant operations. With the support of the bank, the city's project aims to bring new job opportunities that will help revitalize and stabilize the area.


## Orlando CSA

The bank made nine CD loans in its AA for a total of $\$ 208.5$ million, which represents 29 percent of the tier 1 capital allocated to the AA. Of total CD lending, 80.3 percent supported community services and 20 percent supported affordable housing.

Examples of CD loans in the AA include:

- In May 2015, the bank funded a $\$ 108.2$ million loan to the School Board of Orange County FL to provide an effective and complete education for low- and moderate-income students.
- In December 2017, the bank provided a $\$ 13.9$ million loan to develop affordable housing in DeLand, which is an area identified as having an affordable housing gap by the National Low-Income Housing Coalition. The project resulted in the creation of 100 low- and moderate-income units.
- In March 2019, the bank provided a $\$ 1.4$ million loan to develop affordable housing in the Palm Beach County section of the AA. This project resulted in the creation of 40 low- and moderateincome units.


## Product Innovation and Flexibility

The bank makes extensive use of innovative and/or flexible lending practices to serve AA credit needs, which was considered positively in determining the rating for the state of Florida.

## Miami CSA

A total of 8,011 loans were funded totaling nearly $\$ 1.4$ billion under the following innovative and/or flexible programs.

| Loan Type | Number of <br> Loans | Dollar Amount <br> (\$000's) |
| :--- | :---: | :---: |
| DreaMaker | 934 | 163,890 |
| Federal Housing Administration (FHA) | 2,477 | 411,386 |
| Home Affordable Refinance Program (HARP) | 3,218 | 451,312 |
| Veteran's Administration (VA) | 625 | 166,173 |
| Small Business Administration (SBA) | 705 | 177,414 |
| U.S. Department of Agriculture (USDA) | 52 | 7,168 |

## Orlando-Deltona-Daytona Beach CSA

A total of 5,608 loans were funded totaling $\$ 883.2$ million under the following innovative and/or flexible programs.

| Loan Type | Number of <br> Loans | Dollar Amount <br> $\mathbf{( \$ 0 0 0 ' s )}$ |
| :--- | :---: | :---: |
| DreaMaker | 603 | 107,177 |
| Federal Housing Administration (FHA) | 1,493 | 210,913 |
| Home Affordable Refinance Program (HARP) | 1,204 | 151,501 |
| Veteran's Administration (VA) | 770 | 177,593 |
| Small Business Administration (SBA) | 213 | 50,578 |
| U.S. Department of Agriculture (USDA) | 1,325 | 185,421 |

## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall Outstanding Lending Test rating and did not significantly affect the initial overall conclusions based on the AAs receiving fullscope review. Based on limited-scope reviews, the bank's performance under the Lending Test in the Gainesville MSA, Lakeland-Winter Haven MSA, North Port-Sarasota CSA, Palm Bay-MelbourneTitusville MSA, Tallahassee MSA, and Tampa-St. Petersburg-Clearwater MSA, Cape Coral, Fort Myers-Naples MSA, Jacksonville MSA and Ocala MSA is weaker than the bank's excellent performance under the Lending Test in the full-scope areas due to weaker geographic and/or borrower income distributions.

Refer to Tables O through T in the state of Florida section of appendix D for the facts and data that support these conclusions.

## INVESTMENT TEST

The bank's performance under the Investment Test in the state of Florida is rated High Satisfactory.

## Conclusions for Areas Receiving Full-Scope Reviews

Based on a full-scope reviews, the bank's performance in the Miami-Fort Lauderdale-Port St. Lucie CSA and Orlando Deltona-Daytona Beach CSA is good.

## Miami-Fort Lauderdale-Port St. Lucie CSA

The bank has an adequate level of qualified CD investments and grants, although rarely in a leadership position, particularly those that are not routinely provided by private investors. Current and prior period investment dollar volume represents 3.6 percent of tier 1 capital allocated to the AA. A significant majority or 66.9 percent of total investments represent current period investments.

The bank exhibits excellent responsiveness to the needs identified in the AA as affordable housing, affordable rental housing, and community service. Current period investments were 82.1 percent or $\$ 59.5$ million affordable housing, 15.1 percent community service, and 1.9 percent economic development. Current and prior period investments created or supported 5,371 low- and moderateincome housing units for individuals and families. The bank provided 163 grants totaling $\$ 17.1$ million to a variety of organizations that primarily support community service and affordable housing. In some occurrences the bank provided grants in multiple years.

The bank makes extensive use of innovative and/or complex investments to support CD initiatives. Current period investments include eight or $\$ 50.2$ million complex Direct Investor LIHTC transactions which require bank expertise and capacity in selecting projects and partners, negotiating agreements, overseeing project development and operations, and ensuring compliance. In addition, nine investments were a catalyst for future growth and other improvements.

Examples of CD investments in the AA include:

- The bank invested $\$ 1.2$ million in a LIHTC fund for affordable housing development in the MiamiDade County. The project was required to set aside a number of units for low- and moderate-income individuals or households that must earn either less than 50 percent or 60 percent of the (AMI) (depending on the set-aside option chosen by the property owner) to qualify for these units.
- The bank originated an $\$ 11.4$ million Direct Investor LIHTC investment for new construction of two 4-story, elevator buildings with 100 units located in Homestead FL. All units will benefit from a rental subsidy provided and administered by Miami-Dade County through its Public Housing and Community Development Department. A Section 8 HAP contract will cover 80 units and a Section 9 public housing Annual Contribution Contract (ACC) covers 20 units. The first phase of the multiphase development will replace a former public housing complex demolished in 2014. The project was financed with $\$ 15.5$ million tax exempt bonds purchased by the bank.


## Orlando Deltona-Daytona Beach CSA

The bank has an excellent level of qualified CD investments and grants, but not in a leadership position, particularly those that are not routinely provided by private investors. Current and prior period investment dollar volume represent 8.9 percent of tier 1 capital allocated to the AA. A significant majority or 84.6 percent of total investments represent current period investments.

The bank exhibits excellent responsiveness to the needs identified in the AA including affordable housing and affordable rental housing and community service. Eighty-two percent or $\$ 50.2$ million of investments focused on affordable housing and 7.0 percent or $\$ 3.8$ million on community service. Current and prior period investments created or supported 2,910 low- and moderate-income housing units for individuals and families. The bank provided 44 grants totaling $\$ 8.3$ million to a variety of organizations that primarily support affordable housing and community services.

The bank occasionally uses innovative and/or complex investments to support CD initiatives. Current period investments included three complex Direct Investor LIHTC transactions which require bank expertise and capacity in selecting projects and partners, negotiating agreements, overseeing project development and operations, and ensuring compliance. The bank also invested in one NMTC project.

Examples of CD investments in the AA include:

- The bank invested $\$ 16.3$ million in a LIHTC fund. This activity is responsive to the identified need for affordable housing within the bank's AA. The LIHTC provides a tax incentive to construct or rehabilitate affordable rental housing for low- and moderate-income households. It subsidizes the acquisition, construction, and rehabilitation of affordable rental housing for low- and moderateincome tenants.
- The bank made three grants totaling $\$ 5$ million to a community loan fund to increase affordable housing in the AA. The three-year investment allows development of stable affordable housing for low- and moderate-income renters by working with innovative developers to develop multifamily rental complexes using repurposed shipping containers, purchasing bulk other real estate owned properties and rehabilitating them for affordable rental housing; and acquiring and renovating existing multifamily properties to preserve long-term affordability.
- The bank invested $\$ 1.9$ million in a NMTC that provided financing to a service entity seeking to expand and create jobs in two grocery stores in the AA. The entity was unable to secure conventional financing and traditional financing would have been at a high cost. The bank partnered with a Central Florida Community Development Entity (CDE) to finance the project. Bank financing was the final component of allocation necessary to ensure the project's success. Anticipated job growth in the two stores was 90 full-time positions available to individuals with a high school diploma.

| Qualified Investments -State of Florida |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area (AA) | Prior Period* |  | Current Period |  | Total |  |  |  | $\underset{* *}{\substack{\text { Unfunded } \\ \text { Commitments }\\}}$ |  |
|  | \# | \$(000's) | \# | \$(000's) | \# | $\begin{gathered} \text { \% of } \\ \text { Total \# } \end{gathered}$ | \$(000's) | \% of <br> Total \$ | \# | \$(000's) |
| Full Review: |  |  |  |  |  |  |  |  |  |  |
| Miami-Fort Lauderdale-Port St. Lucie CSA | 36 | 35,792 | 175 | 72,426 | 211 | 42.4 | 108,219 | 28.3 | 0 | 0 |
| Orlando-Deltona-Daytona Beach CSA | 12 | 9,878 | 49 | 54,274 | 61 | 12.2 | 64,153 | 16.8 | 0 | 0 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |
| Cape Coral-Fort MyersNaples CSA | 3 | 150 | 6 | 250 | 9 | 1.8 | 400 | 0.1 | 0 | 0 |
| Gainesville MSA | 3 | 22 | 5 | 11,920 | 8 | 1.6 | 11,942 | 3.1 | 0 | 0 |
| Jacksonville MSA | 4 | 435 | 20 | 35,238 | 2 | 4.8 | 35,673 | 9.3 | 0 | 0 |
| Lakeland-Winter Haven MSA | 3 | 340 | 5 | 240 | 8 | 1.6 | 580 | 0.2 | 0 | 0 |
| North Port-Sarasota CSA | 4 | 167 | 7 | 320 | 11 | 2.2 | 487 | 0.1 | 0 | 0 |
| Ocala MSA | 0 | 0 | 2 | 87 | 2 | 0.4 | 87 | 0.0 | 0 | 0 |
| Palm Bay-MelbourneTitusville MSA | 1 | 0 | 4 | 546 | 5 | 1.0 | 546 | 0.2 | 0 | 0 |
| Tallahassee MSA | 0 | 0 | 2 | 16,207 | 2 | 0.4 | 16,207 | 4.2 | 0 | 0 |
| Tampa-St. PetersburgClearwater MSA | 22 | 10,209 | 48 | 87,937 | 70 | 14.1 | 98,146 | 25.6 | 0 | 0 |
| Statewide Investments with Purpose, Mandate, or Function ( $\mathrm{P} / \mathrm{M} / \mathrm{F}$ ) to Serve AAs | 0 | 0 | 67 | 42,920 | 67 | 13.5 | 42,920 | 11.2 | 0 | 0 |
| Statewide Investments with No Purpose, Mandate, or Function ( $\mathrm{P} / \mathrm{M} / \mathrm{F}$ ) to Serve AAs | 16 | 3,273 | 4 | 172 | 20 | 4.0 | 3,445 | 0.9 | 0 | 0 |

* Prior Period Investments' means investments made in a previous evaluation period that are outstanding as of the examination date.
** Unfunded Commitments' means legally binding investment commitments that are tracked and recorded by the institution's financial reporting system.


## Statewide Investments in the State of Florida

The bank has qualified investments throughout the state of Florida with and without a P/M/F to serve AAs. These investments represent 11.3 percent of total qualified investment in Florida. Three investments totaling $\$ 31.7$ million were made for affordable housing, including two complex Direct Investor LIHTC transactions. Sixty-four grants totaling $\$ 11.3$ million were provided to a variety of organizations, primarily agencies administering financial education services to consumers. Some grants
were made in multiple years. Almost all investments have a P/M/F to serve AAs. The level of broader statewide investments supports the Investment Test rating for the state of Florida.

## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall High Satisfactory Investment Test rating and did not significantly affect the initial overall conclusions based on the AAs receiving full-scope review. Based on limited-scope reviews, the bank's performance under the Investment Test in the Gainesville MSA, Jacksonville MSA, Tampa-St. Petersburg-Clearwater MSA and Tallahassee MSA is stronger than the bank's good performance under the Investment Test in full-scope areas. Stronger performance is due to higher levels of qualified investments in relation to tier 1 capital. The bank's performance under the Investment Test in the Cape Coral-Fort Myers-Naples CSA, LakelandWinter Haven MSA, North Port-Sarasota CSA, Ocala MSA, and Palm Bay-Melbourne-Titusville MSA is weaker than the bank's good performance in the full-scope areas. Weaker performance is due to a lower level of investments.

## SERVICE TEST

The bank's performance under the Service Test in the state of Florida is rated High Satisfactory.

## Conclusions for Areas Receiving Full-Scope Reviews

Based on a full-scope review, the bank's performance in the Miami-Fort Lauderdale-Port St. Lucie, FL CSA is good and the bank's performance in the Orlando-Deltona-Daytona Beach, FL CSA is excellent.

## Retail Banking Services

Service delivery systems are accessible to geographies and individuals of different income levels in the bank's full-scope AAs.

Examiners evaluated the data as outlined in the Scope section at the front of this document including bank-provided data on usage of branches adjacent to low-and moderate-income geographies by individuals residing in those geographies and on increases in the usage of alternative delivery systems.

## Miami-Fort Lauderdale-Port St. Lucie, FL CSA

Based on the data in the table below and performance context, the branch distribution is good. In lowand moderate-income geographies, the distribution is respectively near to and below the percentage of the population. The bank had eight branches in low-income geographies and 37 branches in moderateincome geographies. The distribution was augmented by one MUI tract branch that served low-income tracts and 54 MUI tract branches that serve moderate-income tracts. Examiners reviewed data on the accounts held and transactions conducted at the MUI branches and confirmed they were serving the adjacent low- and moderate-income populations.

## Orlando-Deltona-Daytona Beach, FL CSA

Based on the data in the table below and performance context, the branch distribution is excellent. In low- and moderate-income geographies, the distribution respectively exceeds and is near to the percentage of the population. The bank had two branches in low-income geographies and 14 branches
in moderate-income geographies. The distribution was augmented by 15 MUI tract branches that serve moderate-income tracts. Examiners reviewed data on the accounts held and transactions conducted at the MUI branches and confirmed they were serving the adjacent low- and moderate-income populations.

| Distribution of Branch Delivery System |  |  |  |  |  |  |  | As of December 31, 2019 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area |  | Branches |  |  |  |  |  | Population |  |  |  |
|  | \% of Rated Area Deposits in AA | \# of <br> BANK <br> Branches | \% ofRated AreaBranchesin AA | Location of Branches by Income of Geographies (\%) |  |  |  | \% of Population within Each Geography |  |  |  |
|  |  |  |  | Low | Mod | Mid | Upp | Low | Mod | Mid | Upp |
| Miami-Fort <br> Lauderdale <br> -Port St. <br> Lucie CSA | 61.0 | 194 | 46.4 | 4.1 | 19.1 | 36.1 | 40.7 | 5.6 | 28.1 | 33.3 | 32.6 |
| Orlando- <br> Deltona- <br> Daytona <br> Beach CSA | 14.5 | 64 | 15.3 | 3.1 | 21.9 | 46.9 | 26.6 | 2.3 | 25.7 | 42.9 | 28.8 |

* May not add up to 100 percent due to geographies with unknown tract income level and rounding


## Miami-Fort Lauderdale-Port St. Lucie CSA

Alternative delivery systems enhanced the delivery of banking services to geographies and individuals of all income levels. The OCC considered the availability and use of alternative delivery systems over the evaluation period. This included review of the bank's 778 deposit-taking ATMs, online banking, mobile banking, and telephone banking to determine the effectiveness of these systems to make retail banking services available to individuals in low- and moderate-income geographies. The bank increased the deposit-taking ATMs in low- and moderate-income geographies by 47.0 percent over the prior rating period to 31 ( 4.0 percent) deposit-taking ATMs in low-income geographies and 166 (21.3 percent) ATMs in moderate-income geographies. Additionally, bank-provided data on use of online, mobile, and telephone banking showed increases in the adoption of these services by low- and moderate-income individuals from the prior rating period.

## Orlando-Deltona-Daytona Beach CSA

Alternative delivery systems enhanced the delivery of banking services to geographies and individuals of all income levels. The OCC considered the availability and use of alternative delivery systems over the evaluation period. This included review of the bank's 237 deposit-taking ATMs, online banking, mobile banking, and telephone banking to determine the effectiveness of these systems to make retail banking services available to individuals in low- and moderate-income geographies. The bank had 8 (3.4 percent) deposit-taking ATMs in low-income geographies and 55 (23.2 percent) ATMs in moderate-income geographies. Additionally, bank-provided data on use of online, mobile, and telephone banking showed increases in the adoption of these services by low- and moderate-income individuals from the prior rating period.

| Distribution of Branch Openings/Closings |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{array}{l}\text { Assessment } \\ \text { Area }\end{array}$ | $\begin{array}{c}\text { \# of Branch } \\ \text { Openings }\end{array}$ | $\begin{array}{c}\text { \# of Branch } \\ \text { Closings }\end{array}$ | Net change in Location of Branches |  |  |  |  |
| $(+$ or -$)$ |  |  |  |  |  |  |  |$)$

## Miami-Fort Lauderdale-Port St. Lucie CSA

The bank's opening and closing of branches has not adversely affected the accessibility of its delivery systems, particularly in low- and moderate-income geographies and/or to low- and moderate-income individuals. The bank opened two branches in moderate-income geographies, closed one branch in a low-income geography, and closed four branches in moderate-income geographies. Branch closures were due to reduced customer usage and proximity to other Chase branches. Despite the branch closures, branch locations remained accessible to geographies and individuals of different income levels in the bank's AA.

Services, including where appropriate, business hours, do not vary in a way that inconveniences its AA, particularly low- and moderate-income geographies and/or individuals. Generally, branches are open Monday through Friday from 8:30 am to 6:00 pm and Saturday from 9:00 am to 2:00 pm. All retail banking services are available at all branches within the low- and moderate-income geographies.

## Orlando-Deltona-Daytona Beach CSA

The bank's opening and closing of branches has enhanced the accessibility of its delivery systems, particularly in low- and moderate-income geographies and/or to low- and moderate-income individuals. The bank did not open or close any branches in low-income geographies, opened four branches in moderate-income geographies and closed one branch in a moderate-income geography. The branch closure was due to reduced customer usage. Branch locations remained accessible to geographies and individuals of different income levels in the bank's AA.

Services, including where appropriate, business hours, do not vary in a way that inconveniences its AA, particularly low- and moderate-income geographies and/or individuals. Generally, branches are open Monday through Friday from 9:00 am to 6:00 pm and Saturday from 9:00 am to 2:00 pm. All retail banking services are available at all branches within the low- and moderate-income geographies.

## Community Development Services

The bank was a leader in providing CD services in Miami-Fort Lauderdale-Port St. Lucie CSA and Orlando-Deltona-Daytona Beach CSA that are responsive to AA needs.

## Miami-Fort Lauderdale-Port St. Lucie CSA

Bank records show employees provided technical assistance and/or job-specific expertise for 1,551 CD service activities to 49 organizations for a total of 6,067 qualified hours of service. A majority of the
bank's assistance was to organizations that provide community services to low- and moderate-income individuals and families. These services were responsive to community needs, particularly, financial literacy and first-time homebuyer education. The following are examples of CD services provided in this AA:

- Bank employees conducted 15 first time homebuyer seminars serving 925 low- and moderateincome individuals in partnership with a non-profit housing organization.
- A bank employee conducted 20 financial literacy seminars serving 43 low- and moderate-income individuals in partnership with a local non-profit.


## Orlando-Deltona-Daytona Beach CSA

Bank records show employees provided technical assistance and/or job-specific expertise for 449 CD service activities to 15 organizations for a total of 2,074 qualified hours of service. A majority of the bank's assistance was to organizations that provide community services to low- and moderate-income individuals and families. These services were responsive to community needs, particularly, financial literacy and job training. The following are examples of CD services provided in this AA:

- Bank employees conducted 29 first time homebuyer seminars serving 272 low- and moderateincome individuals in partnership with a non-profit organization.
- Bank employees provided 89 financial literacy seminars to over 2,200 low- and moderate-income students through partnership with a non-profit organization.


## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall High Satisfactory Service Test rating and did not significantly change the initial overall conclusions based on the AAs receiving full-scope review. Based on limited-scope reviews, the bank's performance under the Service Test in the Tampa-St. Petersburg-Clearwater, FL and Gainesville-Lake City, FL AAs is stronger than the bank's overall performance under the Service Test in the full-scope areas due to better branch distribution in low- and moderate-income geographies. The bank's performance under the Service Test in the Jacksonville-St. Marys-Palatka, FL-GA CSA is consistent with the bank's overall performance under the Service Test in the full-scope areas. The bank's performance under the Service Test in the North PortSarasota, FL; Cape Coral-Fort Myers-Naples, FL; Lakeland-Winter Haven, FL; Ocala, FL; Palm Bay-Melbourne-Titusville, FL; Tallahassee-Bainbridge, FL-GA; AAs is weaker than the bank's overall performance under the Service Test in the full-scope area due to a lower percentage of branch distribution in low- and moderate-income geographies

## State Rating

## State of Georgia

CRA rating for the State of Georgia ${ }^{12}$ : Outstanding
The Lending Test is rated: Outstanding
The Investment Test is rated: Outstanding
The Service Test is rated: High Satisfactory
The major factors that support this rating include:

- A good level of lending activity.
- Overall good geographic distribution of home mortgage loans and small loans to businesses.
- Overall good borrower distribution of home mortgage loans and small loans to businesses.
- A leader in making CD loans, which positively affected the rating.
- The extensive use of flexible products, which positively affected the rating.
- An excellent level of CD investments that displayed excellent responsiveness to credit and community economic development needs, and a significant level of broader statewide investments.
- Retail service delivery systems are accessible to geographies and individuals of different income levels.
- Chase is a leader in providing CD services that are responsive to AA needs.


## Description of Institution's Operations in Georgia

The state of Georgia is Chase's 16th largest rating area based on deposits of $\$ 5.7$ billion representing 0.4 percent of the bank's total deposits. As of December 31, 2019, the bank operated 89 branches and 257 deposit-taking ATMs within the rating area, representing 1.8 percent of total branches and 1.6 percent of total ATMs. The bank originated and purchased approximately $\$ 10.7$ billion in loans or 1.5 percent of total bank loan originations and purchases during the evaluation period in the state.

According to the FDIC Deposit Market Share Data, as of June 30, 2019, there were 213 banks operating 2,252 branches in the state of Georgia. Chase ranked eighth in deposit market share with 2.2 percent. Major competitors in the state based on deposit market share include SunTrust Bank (21.2 percent), Bank of America, N.A. (14.7 percent), and Wells Fargo Bank, N.A.(14.6 percent) share.

Chase has one AA in the state of Georgia and consists of a portion of the Atlanta-Athens-Clarke County-Sandy Springs, GA CSA (Atlanta CSA) which received a full-scope review. Refer to appendix A for a complete description of the AA.

## Description of Full-Scope AA

The following table provides a summary of the demographic that includes housing and business information for the Atlanta CSA. Table A indicates that the volume of OOUs is very small in lowincome CTs ( 3.3 percent) and over 22.2 percent of families in the AA are low-income, with 11.9 percent below the poverty level. The median housing value in the Atlanta CSA is three times the median income, four times the moderate-income and seven times the low-income, indicating a limited

[^111]proportion of OOUs are affordable to low-income borrowers. One simplistic method used to determine housing affordability assumes a maximum monthly principal and interest payment of no more than 30 percent of the applicant's income.

In the Atlanta CSA, assuming a 30-year mortgage with a five percent interest rate and three percent down payment, while not accounting for homeowners insurance, real estate taxes, or any additional monthly expenses, a low-income borrower making \$29,279 per year (or less than 50 percent of the FFIEC adjusted median family income in the CSA) could afford a $\$ 88,285$ mortgage loan with a payment of $\$ 878$ per month; a moderate-income borrower earning $\$ 46,846$ per year (or less than 80 percent of the FFIEC adjusted median family income in the CSA) could afford a $\$ 172,026$ mortgage loan with a payment of $\$ 1,405$ per month.

Median rents and the percentage of families below poverty level suggest rental housing is also unaffordable for some low-income residents.

\left.| Table A - Demographic Information of the Assessment Area |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area: Atlanta-Athens-Clarke County-Sandy Springs GA CSA 2017-2019 |  |  |  |  |  |  |  |$\right]$| Upper |
| :---: |
| Demographic Characteristics |

Source: 2015 ACS and 2019 D\&B Data
Due to rounding, totals may not equal 100.0\%
(*) The NA category consists of geographies that have not been assigned an income classification.

## Economic Data

According to the Moody's Analytics February 2020 report, the Atlanta area economy is strong and growing. The economy is diverse, and the area has a business-friendly environment, strong demographics including a large pool of talent and healthy net migration. Job growth has a solid lead over the US with strong gains in most industries especially education, healthcare, and leisure hospitality industries. At 3.0 percent, the jobless rate is the lowest in three decades. The economic drivers for the area are high technology and logistics. The area is a major tech hub and has a deep talent pool of in-
migrants and graduates of area institutions Georgia Tech and Emory University. Hartsfield-Jackson airport is a well-established logistics hub that creates an $\$ 82$ billion economic impact and employs approximately 63,000 people. Top employers in the area include Delta Airlines, Inc., Walmart Stores, Inc., and The Home Depot Inc. Since 2013, the median prices for single family homes have increased 60 percent and dwindling the supply of affordable homes.

## Community Contacts

Examiners considered four community contacts completed during the review period with entities serving the area. The contacts were with organizations focused on affordable housing, economic development, workforce development, increase economic standards of low-income individuals, community services, and asset development and financial stability. Contacts addressed concerns regarding financing for affordable housing. Contacts noted that there are numerous opportunities for banks to help address credit and community development needs by offering flexible lending products for both affordable housing and small businesses; grant support; and technical assistance to non-profit organizations.

## Scope of Evaluation in Georgia

The Atlanta CSA received a full-scope review.

## CONCLUSIONS WITH RESPECT TO PERFORMANCE TESTS IN GEORGIA

## LENDING TEST

The bank's performance under the Lending Test in the state of Georgia is rated Outstanding.

## Conclusions for Area Receiving a Full-Scope Review

Based on a full-scope review, the bank's performance in the Atlanta CSA is excellent. Overall, excellent lending levels and CD lending offset weaker, but good geographic and borrower distribution of loans. Product innovation and flexibility was also considered favorably.

## Lending Activity

Lending levels reflect an excellent responsiveness to the credit needs in the bank's AA.
Examiners considered the number and amount of home mortgage, small business, small farm loans originated or purchased relative to Chase's capacity based on deposits, competition, and market presence. Lending activity for home mortgage and small loans to businesses received the most weight in reaching conclusions. Respectively, home mortgage lending and small loans to businesses account for 31.9 percent and 67.9 percent of the loan volume in the state by number and 83.5 percent and 13.4 percent of loan volume by dollar. Small farm lending is not a strategic focus of the bank and received minimal weight in reaching conclusions. Farm loans represented 0.2 percent of the loan volume in the state by number and 0.03 percent loan volume by dollar.

| Number of Loans* |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment <br> Area | Home <br> Mortgage | Small <br> Business | Small <br> Farm | Community <br> Development | Total | \% State <br> Loans | \% State <br> Deposits |
| Atlanta CSA | 34,129 | 72,671 | 260 | 11 | 107,071 | 100 | 100 |

*The tables present the data for all assessment areas. The narrative below addresses performance in full-scope areas only.

Dollar Volume of Loans* (in \$000s)

| Assessment <br> Area | Home <br> Mortgage | Small <br> Business | Small <br> Farm | Community <br> Development | Total | \% State* <br> Loans | \% State <br> Deposits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Atlanta CSA | $8,905,832$ | $1,425,537$ | 4,141 | 334,691 | $10,670,201$ | 100 | 100 |

*The tables present the data for all assessment areas. The narrative below addresses performance in full-scope areas only.
Chase ranked fifth in deposits in the AA out of 213 institutions with 3.4 percent market share.
In overall home mortgage lending, Chase ranked fifth with 2.7 percent market share. This is a very competitive market with 917 home mortgage lenders, placing Chase in the top one percent. The top lenders in this market were Wells Fargo Bank, N.A. (8.0 percent), Quicken Loans (4.7 percent), and Bank of America, N.A. (4.1 percent).

Chase ranked second in small loans to businesses with a 11.5 percent market share. There are 207 lenders in the CSA. Other major lenders in the market were primarily nationwide credit card lenders with significant small business portfolios and include American Express National Bank (28.3 percent), Bank of America, N.A. (11.1 percent), and Wells Fargo Bank, N.A. (9.9 percent).

Chase ranked second in small loans to farms 26.2 percent market share. There are 30 lenders in the CSA. The other major lenders in the market are Wells Fargo Bank, N.A. ( 27.5 percent), and Bank of America, N.A. (10.2 percent).

## Distribution of Loans by Income Level of the Geography

The bank exhibits a good geographic distribution of loans in its AA.

## Home Mortgage Loans

Refer to Table O in the state of Georgia section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of home mortgage loan originations and purchases is good. The following information was taken into consideration when determining this rating.

- The limited proportion of housing units in low-income geographies, particularly OOUs (3.3 percent) and constrained lending opportunities were noted; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of OOUs in those geographies.
- The high level of competition in the AA (917 home mortgage lenders) was also considered and examiners placed greater significance on performance compared to the aggregate of lenders.
- Between 2017 and 2019, the proportion of loans in low-income areas was near to the proportion of OOUs in those geographies and the aggregate distribution of loans. The proportion of loans in moderate-income areas was respectively near to and below the proportion of OOUs in those geographies and the aggregate distribution of loans.
- The performance in low- and moderate-income geographies during the 2014 and 2016 time periods was inconsistent with 2017 to 2019. The proportion of loans in low-income geographies is well below the proportion of OOUs in those geographies, and below the aggregate distribution of loans. The proportion of loans in moderate-income geographies is below the proportion of OOUs but exceeded the aggregate distribution of loans.


## Small Loans to Businesses

Refer to Table Q in the state of Georgia section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to businesses.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to businesses is adequate. The following information was taken into consideration when determining this rating.

- The small proportion of businesses in low-income geographies ( 5.9 percent) and competition between 207 lenders constrained lending opportunities to existing businesses. Therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of businesses in those geographies.
- Between 2017 and 2019, the proportion of loans to small businesses in low- and moderate-income geographies was below both the proportion of small businesses in those areas and the aggregate distribution of loans.
- The performance in low- and moderate-income geographies during the 2014 and 2016 time periods was consistent with 2017 to 2019. The proportion of loans to small businesses in low- and moderate-income geographies was below the proportion of small businesses in those areas and below the aggregate distribution of loans in low-income geographies, and near to the aggregate distribution in moderate-income geographies.


## Small Loans to Farms

Refer to Table S in the state of Georgia section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to farms.
Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to farms is good. The following information was taken into consideration when determining this rating.

- The limited percentage of farms in low-income geographies, (3.8 percent) and constrained lending opportunities were noted; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of farms in those geographies.
- The fact that farm lending is not a focus of the bank was also considered.
- Between 2017 and 2019, the proportion of loans to small farms in low-income geographies was well below the proportion of farms in those geographies and significantly exceeded the aggregate distribution of all lenders. The proportion of loans to small farms in moderate-income geographies was below the proportion of farms in those geographies and exceeded the aggregate distribution of all lenders.
- Performance in low- and moderate-income geographies during the 2014 to 2016 period was weaker than performance during 2017 to 2019 period. The proportion of loans to small farms in low-income geographies exceeded both the proportion of farms in those geographies and the aggregate distribution. The proportion of loans to small farms in moderate-income geographies was well below both the proportion of farms in those geographies and the aggregate distribution.


## Lending Gap Analysis

A review of home mortgage loans, small loans to business, and small loans to farms including summary reports and AA maps did not identify any unexplained conspicuous lending gaps in the bank's activities.

## Distribution of Loans by Income Level of the Borrower

The bank exhibits a good distribution of loans among individuals of different income levels and business and farms of different sizes.

## Home Mortgage Loans

Refer to Table P in the state of Georgia section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall borrower distribution of home mortgage loans originations and purchases for this evaluation is good. The following information was taken into consideration when determining this rating.

- Greater significance was placed on performance against the aggregate distribution as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of this Full-Scope AA.
- Examiners particularly considered housing affordability challenges for low- and moderate-income borrowers.
- Between 2017 and 2019, the proportion of loans to low-income borrowers was well below the percentage of low-income families and exceeded the aggregate distribution of lenders. The proportion of moderate-income loans exceeded the proportion of moderate-income families and the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 to 2019. The proportion of loans to low-income borrowers was well below the percentage of lowincome families and exceeded the aggregate distribution of lenders. The proportion of moderateincome loans was exceeded the proportion of moderate-income families and the aggregate distribution.


## Small Loans to Businesses

Refer to Table R in the state of Georgia section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to businesses.

Based on the data in the tables and the following considerations, the bank's overall borrower distribution of small loans to businesses by revenue code is good. The following information was taken into consideration when determining this rating.

- Greater significance was placed on performance against the aggregate distribution of lenders as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of the Full-Scope AA.
- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below to the percentage of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 and 2019. The bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.


## Small Loans to Farms

Refer to Table T in the state of Georgia section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to farms.

Based on the data in the table and the following considerations, the distribution of the bank's originations and purchases of small loans to farms by revenue category is good. The following information was taken into consideration when determining this rating.

- Between 2017 and 2019, the bank's percentage of loans to farms with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 and 2019. The bank's percentage of loans to farms with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.


## Community Development Lending

The bank is a leader in making CD loans.
The Lending Activity Tables, shown above, set forth the information and data used to evaluate the bank's level of CD lending. These tables include all CD loans, including multifamily loans that also qualify as CD loans.

The bank made 11 CD loans in the AA for a total of $\$ 334.7$ million. This represents 45.3 percent of the tier 1 capital allocated to the AA. The bank's CD loans were responsive to identified community needs with 51.9 percent and 45.9 percent of the lending supporting community services and revitalization efforts, respectively.

Examples of CD loans include:

- In February 2014, Chase originated a $\$ 62.5$ million loan to the Douglas County School System, which is a region that primarily serves low- and moderate-income students. Fifty nine percent of the school district's student population is eligible for the Federal Free or Reduced Lunch program based on information from the National Center for Education Statistics (NCES).
- In October 2016, Chase originated a $\$ 10.4$ million construction loan used to revitalize the downtown area of the City of Lithonia. The project is in a moderate-income census tract and was part of the city's comprehensive revitalization plan. The funds helped to clean up a site that was previously designated a brownfield due to contamination and newly constructed 75 affordable apartment units for LMI families.
- In April 2017, Chase originated a $\$ 97.3$ million loan to the Gwinnett County Board of Education, which is responsible for the school district's curriculum, academic intervention, school improvements, and capital projects. Approximately 54 percent of the school district's student population is eligible for the Federal Free or Reduced Lunch program (NCES).


## Other Loan Data

In November 2016, Chase provided a $\$ 19.1$ million letter of credit to a limited partnership. This financing will provide construction period credit enhancement for bonds being issued by the Housing Authority of the City of Augusta, Georgia. Proceeds of the bonds will be the primary source of construction financing for the new construction of 240 units of affordable housing for families in Augusta. All of which will be affordable to families earning 60 percent or less of the AMI. The project also received $\$ 16.1$ million in LIHTC equity.

## Product Innovation and Flexibility

The bank makes extensive use innovative and/or flexible lending practices to serve AA credit needs. Refer to the comments in the Product Innovation and Flexibility section in the front of this performance evaluation for program details.

The bank funded 10,207 loans totaling $\$ 1.5$ billion under the following innovative and/or flexible programs.

| Loan Type | Number of <br> Loans | Dollar Amount <br> $\mathbf{( \$ 0 0 0 ' s )}$ |
| :--- | :---: | :---: |
| DreaMaker | 1,067 | 192,461 |
| FHA | 4,472 | 606,245 |
| HARP | 2,704 | 349,009 |
| VA | 921 | 208,133 |
| SBA | 240 | 70,971 |
| USDA | 803 | 106,992 |

## INVESTMENT TEST

The bank's performance under the Investment Test in the state of Georgia is rated Outstanding.

## Conclusions for Area Receiving a Full-scope Review

Based on a full-scope review, the bank's performance in the Atlanta CSA is excellent.
The bank has an excellent level of qualified CD investments and grants, although rarely in a leadership position, particularly those that are not routinely provided by private investors. Current and prior period investments represent 23.6 percent of allocated tier 1 capital. A significant majority, or 91.6 percent of total investments represent current period investments.

The bank exhibits excellent responsiveness to the needs identified in this AA including affordable housing, economic development, and community service. Current period investments represent 89.7 percent affordable housing, 5.5 percent community service, 2.8 percent economic development and 2.0 percent revitalization/stabilization. Affordable housing represents 99.8 percent of prior period investments. Current and prior period investments created or retained 7,005 affordable housing units for low- and moderate-income individuals and families. Twenty-eight grants totaling $\$ 6.4$ million were provided to a variety of organizations for community service, affordable housing, and economic development.

The bank occasionally uses innovative and/or complex investments to support CD initiatives. Sixteen prior and current complex investments, represent 33.1 percent of total investments, including six Direct Investor LIHTC transactions which require bank expertise and capacity in selecting projects and partners, negotiating agreements, overseeing project development and operations, and ensuring compliance. The bank also made three NMTC investments. Three investments or 6.7 percent of qualified CD investments were catalysts for change and will encourage future growth and other improvements.

Examples of CD Investments in the AA include:

- The bank originated a $\$ 31.1$ million LIHTC equity investment for new construction of a 240 -unit development in Stonecrest, GA. All unit rents are set at 60 percent AMI. The bank will manage the asset for the entire fifteen-year hold period, ensuring compliance with the LIHTC program and conducting annual on-site inspections.
- The bank originated a $\$ 14.7$ million LIHTC equity investment for new construction of senior apartments in Atlanta, GA. The project consists of 180 units restricted to households earning at or below 60 percent AMI. Sixty-five ( 36 percent) of the units will be subsidized with a HUD HAP Section 8 contract. The project is required to provide four supportive services from three categories including social/recreational programs, on-site enrichment classes, and on-site health classes.

| Qualified Investments - State of Georgia |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area (AA) | Prior Period* |  | Current Period |  | Total |  |  |  | UnfundedCommitments** |  |
|  | \# | \$(000's) | \# | \$(000's) | \# | \% of <br> Total \# | \$(000's) | \% of Total \$ | \# | \$(000's) |
| Full Review: |  |  |  |  |  |  |  |  |  |  |
| Atlanta-Athens-Clarke County-Sandy Springs CSA | 34 | 14,631 | 50 | 159,897 | 84 | 45.9 | 174,528 | 47.7 | 0 | 0 |
| Other: |  |  |  |  |  |  |  |  |  |  |
| Statewide Investment with Purpose, Mandate, or Function ( $\mathrm{P} / \mathrm{M} / \mathrm{F}$ ) to Serve AAs | 2 | 824 | 59 | 184,124 | 61 | 33.3 | 184,947 | 50.6 | 0 | 0 |
| Statewide Investment with No Purpose, Mandate, or Function ( $\mathrm{P} / \mathrm{M} / \mathrm{F}$ ) to Serve AAs | 32 | 4,605 | 6 | 1,480 | 38 | 20.8 | 6,085 | 1.7 | 0 | 0 |

* Prior Period Investments' means investments made in a previous evaluation period that are outstanding as of the examination date.
** Unfunded Commitments' means legally binding investment commitments that are tracked and recorded by the institution's financial reporting system.


## Statewide Investments in State of Georgia

The bank has qualified investments with and without $\mathrm{P} / \mathrm{M} / \mathrm{F}$ to serve the AA in the state of Georgia. Investments with a $\mathrm{P} / \mathrm{M} / \mathrm{F}$ included affordable housing and community services. Seven investments or $\$ 47.2$ million were complex consisting of Direct Investor LIHTCs and NMTCs transactions. Four investments were a catalyst for change and will encourage future growth and other improvements. Current period affordable housing investments created 2,501 housing units for low- and moderate-income families and individuals. The bank made 23 grants or $\$ 2.8$ million to a variety of community service organizations primarily providing financial education services. In some instances, grants were provided in multiple years.

## SERVICE TEST

The bank's performance under the Service Test in the state of Georgia is rated High Satisfactory.

## Conclusions for Area Receiving a Full-Scope Review

Based on a full-scope review, the bank's performance in the Atlanta CSA is good.

## Retail Banking Services

Service delivery systems are accessible to geographies and individuals of different income levels in the bank's AA.

Examiners evaluated the data as outlined in the Scope section at the front of this document including bank provided data on usage of branches adjacent to low-and moderate-income geographies by individuals residing in those geographies and on increases in the usage of alternative delivery systems.

Based on the data in the table below and performance context, the branch distribution is good. In lowand moderate-income geographies, the distribution is respectively well below and is near to the percentage of the population. The distribution was augmented by one MUI tract branch that serves lowincome tracts and 11 MUI tract branches that serve moderate-income tracts. Examiners reviewed data
on the accounts held and transactions conducted at the MUI branches and confirmed they were serving the adjacent low- and moderate-income populations.

| Distribution of Branch Delivery System |  |  |  |  |  |  |  | As of December 31, 2019 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Deposits | Branches |  |  |  |  |  | Population |  |  |  |
|  | \% of Rated Area | \# of <br> BANK <br> Branches | \% of Rated Area Branches in AA | Location of Branches by Income of Geographies (\%) |  |  |  | \% of Population within Each Geography |  |  |  |
|  | AA |  |  | Low | Mod | Mid | Upp | Low | Mod | Mid | Upp |
| Atlanta CSA |  |  |  |  |  |  |  |  |  |  |  |
|  | 100 | 86 | 100 | 3.5 | 18.6 | 25.6 | 52.3 | 7.9 | 23.0 | 32.5 | 36.2 |

* May not add up to 100 percent due to geographies with unknown tract income level and rounding

Alternative delivery systems enhanced the delivery of banking services to geographies and individuals of all income levels. The OCC considered the availability and use of alternative delivery systems over the evaluation period. This included review of the bank's 247 deposit-taking ATMs, online banking, mobile banking, and telephone banking to determine the effectiveness of these systems to make retail banking services available to individuals in low- and moderate-income geographies. The bank increased the deposit-taking ATMs in low- and moderate-income geographies by 13.3 percent over the prior rating period to 10 ( 4.0 percent) deposit-taking ATMs in low-income geographies and 41 (16.6 percent) ATMs in moderate-income geographies. Additionally, bank-provided data on use of online, mobile, and telephone banking showed increases in the adoption of these services by low- and moderate-income individuals from the prior rating period.

| Distribution of Branch Openings/Closings |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment <br> Area | \# of Branch <br> Openings | \# of Branch <br> Closings | Net change in Location of Branches <br> $(+$ or -$)$ |  |  |  |  |
| Atlanta CSA | 15 | 9 | Low | Mod | Mid | Upp |  |

To the extent changes have been made, the bank's opening and closing of branches has adversely affected the accessibility of its delivery systems, particularly in low- and moderate-income geographies and/or to low- and moderate-income individuals. The bank opened one branch in a moderate-income area and closed two branches each in each low- and moderate-income geographies. Branch closures were due to reduced customer usage. Despite the branch closures, branch locations remained accessible to geographies and individuals of different income levels in the bank's AA. Twelve branches in reasonable proximity provided services to individuals in the low-and moderate-income geographies with branch closures.

Services, including where appropriate, business hours, do not vary in a way that inconveniences, the AA, particularly low- and moderate-income geographies and/or individuals. Generally, branches are open Monday through Thursday from 9:00 am to 5:00 pm, Friday from 9:00 am to 6:00 pm and Saturday from 9:00 am to 1:00 pm.

## Community Development Services

The bank was a leader in providing CD services that were responsive to AA needs.
Bank employees provided their financial, job-specific expertise, and/or technical assistance for 750 CD service activities to 10 organizations since the last evaluation, logging a total of over 3,200 qualified hours. All assistance was to organizations that provide community services to low- and moderateincome individuals and families. The bank's community development services were responsive to the community needs in the AA, particularly affordable housing. The following are examples of CD services provided:

- Three bank employees provided 370 homebuyer education activities to low- and moderate-income bank customers benefitting 1,000 low- and moderate-income customers.
- Eight bank employees provided 99 technical assistance activities to a local nonprofit whose mission is advancing low- and moderate-income individuals to economic self-sufficiency through employment.


## State Rating

## State of Idaho

CRA rating for the State of Idaho ${ }^{13}$ : Satisfactory
The Lending Test is rated: High Satisfactory
The Investment Test is rated: Low Satisfactory
The Service Test is rated: High Satisfactory
The major factors that support this rating include:

- A good level of lending activity.
- Overall good geographic distribution of home mortgage loans and small loans to businesses.
- Overall good borrower distribution of home mortgage loans and small loans to businesses.
- No CD loans were made, which has a negative effect on the Lending Test rating.
- The use of flexible products did not affect the rating.
- An adequate level of qualified investments that displayed excellent responsiveness to credit and community economic development needs and an adequate level of broader statewide investments.
- Retail service delivery systems are readily accessible to geographies and individuals of different income levels.
- An adequate level of CD services in the full-scope AA.


## Description of Institution's Operations in Idaho

The state of Idaho is Chase's $26^{\text {th }}$ largest rating area based on aggregate deposits of $\$ 1.1$ billion, representing less than 0.1 percent of the bank's total deposits. As of December 31, 2019, the bank operated 20 branches and 30 deposit-taking ATMs within the rating area, representing 0.4 percent of total branches and 0.3 percent of total ATMs. The bank originated and purchased approximately $\$ 1.8$ billion in loans or 3.2 percent of total bank loan originations and purchases during the evaluation period in the state.

According to the FDIC Deposit Market Share Data, as of June 30, 2019, there were 29 banks operating 469 branches in the state of Idaho. Chase ranked ninth in deposit market share with 4.1 percent. Major competitors in the state based on deposit market share are include Wells Fargo Bank, N.A. (20.7 percent), U.S. Bank, N.A. (17.3 percent), and KeyBank ( 6.9 percent).

Chase has six AAs in the state of Idaho and the Boise City-Mountain Home-Ontario, ID-OR CSA received a full-scope review (Boise City MSA). The Idaho Falls MSA, Coeur d'Alene MSA, Pocatello MSA, Twin Falls MSA, and Idaho Non-MSA received limited-scope reviews. Refer to appendix A for a complete description of the AAs.

[^112]
## Description of Full-Scope AA

The following table provides a summary of the demographic that includes housing and business information for the Boise City MSA. Table A indicates that the volume of OOUs is very small in lowincome CTs ( 1.5 percent) and over 18.9 percent of families in the AA are low-income, with 10.0 percent below the poverty level. The median housing value in the Boise City MSA is four times the median income. One simplistic method used to determine housing affordability assumes a maximum monthly principal and interest payment of no more than 30 percent of the applicant's income.

In the Boise City MSA, assuming a 30 -year mortgage with a five percent interest rate and three percent down payment, while not accounting for homeowners insurance, real estate taxes, or any additional monthly expenses, a low-income borrower making $\$ 30,861$ per year (or less than 50 percent of the FFIEC adjusted median family income in the MSA) could afford a $\$ 95,892$ mortgage loan with a payment of $\$ 926$ per month; a moderate-income borrower earning $\$ 49,378$ per year (or less than 80 percent of the FFIEC adjusted median family income in the MSA) could afford a $\$ 184,153$ mortgage loan with a payment of $\$ 1,481$ per month.

Median rents and the percentage of families below poverty level suggest rental housing is also unaffordable for some low-income residents.

| Table A - Demographic Information of the Assessment Area Assessment Area: 147 Boise City MSA 2017-2019 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Demographic Characteristics | \# | Low \% of \# | Moderate \% of \# | Middle \% of \# | Upper <br> \% of \# | $\begin{aligned} & \text { NA* } \\ & \text { \% of \# } \end{aligned}$ |
| Geographies (Census Tracts) | 88 | 6.8 | 28.4 | 37.5 | 27.3 | 0.0 |
| Population by Geography | 616,422 | 3.6 | 26.4 | 44.8 | 25.2 | 0.0 |
| Housing Units by Geography | 235,712 | 4.2 | 26.7 | 43.8 | 25.3 | 0.0 |
| Owner-Occupied Units by Geography | 151,060 | 1.5 | 22.2 | 46.4 | 29.9 | 0.0 |
| Occupied Rental Units by Geography | 72,033 | 8.9 | 35.5 | 39.4 | 16.1 | 0.0 |
| Vacant Units by Geography | 12,619 | 9.5 | 29.8 | 37.6 | 23.2 | 0.0 |
| Businesses by Geography | 57,620 | 9.8 | 23.0 | 37.4 | 29.9 | 0.0 |
| Farms by Geography | 2,179 | 4.3 | 22.9 | 46.9 | 26.0 | 0.0 |
| Family Distribution by Income Level | 152,134 | 18.9 | 18.6 | 21.8 | 40.7 | 0.0 |
| Household Distribution by Income Level | 223,093 | 22.5 | 16.6 | 18.9 | 42.0 | 0.0 |
| Median Family Income MSA - 14260 Boise City, ID MSA |  | \$61,722 | Median Housing Value |  |  | \$174,922 |
|  |  |  | Median Gross Rent |  |  | \$843 |
|  |  |  | Families Below Poverty Level |  |  | 10.0\% |

Source: 2015 ACS and 2019 D\&B Data
Due to rounding, totals may not equal 100.0\%
${ }^{(*)}$ The NA category consists of geographies that have not been assigned an income classification.

## Economic Data

According to the Moody's Analytics November 2019 report, the Boise City area has above-average population growth and favorable migration flows. The area has cheaper living costs and lower business
costs compared to other large west coast metro areas. The labor force has seen strong growth. Per capita income growth that is 20.0 percent above average is driving year-over-year house price appreciation of 2.5 times the U.S. rate. The area is becoming a prime retirement destination for those escaping spiraling costs in other West Coast metro areas. The inflow of new residents boosts economic activity but also harms the area's income distribution as more affluent individuals relocate to the area. The area's housing market is one of the hottest in the U.S. and housing affordability has fallen to 20 percent below average since 2016. Low-wage workers, who make up a significant portion of the labor force are being priced out of the area. Income inequality in the area, though still lower than average, has risen faster since 2009 than nationally. Major employment industries in the area include professional and business services; education and health services; and government. Major employers in the area include St. Luke's Health System; Micron Technology Inc.; Boise State University; and St. Alphonsus Regional Medical Center.

## Community Contacts

Examiners considered two community contacts completed during the review period with entities serving the area. The contacts were with organizations focused on affordable housing and small business. According to the contacts the local economy is doing well. The area has seen an influx of people from California and Seattle, Washington locating to the Boise City area as the housing is more affordable. However, available housing is in short supply. Contacts noted that West Boise/Garden City has a lot of manufacturing/industrial companies with an opportunity for housing developments and other revitalization efforts. Contacts noted that there are numerous opportunities for banks to help address credit and community development needs by offering affordable housing for low-income households, flexible loan programs for first time homebuyers, financial coaching and counseling, loans for businesses, including equipment loans, equity/debt loans for operational expenses, and inventory loans and financing and technical assistance for small businesses that are not yet bankable.

## Scope of Evaluation in Idaho

The Boise City MSA received a full-scope review. The MSA accounts for 74.6 percent of the bank's deposits and 66.2 percent of the lending in Idaho. The other five AAs received a received a limitedscope review. Performance in limited-scope AAs and its effect on the CRA rating are discuss at the end of each test

## CONCLUSIONS WITH RESPECT TO PERFORMANCE TESTS IN IDAHO

## LENDING TEST

The bank's performance under the Lending Test in the state of Idaho is rated High Satisfactory.
Performance in AAs receiving limited-scope reviews was factored together with performance from the full-scope AA to determine the state's overall High Satisfactory Lending Test rating. Limited-scope conclusions did not significantly affect the initial overall conclusions based on the AAs receiving fullscope review.

## Conclusions for Area Receiving a Full-Scope Review

Based on a full-scope review, the bank's performance in the Boise City MSA is good. Overall, lending
levels, geographic and borrower distribution of loans were good. No CD loans were made, which had a negative effect. The use of flexible products did not affect the rating.

## Lending Activity

Lending levels reflect good responsiveness to credit needs in the bank's AA.
Examiners considered the number and dollar amount of home mortgage, small business, small farm loans originated or purchased relative to Chase's capacity based on deposits, competition, and market presence. Lending activity for home mortgage and small loans to businesses received the most weight in reaching conclusions. Respectively, home mortgage lending and small loans to businesses account for 31.3 percent and 67.0 percent of the loan volume in the state by number and 88.8 percent and 10.9 percent of loan volume by dollar. Small farm lending is not a strategic focus of the bank and received minimal weight in reaching conclusions. Farms loans represented 1.6 percent of the loan volume in the state by number 0.2 percent loan volume by dollar.

| Number of Loans* |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home <br> Mortgage | Small <br> Business | Small <br> Farm | Community <br> Development | Total | \% State <br> Loans | \% State <br> Deposits |
| Boise City MSA | 4,427 | 9,992 | 221 | 0 | 14,640 | 66.2 | 74.6 |
| Idaho Falls MSA | 443 | 1,395 | 24 | 0 | 1,862 | 8.4 | 7.6 |
| Coeur d'Alene MSA | 1,289 | 1,815 | 22 | 0 | 3,126 | 14.1 | 7.1 |
| Twin Falls MSA | 109 | 428 | 48 | 0 | 585 | 2.7 | 2.6 |
| Pocatello MSA | 278 | 590 | 9 | 0 | 877 | 4.0 | 1.9 |
| Idaho Non-MSA | 384 | 606 | 21 | 0 | 1,011 | 4.6 | 6.2 |
| Total | 6930 | 14,826 | 359 | 0 | 22,115 | 100 | 100 |

*The tables present the data for all assessment areas. The narrative below addresses performance in full-scope areas only.

## Dollar Volume of Loans* (in \$000s)

| Assessment Area | Home <br> Mortgage | Small <br> Business | Small <br> Farm | Community <br> Development | Total | \% <br> State* <br> Loans | \% State <br> Deposits |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Boise City MSA | $1,056,997$ | 132,906 | 2,694 | 0 | $1,192,597$ | 67.6 | 74.6 |
| Idaho Falls MSA | 72,434 | 17,492 | 282 | 0 | 90,208 | 5.1 | 7.6 |
| Coeur d'Alene MSA | 320,433 | 21,490 | 252 | 0 | 342,175 | 19.4 | 7.1 |
| Twin Falls MSA | 19,195 | 5509 | 480 | 0 | 25,184 | 1.4 | 2.6 |
| Pocatello MSA | 38,378 | 6,531 | 79 | 0 | 44,988 | 2.5 | 1.9 |
| Idaho Non-MSA | 60,588 | 9,369 | 300 | 0 | 70,257 | 4.0 | 6.2 |
| Total | $1,568,025$ | 193,297 | 4,087 | 0 | $1,765,409$ | 100 | 100 |

*The tables present the data for all assessment areas. The narrative below addresses performance in full-scope areas only.
Chase ranked fifth in deposits in the AA of 21 institutions with 7.0 percent market share.
In overall home mortgage lending, Chase ranked ninth with 2.2 percent market share. This is a very competitive market with 387 mortgage lenders. The top lenders in this market were Idaho Central ( 17.0 percent), Wells Fargo Bank, N.A. (5.1 percent), and Fairway Independent Mortgage (4.9 percent).

Chase ranked first in small loans to businesses with 17.6 percent market share. There are 81 lenders in the MSA. Other major lenders in the market are U.S. Bank, N.A. (12.9 percent) and American Express National Bank (12.7 percent).

Chase ranked third in small loans to farms 16.1 percent market share. There are 19 lenders in the MSA. Other major lenders in the market are Columbia State Bank (18.8 percent), U.S. Bank, N.A. (16.6 percent) and Wells Fargo Bank, N.A. (15.2 percent).

## Distribution of Loans by Income Level of the Geography

The bank exhibits a good geographic distribution of loans in its AA.

## Home Mortgage Loans

Refer to Table O in the state of Idaho section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of home mortgage loan originations and purchases is good. The following information was taken into consideration when determining this rating.

- Performance in the moderate-income areas was given more significance as there was a small percentage of low-income geographies in both time periods ( 2.3 percent between 2014 and 2016 and 6.8 percent between 2017 and 2019).
- Between 2017 and 2019, the proportion of loans in low- and moderate-income areas exceeded and met the percentage of OOUs and aggregate distribution of loans.
- Performance in the low- and moderate-income geographies between 2014 and 2016 was inconsistent with the performance during the 2017-2019 period. The bank did not make any loans in low-income geographies and the moderate-income performance was well-below the percentage of OOUs and below the aggregate distribution of loans. The weaker performance between 2014 and 2016 did affect the excellent performance during 2017-2019.


## Small Loans to Businesses

Refer to Table Q in the state of Idaho section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to businesses.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to businesses for this evaluation is adequate. The following information was taken into consideration when determining this rating.

- Between 2017 and 2019, the proportion of loans in low- and moderate-income areas was below both the percentage of small businesses and the aggregate distribution of loans.
- Performance in low- and moderate-income geographies during the 2014 and 2016 time periods was inconsistent with 2017 to 2019. Between 2104 and 2016, the proportion of loans to small businesses in low- and moderate-income areas was well-below the percentage of small businesses located in those geographies and below the aggregate distribution of loans.
- Consideration was given to demographic evidence that only one percent of businesses were in lowincome geographies during the 2014 to 2016. As a result, weaker performance in low- and
moderate-income areas during this period for geographic distribution did not affect the overall adequate performance.


## Small Loans to Farms

Refer to Table S in the state of Idaho section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to farms.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to farms is good. The following information was taken into consideration when determining this rating.

- The limited percentage of farms in low-income geographies (4.3 percent) constrained lending opportunities; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of farms in those geographies.
- The high level of competition in the AA (19 lenders) and the fact that farm lending is not a focus of the bank was also considered and examiners placed greater significance on performance compared to the aggregate of lenders.
- Between 2017 and 2019, the bank did not make any small farms loans in low-income geographies. The proportion of loans to small farms in moderate-income geographies was below both the proportion of farms in those geographies and the aggregate distribution.
- Performance in low- and moderate-income geographies during the 2014 to 2016 period was generally consistent with the performance during 2017 to 2019 period. Between 2014 and 2016, the bank did not make any small farms in low-income geographies. The proportion of loans to small farms in moderate-income geographies was below the proportion of farms in those geographies and near to the aggregate distribution.


## Lending Gap Analysis

A review of home mortgage loans, small loans to business, and small loans to farms including summary reports and AA maps did not identify any unexplained conspicuous lending gaps in the bank's activities.

## Distribution of Loans by Income Level of the Borrower

The bank exhibits a good distribution of loans among individuals of different income levels and business and farms of different sizes.

## Home Mortgage Loans

Refer to Table P in the state of Idaho section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall borrower distribution of home mortgage loans originations and purchases for this evaluation is good. The following information was taken into consideration when determining this rating.

- Profile data indicates housing affordability was a challenge for low- and moderate-income borrowers.
- Greater significance was placed on lending performance to moderate-income borrowers due to the challenges limiting opportunities in lending to low-income borrowers.
- Between 2017 and 2019, the proportion of loans to low-income borrowers was well-below the percentage of low-income families in the AA and significantly exceeded the aggregate distribution of loans. The proportion of loans to moderate-income borrowers was significantly exceeded both the percentage of moderate-income families in the AA and the aggregate distribution of loans.
- Performance in low-income geographies between 2014 and 2016 was consistent with 2017 to 2019. Between 2014 and 2016, the proportion of loans to low-income borrowers was well-below the percentage of low-income families in the AA and significantly exceeded the aggregate distribution of loans. Between 2014 and 2016, the moderate-income performance was weaker than 2017 to 2019. The proportion of loans to moderate-income borrowers was near to the percentage of moderate-income families in the AA and well-below the aggregate distribution of loans. The performance in the 2014-2016 period had no effect on the overall good lending performance.


## Small Loans to Businesses

Refer to Table R in the state of Idaho section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to businesses.

Based on the data in the tables and the following considerations, the bank's overall borrower distribution of small loans to businesses with revenues of $\$ 1$ million or less is good. The following information was taken into consideration when determining this rating.

- Greater significance was placed on performance against the aggregate distribution of lenders as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of the Full-Scope AA.
- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and significantly exceeded the aggregate distribution.
- Performance against both the aggregate and borrower distribution in 2014 through 2016 were consistent with 2017-2019. The bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and significantly exceeded the aggregate distribution.


## Small Loans to Farms

Refer to Table T in the state of Idaho section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to farms.

Based on the data in the table and the following considerations, the distribution of the bank's originations and purchases of small loans to farms by revenue category is good. The following information was taken into consideration when determining this rating.

- Between 2017 and 2019, the bank's percentage of loans to farms with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 and 2019. The bank's percentage of loans to farms with revenues of $\$ 1$ million or less was below the percentage of businesses and significantly exceeded the aggregate distribution.


## Community Development Lending

The bank did not originate any CD loans during the evaluation period.
While the bank was unable to make any CD loans during the period, the bank continued to meet the needs of the low- and moderate-income individuals and geographies in Boise City MSA through qualified CD investments and service activities.

The Lending Activity Tables, shown above, set forth the information and data used to evaluate the bank's level of CD lending. These tables include all CD loans, including multifamily loans that also qualify as CD loans.

## Product Innovation and Flexibility

The bank uses innovative and/or flexible lending practices to serve credit needs in each of the full-scope AA reviewed. Refer to the comments in the Product Innovation and Flexibility section in the front of this performance evaluation for program details.

The bank funded1,033 loans totaling $\$ 257.2$ million under the following innovative and/or flexible programs.

| Loan Type | Number of <br> Loans | Dollar Amount <br> $\mathbf{( \$ 0 0 0 ' s )}$ |
| :--- | :---: | :---: |
| DreaMaker | 105 | 19,298 |
| FHA | 222 | 33,723 |
| HARP | 378 | 50,941 |
| VA | 212 | 48,206 |
| SBA | 22 | 3,584 |
| USDA | 94 | 101,401 |

## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall Satisfactory Lending Test rating and did not significantly affect the initial overall conclusions based on the AAs receiving fullscope review. Based on the lending scope reviews, the bank's performance under the Lending Test in the Idaho Falls MSA and Coeur d'Alene MSA is consistent with the bank's overall good performance under the Lending Test in the full-scope area. The bank's performance under the Lending Test in the Pocatello MSA, Twin Falls MSA, and Idaho Non-MSA is weaker than the bank's overall good performance due to weaker geographic and borrower income distribution performance.

Refer to Tables O through T in the state of Idaho section of appendix D for the facts and data that support these conclusions.

## INVESTMENT TEST

The bank's performance under the Investment Test in the state of Idaho is rated Low Satisfactory.

## Conclusions for Area Receiving a Full-Scope Review

Based on a full-scope review, the bank's performance in the Boise City MSA is adequate.
The bank has an adequate level of qualified CD investments and grants, but rarely in a leadership position, particularly those that are not routinely provided by private investors. Current and prior period qualified investments represent 3.2 percent of tier 1 capital allocated to the AA. Majority, or 99.9 percent of total investment represent current period investments.

The bank exhibits excellent responsiveness to credit and community economic development needs, including affordable housing and community services. One direct investment of $\$ 3.2$ million focused on affordable housing, which is a primary community development need in the AA. Fourteen grants totaled $\$ 350,000$, with 57.1 percent and 42.9 percent supporting community services and affordable housing, respectively. The prior period investment relates to an investment in a LIHTC fund that supports affordable rental housing.

Examples of CD Investments in the AA include:

- The bank provided a $\$ 3.2$ million LIHTC investment that contributed to the creation of 98 affordable housing units.
- The bank provided a $\$ 45,000$ grant to a partnership for their career learning and workforce program. Per the organization, 100 percent of those targeted or to benefit from the program are low- and moderate-income individuals. The planning process for the workforce development program was establishing strategies and leveraging unique knowledge and resources of various cross sector leaders to achieve targeted career readiness outcomes for young adults. The bank's funding played a critical role for the program by supporting the planning process to establish a shared agenda.

The bank did not use innovative and/or complex investments to support CD initiatives.

| Qualified Investments - State of Idaho |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area (AA) | Prior Period* |  | Current Period |  | Total |  |  |  | UnfundedCommitments** |  |
|  | \# | \$(000's) | \# | \$(000's) | \# | \% of <br> Total \# | \$(000's) | \% of <br> Total \$ | \# | \$(000's) |
| Full Review: |  |  |  |  |  |  |  |  |  |  |
| Boise City-Mountain HomeOntario CSA | 1 | 14 | 15 | 3,419 | 16 | 35.56 | 3,433 | 31.21 | 0 | 0 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |
| Idaho Fall-Rexburg-Blackfoot CSA | 1 | 25 | 0 | 0 | 1 | 2.22 | 25 | 0.23 | 0 | 0 |
| Pocatello MSA | 1 | 88 | 1 | 5 | 2 | 4.44 | 93 | 0.84 | 0 | 0 |
| Spokane-Spokane Valley-Coeur d'Alene CSA | 8 | 3,528 | 0 | 0 | 8 | 17.78 | 3,528 | 32.07 | 0 | 0 |
| Twin Falls MSA | 0 | 0 | 1 | 10 | 1 | 2.22 | 10 | 0.09 | 0 | 0 |
| ID Non-Metro AA | 2 | 1 | 0 | 0 | 2 | 4.44 | 1 | 0.01 | 0 | 0 |
| Other: |  |  |  |  |  |  |  |  |  |  |
| Statewide Investments with Purpose, Mandate, or Function ( $\mathrm{P} / \mathrm{M} / \mathrm{F}$ ) to Serve AAs | 0 | 0 | 9 | 3,415 | 9 | 20.00 | 3,415 | 31.05 | 0 | 0 |
| Statewide Investments with No Purpose, Mandate, or Function (P/M/F) to Serve AAs | 6 | 494 | 0 | 0 | 6 | 13.33 | 494 | 4.49 | 0 | 0 |

Prior Period Investments' means investments made in a previous evaluation period that are outstanding as of the examination date. ** Unfunded Commitments' means legally binding investment commitments that are tracked and recorded by the institution's financial reporting system.

## Statewide Investments in the State of Idaho

The bank has 15 current and prior period investments with and without a $\mathrm{P} / \mathrm{M} / \mathrm{F}$ to serve AAs in the state of Idaho. These broader statewide investments represent 36 percent of total amount of state investments. Eighty-seven percent of the total amount have a P/M/F to serve AAs in Idaho. The CD investments support community service and affordable housing. The investments in the broader statewide area support the bank's otherwise adequate performance under the Investment Test in the state of Idaho.

## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall Low Satisfactory Investment Test rating and did not significantly change the initial overall conclusions based on the AA receiving full-scope review. Based on limited-scope reviews, the bank's performance under the Investment Test in the Pocatello MSA is consistent with the bank's overall adequate performance in the full-scope area. The bank's performance in the Coeur d'Alene CSA is stronger than the bank's overall adequate performance in the full-scope area due primarily to a higher volume of prior period CD investments. The bank's performance under the Investment Test in the Idaho Falls CSA, Twin Falls MSA, and the combined Idaho Non-Metro AA is weaker than the bank's overall adequate performance in the fullscope area due to a lower volume of qualified investments.

## SERVICE TEST

The bank's performance under the Service Test in state of Idaho is rated High Satisfactory.

## Conclusions for Area Receiving a Full-Scope Review

Based on a full-scope review, the bank's performance in the Boise City MSA is good.

## Retail Banking Services

Service delivery systems are readily accessible to geographies and individuals of different income levels in the bank's AA.

Examiners evaluated the data as outlined in the Scope section at the front of this document including bank-provided data on usage of branches adjacent to low- and moderate-income geographies by individuals residing in those geographies and on increases in the usage of alternative delivery systems.

Based on the data in the table below and performance context, the branch distribution is excellent. In low- and moderate-income geographies, the distribution exceeds the percentage of the population in these respective geographies. The bank had two branches in low-income geographies and four branches in moderate-income geographies.

| Distribution of Branch Delivery System |  |  |  |  |  |  |  | As of December 31, 2019 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Deposits | Branches |  |  |  |  |  | Population |  |  |  |
| Assessment | \% of Rated Area | \# of <br> BANK <br> Branches | \% of <br> Rated <br> Area <br> Branches <br> in AA | Location of Branches by Income of Geographies (\%) |  |  |  | \% of Population within Each Geography |  |  |  |
| Area | Deposits in AA |  |  | Low | Mod | Mid | Upp | Low | Mod | Mid | Upp |
| Boise City MSA | 74.6 | 13 | 65.0 | 15.4 | 30.8 | 23.1 | 30.8 | 3.6 | 26.4 | 44.8 | 25.2 |

* May not add up to 100 percent due to geographies with unknown tract income level and rounding

Alternative delivery systems generally enhanced the delivery of banking services to geographies and individuals of all income levels. The OCC considered the availability and use of alternative delivery systems over the evaluation period. This included review of the bank's 19 deposit-taking ATMs, online banking, mobile banking, and telephone banking to determine the effectiveness of these systems to make retail banking services available to individuals in low- and moderate-income geographies. The bank increased the deposit-taking ATMs in low- and moderate-income geographies by 33.3 percent over the prior rating period to three ( 15.8 percent) deposit-taking ATMs in low-income geographies and five ( 26.3 percent) ATMs in moderate-income geographies. Bank-provided data on use of online, mobile, and telephone banking showed negligible changes in the adoption of these services by low- and moderate-income individuals from the prior rating period.

| Distribution of Branch Openings/Closings |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | \# of <br> Branch Openings | \# of Branch Closings | Net change in Location of Branches (+ or -) |  |  |  |
|  |  |  | Low | Mod | Mid | Upp |
| Boise City MSA | 0 | 2 | 0 | -1 | 0 | -1 |

The bank's opening and closing of branches has not adversely affected the accessibility of its delivery systems, particularly in low- and moderate-income geographies and/or to low- and moderate-income individuals. The bank did not close or open any branches in low-income geographies. The bank closed one branch in a moderate-income geography. The branch closure was due to reduced customer usage and unprofitability. Despite the branch closure, branch locations in general, remained accessible to geographies and individuals of different income levels in the bank's AA.

Services, including where appropriate, business hours, do not vary in a way that inconveniences the AA, particularly low- and moderate-income geographies and/or individuals. Generally, branches are open Monday through Friday from 9:00 am to 6:00 pm and Saturday from 9:00 am to 2:00 pm. All retail banking services are available at all branches within the low- and moderate-income geographies.

## Community Development Services

The bank had an adequate level of CD services in the full-scope AA.
Bank records showed employees provided technical assistance and/or job-specific expertise for 87 CD service activities to six organizations for a total of 382 qualified hours of service. A majority of the bank's assistance was to organizations that provide community services to low- and moderate-income individuals and families. These services were responsive to community needs, particularly for affordable housing. The following is an example of CD services provided in this AA:

- Two bank employees provided 147 hours of first-time home purchase seminars benefitting 505 lowand moderate-income individuals. The employees provided information on mortgage products, services, and programs targeting low-to moderate-income homebuyers.


## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall High Satisfactory Service Test rating and did not significantly change the initial overall conclusions based on the AAs receiving full-scope review. Based on limited-scope reviews, the bank's performance under the Service Test in the Idaho Falls-Rexburg-Blackfoot and Coeur d'Alene AAs is consistent with the bank's overall performance under the Service Test in the full-scope area and the bank's performance under the Service Test in the Pocatello; Twin Falls; and Idaho non-metropolitan AAs is weaker than the bank's overall performance under the Service Test in the full-scope area due to lower percentage of branch distribution in low- and moderate-income geographies.

## State Rating

## State of Illinois

CRA rating for the State of Illinois ${ }^{14}$ : Satisfactory
The Lending Test is rated: High Satisfactory
The Investment Test is rated: High Satisfactory
The Service Test is rated: Low Satisfactory
The major factors that support this rating include:

- A good level of lending activity.
- Overall good geographic distribution of home mortgage loans and small loans to businesses.
- Overall good borrower distribution of home mortgage loans and small loans to businesses.
- A leader in making CD loans, the extensive use of flexible products, and stronger performance in the limited-scope areas, positively affected the rating.
- A significantly positive impact on investment activity by the limited-scope AAs as well as a significant level of broader statewide investments with a purpose, function, or mandate to serve AAs.
- Retail service delivery systems reasonably accessible to geographies and individuals of different income levels.
- An adequate level of CD services in the full-scope AA.


## Description of Institution's Operations in Illinois

The state of Illinois is Chase's 21 st largest rating area based on aggregate deposits of $\$ 3.1$ billion, representing 0.2 percent of the bank's total deposits. As of December 31, 2019, the bank operated 18 branches and 54 deposit-taking ATMs within the rating area, representing 0.3 percent of total branches and 0.3 percent of total ATMs. The bank originated and purchased approximately $\$ 1.1$ billion in loans or 0.2 percent of total bank loan originations and purchases during the evaluation period in the state.

According to the FDIC Deposit Market Share Data, as of June 30, 2019, there were 351 banks operating 1,837 branches in the state (excludes deposits and offices in the Chicago CSA, which is evaluated separately in the PE). Chase ranked fourth in deposit market share with 3.1 percent. Major competitors in the state based on deposit market share are State Farm FSB (10.6 percent), Busey Bank (4.0 percent), and PNC Bank, N.A. (3.1 percent).

Chase has six AAs in the state of Illinois and the Campaign-Urbana, IL MSA received a full-scope review (Champaign MSA). The Davenport-Moline, IL MSA, Peoria MSA, Rockford-MSA, Bloomington MSA, and Springfield MSA received limited-scope reviews. Refer to appendix A for a complete description of the AAs.

[^113]The following table provides a summary of the demographics that includes housing and business information for the Champaign MSA. Table A indicates that the volume of OOUs is very small in lowincome CTs (4.9 percent) and over 21.8 percent of families in the AA are low-income, with 9.9 percent below the poverty level. The median housing value in the Champaign MSA is five times the median family income, indicating a limited proportion of OOUs are affordable to low- and moderate-income borrowers. One simplistic method used to determine housing affordability assumes a maximum monthly principal and interest payment of no more than 30 percent of the applicant's income.

In the Champaign MSA, assuming a 30 -year mortgage with a five percent interest rate and three percent down payment, while not accounting for homeowners insurance, real estate taxes, or any additional monthly expenses, a low-income borrower making $\$ 35,317$ per year (or less than 50 percent of the FFIEC adjusted median family income in the MSA) could afford a $\$ 117,114$ mortgage loan with a payment of $\$ 1,059$ per month; a moderate-income borrower earning $\$ 56,507$ per year (or less than 80 percent of the FFIEC adjusted median family income in the MSA) could afford a $\$ 218,130$ mortgage loan with a payment of $\$ 1,695$ per month.

Median rents and the percentage of families below poverty level suggest rental housing is also unaffordable for some low-income residents.

| Table A - Demographic Information of the Assessment Area Assessment Area: Champaign-Urbana IL MSA 2017-20219 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Demographic Characteristics | \# | $\begin{aligned} & \text { Low } \\ & \text { \% of \# } \end{aligned}$ | Moderate \% of \# | Middle \% of \# | $\begin{aligned} & \text { Upper } \\ & \text { \% of \# } \end{aligned}$ | $\begin{aligned} & \mathbf{N A}^{*} \\ & \% \text { of } \# \end{aligned}$ |
| Geographies (Census Tracts) | 47 | 17.0 | 14.9 | 42.6 | 21.3 | 4.3 |
| Population by Geography | 222,261 | 13.2 | 15.5 | 45.0 | 21.3 | 5.0 |
| Housing Units by Geography | 96,302 | 13.9 | 16.2 | 47.9 | 20.1 | 1.8 |
| Owner-Occupied Units by Geography | 49,446 | 4.9 | 10.8 | 58.1 | 26.1 | 0.1 |
| Occupied Rental Units by Geography | 37,111 | 24.7 | 22.4 | 35.5 | 13.5 | 3.9 |
| Vacant Units by Geography | 9,745 | 19.3 | 20.5 | 43.2 | 14.9 | 2.1 |
| Businesses by Geography | 11,949 | 10.1 | 17.3 | 41.9 | 28.1 | 2.6 |
| Farms by Geography | 722 | 2.8 | 5.3 | 71.2 | 20.8 | 0.0 |
| Family Distribution by Income Level | 47,285 | 21.8 | 16.5 | 20.7 | 41.0 | 0.0 |
| Household Distribution by Income Level | 86,557 | 27.6 | 14.5 | 15.2 | 42.7 | 0.0 |
| Median Family Income MSA - 16580 Champaign-Urbana, IL MSA |  | \$70,634 | Median Housing Value |  |  | \$137,205 |
|  |  |  | Median Gross Rent |  |  | \$835 |
|  |  |  | Families Below Poverty Level |  |  | 9.9\% |
| Source: 2015 ACS and 2019 D\&B Data <br> Due to rounding, totals may not equal $100.0 \%$ <br> (*) The NA category consists of geographies that have not been assigned an income classification. |  |  |  |  |  |  |

Economic Data
According to the Moody's Analytics February 2020 report, the Champaign MSA area economy is stable for now due to few dynamic growth drivers. The economy is driven by the presence of the University of

Illinois and agriculture. Some other positives include low business costs especially office rents, a comparatively large pool of talent and good prospects for life sciences and information technology. Most recently, there was a surge of job additions at the University of Illinois. The unemployment rate is at a 20 year low of 3.3 percent. Further, average earnings in the private sector have risen over the past year at one of the fastest rates in the country. While the area is highly dependent on state government for jobs and income, the University of Illinois flagship campus relies less on state funding than the state's other public universities and boasts ample liquidity, a below average debt burden and strong student demand. These advantages have allowed the university to steadily add faculty and staff to keep up with the growing student body. The top three employers in the area include the University of Illinois, The Carle Foundation, and Kraft Foods Inc. The housing market is a mixed bag. Multifamily housing is propping up residential construction. Builders put up more apartment units in 2019 than in all but two other years since records have been kept. Single-family starts remain sluggish, and house price increases have lost their edge over the state.

## Community Contacts

Examiners considered five community contacts completed during the review period with entities serving the area. The contacts were with organizations focused on affordable housing, business start-up, and economic development/small business. Contacts indicated that the area maintains a high standard of living with the benefit of low housing prices in comparison to other growing communities in the nation. However, some low-income families have issues obtaining loans due to credit issues. Contacts noted that there is a shortage of commercial space which has driven up the value and as a result makes space more expensive and more difficult for a start-up business. Contacts identified a need for affordable housing, gap funding for start-ups and other small businesses, funding for younger entrepreneurs with limited credit history. Contacts noted that there are opportunities for banks to lend to projects being originated locally. In addition, there are opportunities for banks to support community development activities and financing programs.

## Scope of Evaluation in Illinois

The Champaign MSA received a full-scope review. The MSA accounts for 24.8 percent of the deposits and 18.6 percent of the lending in Illinois. The remaining five AAs received a limited-scope review. Performance in limited-scope AAs and its effect on the CRA rating are discuss at the end of each test.

## CONCLUSIONS WITH RESPECT TO PERFORMANCE TESTS IN ILLINOIS

## LENDING TEST

The bank's performance under the Lending Test in the state of Illinois is rated High Satisfactory.

## Conclusions for Area Receiving a Full-Scope Review

Based on a full-scope review, the bank's performance in the Champaign MSA is good. Overall, good lending levels and good geographic and borrower distribution of loans.

## Lending Activity

Lending levels reflect good responsiveness to the credit needs in the bank's AA.
Examiners considered the number and amount of home mortgage, small business, small farm loans originated or purchased relative to Chase's capacity based on deposits, competition, and market presence. Lending activity for home mortgage and small loans to businesses received the most weight in reaching conclusions. Respectively, home mortgage lending and small loans to businesses account for 27.5 percent and 70.0 percent of the loan volume in the state by number and 66.3 percent and 27.2 percent of loan volume by dollar. Small farm lending is not a strategic focus of the bank and received minimal weight in reaching conclusions. Farm loans represented 2.4 percent of the loan volume in the state by number 0.6 percent loan volume by dollar.

| Number of Loans* |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home Mortgage | Small Business | Small <br> Farm | Community Development | Total | \% State Loans | \% State <br> Deposits |
| Champaign-Urbana MSA | 982 | 2,523 | 77 | 3 | 3,585 | 18.6 | 24.8 |
| Bloomington-Pontiac CSA | 850 | 1,575 | 57 | 0 | 2,482 | 12.9 | 12.9 |
| Davenport-Moline CSA | 422 | 1,249 | 65 | 2 | 1,738 | 9.0 | 3.4 |
| Peoria-Canton CSA | 1,051 | 2,710 | 144 | 2 | 3,907 | 20.2 | 10.5 |
| Rockford-FreeportRochelle CSA | 1,562 | 3,557 | 52 | 2 | 5,173 | 26.8 | 23.2 |
| Springfield-Jacksonville-Lincoln CSA | 441 | 1,892 | 72 | 1 | 2,406 | 12.5 | 25.2 |
| Total | 5,308 | 13,506 | 467 | 10 | 19,291 | 100 | 100 |

*The tables present the data for all assessment areas. The narrative below addresses performance in full-scope areas only.

| Dollar Volume of Loans*(000's) |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home <br> Mortgage | Small <br> Business | Small <br> Farm | Community <br> Development | Total | \% State <br> Loans | \% State <br> Deposits |
| Champaign-Urbana <br> MSA | 143,136 | 39,374 | 664 | 20,966 | 204,140 | 18.6 | 24.8 |
| Bloomington-Pontiac <br> CSA | 149,827 | 29,183 | 471 | 0 | 179,481 | 16.3 | 12.9 |
| Davenport-Moline <br> CSA | 43,977 | 28,152 | 512 | 17,045 | 89,686 | 8.2 | 3.4 |
| Peoria-Canton CSA | 146,855 | 61,120 | 1,980 | 11,600 | 221,555 | 20.2 | 10.5 |
| Rockford-Freeport- <br> Rochelle CSA | 190,331 | 92,186 | 399 | 12,756 | 295,672 | 26.9 | 23.2 |
| Springfield- <br> Jacksonville-Lincoln <br> CSA | 55,073 | 48,714 | 2,992 | 2,000 | 108,779 | 9.9 | 25.2 |
| Total | 729,199 | 298,729 | 7,018 | 64,367 | $1,099,313$ | 100 | 100 |

*Due to rounding, totals may not equal $100.0 \%$. The tables present the data for all assessment areas. The narrative below addresses performance in fullscope areas only.

Chase ranked second in deposits of 30 institutions with 12.8 percent market share.
In overall home mortgage lending, Chase ranked ninth with 2.8 percent market share. This is a very competitive market with 265 mortgage lenders. The top three lenders in this market share are Busey Bank (16.8 percent), Prime Lending ( 6.7 percent), and Wells Fargo Bank, N.A. (4.7 percent).

Chase ranked first in small loans to businesses with 20.7 percent market share. There are 69 lenders in the MSA. Other major lenders in the market were primarily American Express National Bank (13.8 percent), U.S. Bank, N.A. (8.1 percent), and Capital One, N.A. (6.2 percent).

Chase ranked sixth in small loans to farms 4.7 percent market share. There are 22 lenders in the MSA. The other major lenders in the market are John Deere Financial, F.S.B ( 30.5 percent), First Mid Bank \& Trust, NA (16.3 percent), and Busey Bank (13.6 percent).

## Distribution of Loans by Income Level of the Geography

The bank exhibits a good geographic distribution of loans in its AA.

## Home Mortgage Loans

Refer to Table O in the state of Illinois section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of home mortgage loan originations and purchases for this evaluation is good. The following information was taken into consideration when determining this rating.

- Profile data indicates there is a limited proportion of OOUs available as well as a high level of vacant units in low-income geographies.
- Performance in the moderate-income areas was given more significance as there was a small percentage of low-income geographies in both time periods ( 2.0 percent between 2014 and 2016 and 4.9 percent between 2017 and 2019).
- Between 2017 and 2019, the proportion of loans in low-income geographies was below both the proportion of OOUs in those areas and the aggregate distribution of loans. The proportion of moderate-income geographies significantly exceeded both the proportion of OOUs in those areas and the aggregate distribution of loans.
- Performance in the low- and moderate-income geographies between 2014 and 2016 was inconsistent with the performance during the 2017-2019 period. Between 2014 and 2016, the proportion of loans in low-income geographies was significantly below both the proportion of OOUs in those areas and the aggregate distribution of loans. The proportion of moderate-income geographies was below the proportion of OOUs in those areas and significantly exceeded the aggregate distribution of loans. The weaker performance between 2014 and 2016 did affect the 2017-2019 performance.


## Small Loans to Businesses

Refer to Table Q in the state of Illinois section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to businesses.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to businesses for this evaluation is adequate. The following information was taken into consideration when determining this rating.

- The economic growth of 2.1 percent was much slower than the national rate of 3.4 percent, with population decline in the AA.
- Between 2017-2019, the proportion of loans to small businesses in low-income geographies was near to the proportion of businesses in those area and equaled the aggregate distribution of loans. The proportion of loans to small businesses in moderate-income geographies was below both the proportion of businesses in those area and the aggregate distribution of loans.
- Performance in low- and moderate-income geographies during the 2014 and 2016 time period was stronger than 2017 to 2019. Between 2104 and 2016, the proportion of loans to small businesses in low-income geographies exceeded both the proportion of businesses in those area and the aggregate distribution of loans. The proportion of loans to small businesses in moderate-income geographies was below the proportion of businesses in those area and near to aggregate distribution of loans.


## Small Loans to Farms

Refer to Table S in the state of Illinois section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to farms.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to farms is good. The following information was taken into consideration when determining this rating.

- The limited percentage of farms in low-income geographies ( 2.8 percent) constrained lending opportunities; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of farms in those geographies.
- Farm lending is not a focus of the bank, therefore examiners placed greater significance on performance compared to aggregate of lender. Chase ranked sixth in deposit market share with 4.7 percent amongst the high level of competition in the AA (22 lenders).
- Between 2017 and 2019, the bank did not make any small farm loans in low- and moderate-income geographies.
- Performance in low- and moderate-income geographies during the 2014 to 2016 period was generally consistent with the performance during 2017 to 2019 period. Between 2014 and 2016, the bank did not make any small farms in low-income geographies. The proportion of loans to small farms in moderate-income geographies was significantly below both the proportion of farms in those geographies and the aggregate distribution.


## Lending Gap Analysis

A review of home mortgage loans, small loans to business, and small loans to farms including summary reports and AA maps did not identify any unexplained conspicuous lending gaps in the bank's activities.

## Distribution of Loans by Income Level of the Borrower

The bank exhibits a good distribution of loans among individuals of different income levels and business of different sizes, given the product lines offered by the bank.

## Home Mortgage Loans

Refer to Table P in the state of Illinois section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall borrower distribution of home mortgage loan originations and purchases for this evaluation is good. The following information was taken into consideration when determining this rating.

- Competition is high relative to the market size.
- Between 2017 and 2019, the proportion of loans to low-income borrowers was well below the percentage of low-income families in the AA and below the aggregate distribution of loans. The proportion of loans to moderate-income borrowers significantly exceeded the percentage of moderate-income families in the AA and was near to the aggregate distribution of loans.
- Performance between 2014 and 2016 was stronger than the 2017-2019 period, which contributed to the overall good performance. The proportion of loans to low-income borrowers significantly exceeded the aggregate distribution but was below the proportion of low-income families. The proportion of loans to moderate-income borrowers significantly exceeded both the proportion of moderate-income families and the aggregate distribution.


## Small Loans to Businesses

Refer to Table R in the state of Illinois section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to businesses.

Based on the data in the tables and the following factors, the distribution of the bank's originations and purchases of small loans to businesses by revenue category is excellent. The following information was taken into consideration when determining this rating.

- Between 2017 and 2019, the bank's distribution of loans to businesses with revenues of $\$ 1$ million or less was near to the proportion of businesses with revenues of $\$ 1$ million or less and significantly exceeded the aggregate distribution of loans.
- Performance in the 2014 to 2016 period was consistent with the performance between 2017-2019. The bank's distribution of loans to businesses with revenues of $\$ 1$ million or was near to the proportion of businesses and significantly exceeded the aggregate distribution of loans.


## Small Loans to Farms

Refer to Table T in the state of Illinois section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to farms.

Based on the data in the table and the following considerations, the distribution of the bank's originations and purchases of small loans to farms by revenue category is good. The following information was taken into consideration when determining this rating.

- Between 2017 and 2019, the bank's percentage of loans to farms with revenues of $\$ 1$ million or less was below the percentage of businesses and significantly exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was generally consistent with performance between 2017 and 2019. The bank's percentage of loans to farms with revenues of $\$ 1$ million or less was below the percentage of businesses and significantly exceeded the aggregate distribution.


## Community Development Lending

The bank is a leader in making CD loans.
The Lending Activity Tables, shown above, set forth the information and data used to evaluate the bank's level of CD lending. These tables include all CD loans, including multifamily loans that also qualify as CD loans.

The bank made three CD loans totaling $\$ 21$ million. This dollar volume represented 21.2 percent of the tier 1 capital allocated to the AA. A substantial majority of the loans were used for affordable housing while the remaining supported community service, which are both community needs.

Examples of CD loans in the AA include:

- In February 2016, Chase originated a $\$ 3.2$ million loan to a school district. Sixty-nine percent of the students are eligible for the Federal Free or Reduced Lunch program.
- In November 2016, Chase provided a $\$ 4.8$ million loan for the new construction of an apartment building in a middle-income census tract in Urbana, IL. The project created 33 low- and moderateincome units, with 24 leased under Section 8 contracts and the remainder leased under a Projectbased Veterans Affairs Supportive Housing contract.
- In December 2018, Chase funded a $\$ 13$ million construction bond loan with proceeds used to finance new construction of a 122-unit senior housing project in Champaign, IL. Eligibility for 120 units is dependent upon low- and moderate-income qualification guidelines and the remaining two are market rate. Twenty-four of these units will also be supportive housing units with the Housing Authority providing two full-time case managers to coordinate service delivery.


## Product Innovation and Flexibility

The bank makes extensive use of innovative and/or flexible lending practices to serve AA credit needs. As outlined below, a total of 424 loans were funded totaling $\$ 49.3$ million. Refer to the comments in the Product Innovation and Flexibility section of this performance evaluation for additional details

| Loan Type | Number of <br> Loans | Dollar Amount <br> $\mathbf{( \$ 0 0 0 ’ \mathbf { s } )}$ |
| :--- | :---: | :---: |
| DreaMaker | 49 | 6,977 |
| FHA | 58 | 7,053 |
| HARP | 21 | 1,911 |
| VA | 30 | 5,080 |
| SBA | 8 | 498 |
| USDA | 258 | 27,800 |

## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AA was factored into the state's overall High Satisfactory Lending Test rating and did not change the initial overall conclusions based on the AA receiving the full-scope review. Based on limited-scope reviews, the bank's performance under the Lending Test in the Davenport-Moline IL MSA, Peoria MSA, and Rockford-MSA is consistent with the bank's overall good performance under the Lending Test in the full-scope AA. The bank's performance under the Lending Test in the Bloomington MSA and Springfield MSA is weaker than the bank's overall good performance due to a weaker borrower income distribution. The weaker performance did not affect the overall Lending Test rating for the state of Illinois.

Refer to Tables O through Tin the state of Illinois section of appendix D for the facts and data that support these conclusions.

## INVESTMENT TEST

The bank's performance under the Investment Test in the state of Illinois is rated High Satisfactory.

## Conclusions for Area Receiving a Full-Scope Review

Based on a full-scope review, the bank's performance in the Champaign-Urbana MSA is poor. Performance in the limited-scope AAs had a significantly positive effect on the overall Investment Test rating.

The bank has a poor level of qualified CD investments or grants, but not in a leadership position, particularly those that are not routinely provided by private investors. Current and prior period investments represent 0.8 percent of allocated tier 1 capital allocated to the AA. Nearly all the investments represent prior period investments.

The bank exhibits poor responsiveness to credit and community economic development needs. Identified credit needs are affordable housing, affordable rental housing, and economic and workforce development. While there were no CD investments, the bank made one current period grant totaling $\$ 30.0$ thousand or 3.8 percent of qualified investments, which supported affordable housing. Current and prior period affordable housing investments created or retained 221 low- and moderate-income housing units for individuals and families.

The bank rarely uses innovative and/or complex investments to support CD initiatives. One prior period investment made in 2009 totaling $\$ 749.7$ thousand was a Direct Investor LIHTC transaction which required bank expertise and capacity in selecting projects and partners, negotiating agreements, overseeing project development and operations, and ensuring compliance.

## Number and Amount of Qualified Investments

| Qualified Investments - State of Illinois |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area (AA) | Prior Period* |  | Current Period |  | Total |  |  |  | UnfundedCommitments** |  |
|  | \# | \$(000's) | \# | \$(000's) | \# | \% of <br> Total <br> \# | \$(000's) | \% of Total \$ | \# | \$(000's) |
| Full Review: |  |  |  |  |  |  |  |  |  |  |
| Champaign-Urbana MSA | 3 | 764 | 1 | 30 | 4 | 3.1 | 794 | . 6 | 0 | 0 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |
| Bloomington-Pontiac CSA | 3 | 81 | 1 | 5,855 | 4 | 3.1 | 5,936 | 4.6 | 0 | 0 |
| Davenport-Moline CSA | 3 | 220 | 2 | 14,543 | 5 | 3.9 | 14,763 | 11.4 | 0 | 0 |
| Peoria-Canton CSA | 7 | 4.21 | 10 | 11,457 | 17 | 13.4 | 15,667 | 12.1 | 0 | 0 |
| Rockford-Freeport-Rochelle CSA | 2 | 113 | 6 | 10,290 | 8 | 6.3 | 10,403 | 8.1 | 0 | 0 |
| Springfield-JacksonvilleLincoln CSA | 2 | 135 | 9 | 7,992 | 11 | 8.7 | 8,126 | 6.3 | 0 | 0 |
| Statewide Investments with Purpose, Mandate, or Function (P/M/F) to Serve AAs | 6 | 196 | 51 | 61,884 | 57 | 44.9 | 62,080 | 48.0 | 0 | 0 |
| Statewide Investments with No Purpose, Mandate, or Function (P/M/F) to Serve AAs | 21 | 11,490 | 0 | 0 | 21 | 16.5 | 11,490 | 8.9 | 0 | 0 |

Prior Period Investments' means investments made in a previous evaluation period that are outstanding as of the examination date.
Unfunded Commitments' means legally binding investment commitments that are tracked and recorded by the institution's financial reporting system.
Examples of CD Investments in the AA include:

- The bank provided a $\$ 30$ thousand charitable contribution to a non-profit company through their participation in the bank's REO Community Revitalization Program. The company's mission is to revitalize low- and moderate-income communities by helping low- and moderate-income families become and remain homeowners. This is done by providing education, counseling, and development services that ensure each family has the knowledge, management skills, and fiscal discipline to create and execute the right financial plan.
- The bank pledged to help families in high need neighborhoods achieve and sustain homeownership, by donating or selling bank real estate owned properties to government agencies, municipalities, non-profit organizations, and land banks across the country.


## Statewide Investments in State of Illinois

Statewide Investments with a P/M/F were primarily related to affordable housing, revitalization/stabilization, and community service. A significant majority or 99.7 percent of total investments represent current period investments. Responsiveness to identified community needs is excellent. Current and prior period affordable housing investments totaled $\$ 50.8$ million, with $\$ 6.2$ million for community service and $\$ 4.9$ million for revitalization/stabilization. Affordable housing investments created or retained 1,213 low- and moderate-income housing units for individuals and families. Investments included two complex Direct Investor LIHTC transactions which require bank expertise and capacity in selecting projects and partners, negotiating agreements, overseeing project
development and operations, and ensuring compliance. The bank also made one NMTC investment. Four investments were a catalyst for future growth and other improvements.

The bank made 29 grants totaling $\$ 3.4$ million to a variety of organizations supporting community service through consumer education. In some occurrences, grants were provided in multiple years. The level of investments had a positive impact on the Investment Test rating for the state of Illinois.

## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall High Satisfactory Investment Test rating and significantly changed the initial overall conclusions based on the AA receiving fullscope review. Based on limited-scope reviews, the bank's performance under the Investment Test in the Bloomington MSA, Davenport-Moline-Rock Island MSA, Peoria MSA, Rockford MSA and Springfield MSA is stronger than the bank's overall poor performance under the Investment Test in the full-scope area due to a higher level of qualified investments compared to allocated tier 1 capital. Performance in the limited-scope AAs had a significantly positive effect on the overall Investment Test rating for the state of Illinois.

## SERVICE TEST

The bank's performance under the Service Test in the state of Illinois is rated Low Satisfactory.

## Conclusions for Area Receiving a Full-Scope Review

Based on a full-scope review, the bank's performance in the Champaign MSA is adequate.

## Retail Banking Services

Service delivery systems are reasonably accessible to geographies and individuals of different income levels in the bank's full-scope AA.

Examiners evaluated the data as outlined in the Scope section at the front of this document including bank-provided data on usage of branches adjacent to low-and moderate-income geographies by individuals residing in those geographies and on increases in the usage of alternative delivery systems.

Based on the data in the table below and performance context, the branch distribution is adequate. In low- and moderate-income geographies, the distribution is respectively significantly below and exceeds the percentage of the population. The bank had no branches in low-income geographies and one branch in moderate-income geographies. The distribution was augmented by two MUI tract branches that serve low-income tracts. Examiners reviewed data on the accounts held and transactions conducted at the MUI branches and confirmed they were serving the adjacent low- and moderate-income populations.

Charter Number: 8

| Distribution of Branch Delivery System |  |  |  |  |  |  |  | As of December 31, 2019 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Deposits <br> \% of Rated Area <br> Deposits in AA | Branches |  |  |  |  |  | Population |  |  |  |
|  |  | \# of <br> BANK <br> Branches | \% of <br> Rated <br> Area <br> Branches in AA | Location of Branches by Income of Geographies (\%) |  |  |  | \% of Population within Each Geography |  |  |  |
|  |  |  |  | Low | Mod | Mid | Upp | Low | Mod | Mid | Upp |
| Champaign MSA | 24.8. | 3 | 16.7 | 0 | 33.3 | 66.7 | 0 | 13.2 | 15.5 | 45.0 | 21.3 |

* May not add up to 100 percent due to geographies with unknown tract income level and rounding

Alternative delivery systems did not significantly enhance the delivery of banking services to geographies and individuals of all income levels. The OCC considered the availability and use of alternative delivery systems over the evaluation period. This included review of the bank's 12 deposittaking ATMs, online banking, mobile banking, and telephone banking to determine the effectiveness of these systems to make retail banking services available to individuals in low- and moderate-income geographies. The bank decreased the deposit-taking ATMs in low- and moderate-income geographies from the prior rating period to one ( 8.3 percent) deposit-taking ATMs in low-income geographies and three ( 25.0 percent) ATMs in moderate-income geographies. Bank-provided data on use of online, mobile, and telephone banking showed increases in the adoption of these services by low- and moderateincome individuals from the prior rating period.

| Distribution of Branch Openings/Closings |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Net change in Location of Branches(+ or -) |  |  |  |
| Assessment Area | Openings | Closings | Low | Mod | Mid | Upp |
| Champaign MSA | 0 | 0 | - | - | - | - |

The bank did not open or close any branches during the evaluation period.
Services, including where appropriate, business hours, do not vary in a way that inconveniences, the AA, particularly low- and moderate-income geographies and/or individuals. Generally, branches are open Monday through Thursday from 9:00 am to 5:00 pm, Friday from 9:00 am to 6:00 pm and Saturday from 9:00 am to 1:00 pm. All retail banking services are available at all branches within the moderate-income geographies.

## Community Development Services

The bank provides an adequate level of CD services.
Bank records show that employees provided technical assistance and/or job-specific expertise for 46 CD service activities to two organizations for a total of 332 qualified hours of service. All the bank's assistance was to organizations that provide community services to low- and moderate-income individuals and families. The following is an example of CD services provided in this AA:

- A bank employee provided 190 hours of board service to a local Community Development Corporation


## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall Low Satisfactory Service Test rating and did not significantly change the initial overall conclusions based on the AAs receiving full-scope review. Based on limited-scope reviews, the bank's performance under the Service Test in the Springfield, IL; Rockford, IL; Peoria, IL; Bloomington, IL; Davenport-Moline-Rock Island, IL AAs is consistent with the bank's overall performance under the Service Test in the full-scope area due to consistently weak branch distribution in low- and moderate-income geographies.

## State Rating

## State of Indiana

CRA rating for the State of Indiana ${ }^{15}$ : Satisfactory
The Lending Test is rated: High Satisfactory
The Investment Test is rated: Outstanding
The Service Test is rated: High Satisfactory
The major factors that support this rating include:

- A good level of lending activity.
- Overall adequate geographic distribution of home mortgage loans and small loans to businesses.
- Overall good borrower distribution of home mortgage loans and small loans to businesses.
- A leader in making CD loans, which had a significant positive affect on the rating.
- The extensive use of flexible products, which positively affected the rating.
- A good level of qualified investments, excellent responsiveness to credit and community economic development needs, significant use of complex investments, and the high level of investments in the broader statewide or regional area.
- Retail service delivery systems accessible to geographies and individuals of different income levels.
- Chase is a leader in providing CD services that are responsive to AA needs.


## Description of Institution's Operations in Indiana

The state of Indiana is Chase's $11^{\text {th }}$ largest rating area based on aggregate deposits $\$ 15.6$ billion, representing 1.1 percent of the bank's total deposits. As of December 31, 2019, the bank operated 129 branches and 262 deposit-taking ATMs within the rating area, representing 2.6 percent of total branches and 1.6 percent of total ATMs. The bank originated and purchased approximately $\$ 7.1$ billion in loans or 1.0 percent of total bank loan originations and purchases during the evaluation period in the state.

According to the FDIC Deposit Market Share Data, as of June 30, 2019, there were 144 banks operating 1,967 branches in the state of Indiana. Chase ranked first in deposit market share with 13.9 percent. Major competitors in the state based on deposit market share include PNC Bank, N.A. ( 7.83 percent), Fifth Third Bank ( 6.7 percent), and First Merchants Bank ( 5.4 percent).

Chase delineated six AAs in the state of Indiana. The Indianapolis-Carmel-Muncie, IN CSA (Indianapolis CSA) accounts for 72.0 percent of the bank's deposits in Indiana, received a full-scope review. The CSA consists of the Indianapolis-Carmel-Anderson, IN MSA, Muncie, IN MSA and Crawfordsville, IN MiSA. The Bloomington-Bedford CSA, Lafayette-West Lafayette MSA, Fort Wayne-Huntington-Auburn CSA, South Bend-Elkhart-Mishawaka CSA, and Indiana Non-MSA received limited-scope reviews. Refer to appendix A for a complete description of the AAs.

## Description of Full-Scope AA

The following table provides a summary of the demographic that includes housing and business information for the Indianapolis CSA. Table A indicates that the volume of OOUs is very small in low-

[^114]income CTs and over 21.5 percent of families in the AA are low-income with 10.7 percent below the poverty level. The median housing value in the Indianapolis CSA is three times the median income, two times the moderate-income and three times the low-income, indicating a limited proportion of OOUs are affordable to low-income borrowers. One simplistic method used to determine housing affordability assumes a maximum monthly principal and interest payment of no more than 30 percent of the applicant's income.

In the Indianapolis CSA, assuming a 30-year mortgage with a five percent interest rate and three percent down payment, while not accounting for homeowners insurance, real estate taxes, or any additional monthly expenses, a low-income borrower making $\$ 25,968$ per year (or less than 50 percent of the FFIEC adjusted median family income in the CSA) could afford a $\$ 72,555$ mortgage loan with a payment of $\$ 779$ per month; a moderate-income borrower earning $\$ 41,548$ per year (or less than 80 percent of the FFIEC adjusted median family income in the CSA) could afford a $\$ 146,801$ mortgage loan with a payment of $\$ 1,246$ per month.

Median rents and the significant percentage of families below poverty level suggest rental housing is also unaffordable for many low-income residents.

| Table A - Demographic Information of the Assessment Area <br> Assessment Area: Indianapolis-Carmel-Muncie IN CSA 2017-2019 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Demographic Characteristics | \# | Low <br> \% of \# | Moderate \% of \# | Middle \% of \# | Upper <br> \% of \# | $\begin{gathered} \text { NA* } \\ \text { \% of \# } \end{gathered}$ |
| Geographies (Census Tracts) | 388 | 16.8 | 26.5 | 30.7 | 25.3 | 0.8 |
| Population by Geography | 1,923,240 | 10.7 | 21.9 | 31.5 | 35.3 | 0.6 |
| Housing Units by Geography | 817,792 | 12.3 | 23.9 | 30.8 | 32.6 | 0.4 |
| Owner-Occupied Units by Geography | 473,275 | 6.1 | 16.4 | 35.0 | 42.3 | 0.1 |
| Occupied Rental Units by Geography | 258,922 | 19.1 | 35.0 | 25.6 | 19.6 | 0.7 |
| Vacant Units by Geography | 85,595 | 26.2 | 31.7 | 23.0 | 18.4 | 0.7 |
| Businesses by Geography | 153,609 | 9.1 | 19.4 | 31.0 | 40.2 | 0.3 |
| Farms by Geography | 4,718 | 4.5 | 11.3 | 45.1 | 39.1 | 0.1 |
| Family Distribution by Income Level | 473,648 | 21.5 | 16.9 | 19.4 | 42.1 | 0.0 |
| Household Distribution by Income Level | 732,197 | 23.4 | 16.1 | 17.6 | 42.9 | 0.0 |
| Median Family Income MSA - 26900 Indianapolis-Carmel-Anderson, IN MSA |  | \$66,803 | Median Housing Value |  |  | \$143,191 |
| Median Family Income MSA - 34620 Muncie, IN MSA |  | \$51,935 | Median Gross Rent |  |  | \$824 |
| Median Family Income Non-MSAs - IN |  | \$55,715 | Families Below Poverty Level |  |  | 10.7\% |

Source: 2015 ACS and 2019 D\&B Data
Due to rounding, totals may not equal $100.0 \%$
${ }^{(*)}$ The NA category consists of geographies that have not been assigned an income classification.

## Economic Data

According to Moody's Analytics February 2020 Report, at just below 3 percent, the unemployment rate in Indianapolis is stable at a two-decade low and the labor force is at an all-time high. Average hourly earnings are up more in the area than they are nationwide over the past few years because of tight labor supplies and a rising concentration of high-wage jobs. The area's strengths include highly affordable
housing; strong demographics with positive net-migration; low cost of doing business; a growing hightech hub; and a diversified industrial structure and well-developed distribution network. In November, Amazon broke ground on a fulfillment center in Hancock County, its second addition in the area in 2019. Major employment industries include education and health services; business and professional services; and government. Major employers in the area include Indiana University Health; St. Vincent Hospitals and Health Services; Lilly and Co.; and Community Health Network. The housing market has benefited from earlier job and income gains. Consistently a top Midwest performer in population growth, Indianapolis' economy is well positioned to outshine the region's in coming years. Much of the area's ability to buck the region's negative demographic patterns is tied to low costs for businesses and households. Construction activity will build off current momentum this year and next. While new supply will slow house price appreciation, the risk of a sharp deceleration as new supply comes online is low given above-average affordability and valuations that are anchored to underlying fundamentals.

## Community Contacts

Examiners considered four community contacts completed during the review period with entities serving the area. Contacts were completed with organizations focused on affordable housing, economic development and community and social services. According to the contacts, public resources for affordable housing are limited and not adequate to meet community needs. Parts of the region are struggling to maintain their population. Disinvestment persists in the inner core of the cities. There continues to be persistent poverty in certain neighborhoods and communities. The opioid crisis is impacting many communities. Much of the workforce is undereducated and lacks the skills needed by local businesses. Other needs identified in the community include, financing to support the development of affordable housing, workforce housing to create neighborhood stability, funding support and capacity building for area non-profits that work directly with low- and moderate-income populations, affordable mortgages for low- to moderate-income residents, technical assistance and training for small businesses, including financial education, small dollar loans and start-up funds for small businesses and workforce development training to give low-income individuals access to better paying jobs.

## Scope of Evaluation in Indiana

The Indianapolis CSA received a full-scope review. This CSA accounts for 72.0 percent of the deposits and 68.6 percent of the lending in Indiana. The remaining five AAs received a limited-scope review. Performance in limited-scope AAs and its effect on the CRA rating are discuss at the end of each test.

## CONCLUSIONS WITH RESPECT TO PERFORMANCE TESTS IN INDIANA

## LENDING TEST

The bank's performance under the Lending Test in the state of Indiana is rated High Satisfactory.

## Conclusion for Area Receiving a Full-Scope Review

Based on a full-scope review, the bank's performance in the Indianapolis CSA is good. Overall, good lending levels and good borrower distribution of loans with adequate geographic distribution of loans.

## Lending Activity

Lending levels reflect good responsiveness to credit needs in the bank's AA.
Examiners considered the number and amount of home mortgage, small business, small farm loans originated or purchased relative to Chase's capacity based on deposits, competition, and market presence. Lending activity for home mortgage and small loans to businesses received the most weight in reaching conclusions. Respectively, home mortgage lending and small loans to businesses account for 37.2 percent and 61.2 percent of the loan volume in the state by number and 79.1 percent and 17.5 percent of loan volume by dollar. Small farm lending is not a strategic focus of the bank and received minimal weight in reaching conclusions. Farm loans represented 1.0 percent of the loan volume in the state by number and 0.6 percent loan volume by dollar.

| Number of Loans* |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home Mortgage | Small Business | Small <br> Farm | Community Development | Total |  | \% State <br> Deposits |
| Indianapolis-CarmelMuncie CSA | 21,076 | 34,936 | 485 | 11 | 56,508 | 68.6 | 71.3 |
| Bloomington-Bedford CSA | 1,416 | 2,682 | 62 | 0 | 4,160 | 5.1 | 5.1 |
| Fort Wayne-Huntington-Auburn CSA | 4,015 | 5,912 | 71 | 0 | 9,998 | 12.1 | 8.9 |
| Lafayette-West Lafayette-Frankfort CSA | 1,209 | 2,048 | 109 | 5 | 3,371 | 4.1 | 5.6 |
| South Bend-ElkhartMishawaka CSA | 2,578 | 4,749 | 76 | 1 | 7,404 | 9.0 | 8.0 |
| Indiana Non-MSA | 340 | 559 | 31 | 0 | 930 | 1.1 | 1.2 |
| Total | 30,634 | 50,886 | 834 | 17 | 82,371 | 100 | 100 |

*Due to rounding, totals may not equal $100.0 \%$. The tables present the data for all assessment areas. The narrative below addresses performance in fullscope areas only.

| Dollar Volume of Loans* (in \$000s) |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home <br> Mortgage | Small <br> Business | Small <br> Farm | Community <br> Development | \% <br> State <br> Loans | \% State <br> Deposits |  |
| Indianapolis-Carmel-Muncie <br> CSA | $3,775,506$ | 804,416 | 31,724 | 186,374 | $4,798,020$ | 67.7 | 71.3 |
| Bloomington-Bedford CSA | 223,490 | 62,906 | 1,124 | 0 | 287,520 | 4.1 | 5.1 |
| Fort Wayne-Huntington- <br> Auburn CSA | 545,021 | 167,048 | 1,367 | 0 | 713,436 | 10.1 | 8.9 |
| Lafayette-West Lafayette- <br> Frankfort CSA | 192,079 | 41,023 | 8,397 | 8,499 | 249,998 | 3.5 | 5.6 |
| South Bend-Elkhart- <br> Mishawaka CSA | 841,450 | 154,548 | 2,263 | 0 | 998,261 | 14.1 | 8.0 |
| Indiana Non-MSA | 32,046 | 8,539 | 454 | 0 | 41,039 | 0.6 | 1.2 |
| Total | $5,609,592$ | $1,238,480$ | 45,329 | 194,873 | $7,088,274$ | 100 | 100 |

*Due to rounding, totals may not equal $100.0 \%$. The tables present the data for all assessment areas. The narrative below addresses performance in fullscope areas only.

Chase ranked first in deposits out of 48 institutions with 20.2 percent market share.

In overall home mortgage lending, Chase ranked first with 5.3 percent market share. This is a very competitive market with 636 home lenders and no single lender dominated the market. Other major lenders are Huntington National Bank (5.2 percent), Caliber Home Loans, Inc. (4.6 percent), and Wells Fargo Bank, N.A. (3.6 percent).

Chase ranked first in small loans to businesses with 23.1 percent market share. There are 147 lenders in the CSA. Other major lenders are American Express National Bank ( 15.3 percent), PNC Bank, N.A. ( 9.1 percent), and Capital One, N.A. (5.5 percent).

Chase ranked second in small loans to farms with 19.5 percent market share. There were 36 lenders in the CSA. Other major lenders and market share are John Deere Financial, F.S.B (21.7 percent), First Farmers Bank and Trust (11.8 percent) and First Merchants Bank (8.0 percent).

## Distribution of Loans by Income Level of the Geography

The bank exhibits adequate geographic distribution of loans in its AA.

## Home Mortgage Loans

Refer to Table O in the state of Indiana section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of home mortgage loan originations and purchases for this evaluation is adequate. The following information was taken into consideration when determining this rating.

- The limited proportion of housing units in low-income geographies, particularly OOUs ( 6.1 percent), constrained lending opportunities; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of OOUs in those geographies.
- The high level of competition in the AA (636 home mortgage lenders) was also considered and examiners placed greater significance on performance compared to the aggregate of lenders.
- Between 2017 and 2019, the proportion of loans in low-income areas was well-below the proportion of OOUs in those geographies and below aggregate distribution of loans. The proportion of loans in moderate-income areas was near to the proportion of OOUs in those geographies and exceeded the aggregate distribution of loans.
- The performance in low- and moderate-income geographies during the 2014 and 2016 time periods was inconsistent with 2017 to 2019. The proportion of loans in low-income geographies is significantly below the proportion of OOUs in those geographies and below the aggregate distribution of loans. The proportion of loans in moderate-income geographies was well-below the proportion of OOUs and near to the aggregate distribution of loans.


## Small Loans to Businesses

Refer to Table Q in the state of Indiana section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to businesses.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to businesses for this evaluation is adequate. The following information was taken into consideration when determining this rating.

- During the 2017 to 2019 period, the proportion of loans to small businesses in low- and moderateincome geographies was below both the proportion of businesses in those areas and the aggregate distribution of loans.
- The performance during the 2014 to 2016 time periods was inconsistent with 2017-2019. Between 2104 and 2016, the proportion of loans to small businesses in low-income areas was well-below both the percentage of small businesses located in those geographies and the aggregate distribution of loans. The proportion of loans to small businesses in moderate-income areas was below both the percentage of small businesses located in those geographies and the aggregate distribution of loans.


## Small Loans to Farms

Refer to Table $S$ in the state of Indiana section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to farms.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to farms is good. The following information was taken into consideration when determining this rating.

- The limited percentage of farms in low-income geographies (4.5 percent) constrained lending opportunities; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of farms in those geographies.
- Farm lending is not a focus of the bank, therefore examiners placed greater significance on performance compared to aggregate of lender. Chase ranked second in deposit market share with 21.7 percent amongst the high level of competition in the AA (36 lenders).
- Between 2017 and 2019, the proportion of loans to small farms in low-income geographies was near to the proportion of farms in those geographies and significantly exceeded the aggregate distribution.
- Between 2017 and 2019, the bank did not make any loans to small farms in moderate-income geographies therefore the proportion of loans to small farms in moderate-income geographies was significantly below the proportion of farms in those geographies and the aggregate distribution.
- Performance in low- and moderate-income geographies during the 2014 to 2016 period was generally consistent with performance during the 2017 to 2019 period. The proportion of loans to small farms in low-income geographies was near to the proportion of farms in those geographies and significantly below the aggregate distribution. The proportion of loans to small farms in moderateincome geographies was significantly below the proportion of farms in those geographies and significantly exceeded the aggregate distribution.


## Lending Gap Analysis

A review of home mortgage loans, small loans to business, and small loans to farms including summary reports and AA maps did not identify any unexplained conspicuous lending gaps in the bank's activities.

## Distribution of Loans by Income Level of the Borrower

The bank exhibits a good distribution of loans among individuals of different income levels and business and farms of different sizes, given the product lines offered by the bank.

## Home Mortgage Loans

Refer to Table $P$ in the state of Indiana section of appendix $D$ for the facts and data used to evaluate the borrower distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall borrower distribution of home mortgage loan originations and purchases for this evaluation is good. The following information was taken into consideration when determining this rating.

- Greater significance was placed on performance against the aggregate distribution as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of this Full-Scope AA.
- Examiners particularly considered housing affordability challenges for low- and moderate-income borrowers.
- Between 2017 and 2019, the proportion of loans to low-income borrowers was well-below the percentage of low-income families and near to the aggregate distribution of lenders. The proportion of moderate-income loans exceeded the proportion of moderate-income families and the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 to 2019. The proportion of loans to low-income borrowers was well below the percentage of lowincome families and exceeded the aggregate distribution of lenders. The proportion of moderateincome loans was exceeded the proportion of moderate-income families and the aggregate distribution.


## Small Loans to Businesses

Refer to Table R in the state of Indiana section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to businesses.

Based on the data in the tables and the following factors, the distribution of the bank's originations and purchases of small loans to businesses by revenue category is good. The following information was taken into consideration when determining this rating.

- Greater significance was placed on performance against the aggregate distribution of lenders as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of the Full-Scope AA.
- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and significantly exceeded the aggregate distribution.
- Performance against both the aggregate and borrower distribution in 2014 through 2016 were consistent with 2017-2019. The bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and significantly exceeded the aggregate distribution.


## Small Loans to Farms

Refer to Table $T$ in the state of Indiana section of appendix $D$ for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to farms.

Based on the data in the table and the following considerations, the distribution of the bank's originations and purchases of small loans to farms by revenue category is good. The following information was taken into consideration when determining this rating.

- Between 2017 and 2019, the bank's percentage of loans to farms with revenues of $\$ 1$ million or less was near to the percentage of businesses and substantially exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 and 2019. The bank's percentage of loans to farms with revenues of $\$ 1$ million or less was below the percentage of businesses and substantially exceeded the aggregate distribution.


## Community Development Lending

The bank is a leader in making CD loans.
The Lending Activity Tables, shown above, set forth the information and data used to evaluate the bank's level of CD lending. These tables include all CD loans, including multifamily loans that also qualify as CD loans.

The bank made 11 CD loans totaling $\$ 186.4$ million. This dollar volume represented 12.9 percent of the tier 1 capital allocated to the AA. Ten loans ( 90 percent) supported community services, while the remaining loan supported revitalization/stabilization and affordable housing.

Examples of CD loans include:

- In October 2016, the bank made a $\$ 154.4$ million loan to a school district that educates a student population where 71.8 percent are eligible for the Free and Reduced Lunch Program. The funds were used to implement a program of best practices in curriculum, academic intervention, and other school improvements.
- In November 2014, the bank provided $\$ 6.4$ million in funding towards constructing new affordable housing for senior citizens in Beech Grove, IN. The project includes 11 single-story buildings with a total of 60 units that are for low- and moderate-income seniors age 55 or older.
- In November 2017, the bank provided $\$ 10.7$ million in funding to develop 72 new affordable units in Muncie, IN. The project includes three properties with 23 two-bedroom units and 49 three-bedroom
units that are restricted to low- and moderate-income households. The project was considered a key component of neighborhood revitalization and clean-up of Muncie's south side.


## Product Innovation and Flexibility

The bank makes extensive use of innovative and/or flexible lending practices to serve AA credit needs. As outlined below, a total of 5,574 loans were funded totaling $\$ 718.2$ million. Refer to the comments in the Product Innovation and Flexibility section of this performance evaluation for additional details regarding the programs.

| Loan Type | Number of <br> Loans | Dollar Amount <br> $\mathbf{( \$ 0 0 0 ' s )}$ |
| :--- | :---: | :---: |
| DreaMaker | 787 | 107,567 |
| FHA | 2,384 | 271,216 |
| HARP | 729 | 79,412 |
| VA | 696 | 119,526 |
| SBA | 189 | 44,864 |
| USDA | 789 | 95,617 |

## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AA was factored into the state's overall High Satisfactory Lending Test rating and did not change the initial overall conclusions based on the AAs receiving the full-scope review. Based on limited-scope reviews, the bank's performance under the Lending Test in the Bloomington-Bedford CSA, Lafayette-West Lafayette MSA, and Indiana Non-MSA is consistent with the bank's overall good performance under the Lending Test in the full-scope AA. Based on limitedscope reviews, the bank's performance under the Lending Test in the Fort Wayne-Huntington-Auburn CSA and South Bend-Elkhart-Mishawaka CSA is weaker than the bank's overall good performance in the full-scope AA. Performance is weaker primarily due to the lack of CD lending. Performance in limited-scope AAs did not affect the overall Lending Test rating for the state of Indiana.

Refer to Tables O through T in the state of Indiana section of appendix D for the facts and data that support these conclusions.

## INVESTMENT TEST

The bank's performance under the Investment Test in the state of Indiana is rated Outstanding. A good level of qualified investments was enhanced by excellent responsiveness to credit and community economic development needs, significant use of complex investments, and the high level of investments in the broader statewide or regional area.

## Conclusions for Areas Receiving Full-Scope Reviews

Based on a full-scope review, the bank's performance in the Indianapolis CSA is good.
The bank has a significant level of qualified CD investments and grants, occasionally in a leadership position, particularly those that are not routinely provided by private investors. The current and prior period investments dollar volume represents 5.0 percent of tier 1 capital allocated to the AA. Sixtyseven percent are current period investments.

The bank exhibits excellent responsiveness to credit and community economic development needs identified in the AA. Twenty-three current period CD investments totaling $\$ 42.6$ million are responsive to community development needs. Seventy-one percent support affordable housing, 23.1 percent support community services, and 6.1 percent support revitalization/stabilization. Seventy-five grants totaled $\$ 6.0$ million, with 48.3 percent, 34.0 percent, 12.7 percent, and 5.0 percent supporting community services, revitalization/stabilization, affordable housing, and economic development, respectively. Forty-two prior period CD investments totaling $\$ 23.3$ million are complex with nearly all supporting affordable housing. In addition, 21 current period investments supporting community services and revitalization/stabilization serve as catalysts to encourage future improvement and growth in the AA.

The bank makes significant use of complex investments to support CD initiatives. Eight current period CD investments totaling $\$ 21.2$ million were complex. Of those, 41.5 percent, 46.2 percent and 12.3 percent support affordable housing, community services and revitalization/stabilization, respectively. Nine of ten prior period complex investments or $\$ 14.2$ million, support affordable housing consisting of Direct Investment LIHTCs transactions.

Number and Amount of Qualified Investment

| Qualified Investments - State of Indiana |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area (AA) | Prior Period* |  | Current Period |  | Total |  |  |  | UnfundedCommitments** |  |
|  | \# | \$(000's) | \# | \$(000's) | \# | \% of Total \# | \$(000's) | \% of Total \$ | \# | \$(000's) |
| Full Review: |  |  |  |  |  |  |  |  |  |  |
| Indianapolis-Carmel-Muncie CSA | 42 | 23,372 | 98 | 48,612 | 140 | 53.2 | 48.14 | 48.1 | 0 | 0 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |
| Bloomington-Bedford CSA | 2 | 671 | 5 | 13,749 | 7 | 2.7 | 9.64 | 9.6 | 0 | 0 |
| Fort Wayne-Huntington-Auburn CSA | 11 | 1,285 | 15 | 6,589 | 26 | 9.9 | 5.27 | 5.2 | 0 | 0 |
| Lafayette-West Lafayette-Frankfort CSA | 2 | 64 | 2 | 5,608 | 4 | 1.5 | 3.79 | 3.8 | 0 | 0 |
| South Bend-Elkhart-Mishawaka CSA | 7 | 1,370 | 4 | 6,318 | 11 | 4.2 | 5.14 | 5.1 | 0 | 0 |
| IN Non-Metro AA | 3 | 7 | 0 | 0 | 03 | 1.1 | 7 | 0 | 0 | 0 |
| Other: |  |  |  |  |  |  |  |  |  |  |
| Statewide Investments with Purpose, Mandate or Function (P/M/F) to Serve AAs | 0 | 0 | 47 | 33,612 | 47 | 17.9 | 33,612 | 22.5 | 0 | 0 |
| Statewide Investments with No Purpose, Mandate or Function (P/M/F) to Serve AAs | 24 | 8,242 | 1 | 30 | 25 | 9.5 | 8,272 | 5.5 | 0 | 0 |

Prior Period Investments' means investments made in a previous evaluation period that are outstanding as of the examination date.
Unfunded Commitments' means legally binding investment commitments that are tracked and recorded by the institution's financial reporting system.
Examples of community development investments in the AA include:

- The bank originated a $\$ 2.3$ million NMTC equity investment for the construction of a 16,000 square foot (SF) grocery store, a $12,000 \mathrm{SF}$ re-sale store, and $12,600 \mathrm{SF}$ of additional retail space in Avondale Meadows within the city of Indianapolis. The facility was constructed in a community that is both low-income and a USDA-defined food desert. The bank's investment served as the catalyst to spark more development within this community and to attract businesses offering healthy
food options. The facility acted as a cornerstone business and supported over 100 full-time and parttime jobs in the area.


## Statewide Investments in the State of Indiana

The bank has 72 current and prior period CD investments and grants with and without a $\mathrm{P} / \mathrm{M} / \mathrm{F}$ to serve AAs in the broader statewide or regional area. Ninety-eight percent supports affordable housing, and two percent supports community services. One small investment supports revitalization/stabilization. These broader statewide investments enhanced the bank's overall performance under the Investment Test in the state of Indiana.

## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall Outstanding Investment Test rating and did not significantly change the initial overall conclusions based on the AA receiving fullscope review. Based on limited-scope reviews, the bank's performance under the Investment Test in the Fort Wayne-Huntington-Auburn CSA, South Bend-Elkhart-Mishawaka CSA, and Lafayette-West Lafayette CSA are consistent with the bank's overall good performance under the Investment Test in the full-scope area. Performance in the Bloomington-Bedford CSA is stronger than the bank's good performance in the full-scope area. Stronger performance is due to a high level of investments in relation to tier 1 capital. The bank's performance in the IN Non-Metro AA is weaker than the bank's performance in the full-scope area. Weaker performance is due to a very low level of investments. Performance in limited-scope AAs did not affect the overall Investment Test rating for the state of Indiana.

## SERVICE TEST

The bank's performance under the Service Test in the state of Indiana is rated High Satisfactory.

## Conclusions for Area Receiving a Full-Scope Review

Based on a full-scope review, the bank's performance in the Indianapolis CSA is good.

## Retail Banking Services

Service delivery systems are accessible to geographies and individuals of different income levels in the bank's AA.

Examiners evaluated the data as outlined in the Scope section at the front of this document including bank-provided data on usage of branches adjacent to low-and moderate-income geographies by individuals residing in those geographies and on increases in the usage of alternative delivery systems.

Based on the data in the table below and performance context, the branch distribution is good. In lowand moderate-income geographies, the distribution is respectively below and exceeds the percentage of the population. The bank had five branches in low-income geographies and 20 branches in moderateincome geographies. The distribution was augmented by one MUI tract branch that serves low-income tracts and eleven MUI tract branches that serve moderate-income tracts. Examiners reviewed data on
the accounts held and transactions conducted at the MUI branches and confirmed they were serving the adjacent low- and moderate-income populations.

| Distribution of Branch Delivery System |  |  |  |  |  |  |  | As of December 31, 2019 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | $\begin{gathered} \text { Deposits } \\ \hline \% \text { of Rated } \\ \text { Area } \\ \text { Deposits in } \\ \text { AA } \end{gathered}$ | Branches |  |  |  |  |  | Population |  |  |  |
|  |  | \# of <br> BANK <br> Branches | \% of <br> Rated <br> Area <br> Branches <br> in AA | Location of Branches by Income of Geographies (\%) |  |  |  | \% of Population within Each Geography |  |  |  |
|  |  |  |  | Low | Mod | Mid | Upp | Low | Mod | Mid | Upp |
| Indianapolis -CarmelMuncie CSA | 72.0 | 69 | 69.7 | 7.2 | 29.0 | 30.4 | 33.3 | 10.7 | 21.9 | 31.5 | 35.3 |

* May not add up to 100 percent due to geographies with unknown tract income level and rounding

Alternative delivery systems enhanced the delivery of banking services to geographies and individuals of all income levels. The OCC considered the availability and use of alternative delivery systems over the evaluation period. This included review of the bank's 184 deposit-taking ATMs, online banking, mobile banking, and telephone banking to determine the effectiveness of these systems to make retail banking services available to individuals in low- and moderate-income geographies. The bank increased the deposit-taking ATMs in low- and moderate-income geographies by 30.4 percent over the prior rating period to 16 (8.7 percent) deposit-taking ATMs in low-income geographies and 57 (31.0 percent) ATMs in moderate-income geographies. Additionally, bank-provided data on use of online, mobile, and telephone banking showed increases in the adoption of these services by low- and moderate-income individuals from the prior rating period.

| Distribution of Branch Openings/Closings |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | \# of <br> Branch <br> Openings | \# of <br> Branch <br> Closings | Net change in Location of Branches$(+ \text { or }-)$ |  |  |  |
| Assessment Area |  |  | Low | Mod | Mid | Upp |
| Indianapolis-Carmel-Muncie CSA | 1 | 20 | -6 | -6 | -6 | -1 |

The bank's closing of branches has generally not adversely affected the accessibility of its delivery systems, particularly in low- and moderate-income geographies and/or to low- and moderate-income individuals. The bank closed six ( 50.0 percent) branches in low-income geographies and six ( 23.0 percent) branches in moderate-income geographies. The branch closures in low-income geographies had a negative effect on the accessibility of services to the population residing in those geographies and the closures in moderate-income geographies did not negatively affect the accessibility relative to the population residing in those geographies. Branch closures were due to reduced customer usage and proximity to other Chase branches. Despite the branch closures, branch locations in general remained accessible to geographies and individuals of different income levels in the bank's AA.

Services, including where appropriate, business hours, do not vary in a way that inconveniences, its AA, particularly moderate-income geographies and/or individuals. Generally, branches are open Monday
through Friday from 9:00 am to 6:00 pm, and Saturday from 9:00 am to 2:00 pm. All retail banking services are available at all branches within the low- and moderate-income geographies.

## Community Development Services

The bank was a leader in providing CD services that are responsive to AA needs.
Bank records show that employees provided their financial or job-specific expertise and/or technical assistance for 947 CD Services to 55 organizations, logging 4,358 qualified hours. All of the bank's assistance were to organizations that provide community services to low- and moderate-income individuals and families. The bank's CD services were responsive to the community needs in the AA, particularly financial literacy, and affordable housing. The following are examples of CD services provided:

- The bank was responsive to a significant need in Indianapolis by educating 1600 low- and moderateincome seniors about how to prevent and report financial abuse.
- The bank partnered with a non-profit organization to host a financial inclusion seminar for low- and moderate-income physically challenged individuals.
- The bank provided homebuyer workshops and pre-purchase homebuyer education seminars, impacting over 350 low- and moderate-income individuals.


## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall High Satisfactory Service Test rating and did not significantly change the initial overall conclusions based on the AA receiving a full-scope review. Based on limited-scope reviews, the bank's performance under the Service Test in the Fort Wayne-Huntington-Auburn, IN CSA is stronger than the bank's overall performance under the Service Test in the full-scope area due to stronger branch distribution. The bank's performance in the Bloomington-Bedford, IN; Lafayette-West Lafayette, IN; Indiana non-metropolitan; and South Bend-Elkhart-Mishawaka AAs is weaker than the bank's overall performance under the Service Test in the full-scope area due to a weaker percentage of branch distribution in low- and moderate-income geographies.

## State Rating

## State of Kentucky

CRA rating for the State of Kentucky ${ }^{16}$ : Satisfactory
The Lending Test is rated: High Satisfactory
The Investment Test is rated: Outstanding
The Service Test is rated: High Satisfactory
The major factors that support this rating include:

- A good level of lending activity.
- Overall good geographic distribution of home mortgage loans and small loans to businesses.
- Overall excellent borrower distribution of home mortgage loans and small loans to businesses.
- No CD loans were made, which has a negative effect on the Lending Test rating.
- The extensive use of flexible products, which positively affected the rating.
- An excellent level of qualified investments, excellent responsiveness to credit and community economic development needs, significant use of innovative and/or complex investments, supported by the level of investments in the broader statewide area.
- Retail service delivery are readily accessible to geographies and individuals of different income levels.
- An adequate level of CD services in the full-scope AA .


## Description of Institution's Operations in Kentucky

The state of Kentucky is Chase's $23^{\text {rd }}$ largest rating area based on aggregate deposits of $\$ 2.0$ billion, representing 1.5 percent of the bank's total deposits. As of December 31, 2019, the bank operated 23 branches and 39 deposit-taking ATMs within the rating area, representing 0.4 percent of total branches and 0.2 percent of total ATMs. The bank originated and purchased approximately $\$ 1.3$ billion in loans or 0.2 percent of total bank loan originations and purchases during the evaluation period in the state.

According to the FDIC Deposit Market Share Data, as of June 30, 2019, there were 148 banks operating 1,144 branches in the state Kentucky. Chase ranked fourth in deposit market share with 4.1 percent. The top three banks and their deposit market share are Community Trust Bank (5.7 percent), U.S. Bank, N.A. (5.0 percent), and Truist Bank (4.6 percent).

Chase has delineated four AAs in the state of Kentucky. The Lexington-Fayette-Richmond-Frankfort, KY CSA (Lexington CSA) was selected for a full-scope review. The CSA consists of the LexingtonFayette, KY MSA and Richmond-Berea, KY MiSA. The Bowling Green KY MSA, Owensboro KY MSA, and Kentucky Non-MSA received limited-scope reviews. Refer to appendix A for a complete description of the AAs.

[^115]
## Description of Full-Scope AA

The following table provides a summary of the demographic that includes housing and business information for the Lexington CSA. Table A indicates that the volume of OOUs is very small in lowincome CTs and over 23.1 percent of families in the AA are low-income with 13.0 percent below the poverty level. The median housing value in the Lexington CSA is three times the median income, three times the moderate-income and four times the low-income, indicating a limited proportion of OOUs are affordable to low-income borrowers. One simplistic method used to determine housing affordability assumes a maximum monthly principal and interest payment of no more than 30 percent of the applicant's income.

In the Lexington CSA, assuming a 30-year mortgage with a five percent interest rate and three percent down payment, while not accounting for homeowners insurance, real estate taxes, or any additional monthly expenses, a low-income borrower making $\$ 22,993$ per year (or less than 50 percent of the FFIEC adjusted median family income in the CSA) could afford a $\$ 58,369$ mortgage loan with a payment of $\$ 690$ per month; a moderate-income borrower earning $\$ 36,789$ per year (or less than 80 percent of the FFIEC adjusted median family income in the CSA) could afford a $\$ 124,149$ mortgage loan with a payment of $\$ 1,104$ per month.

Median rents and the significant percentage of families below poverty level suggest rental housing is also unaffordable for many low-income residents.


Source: 2015 ACS and 2019 D\&B Data
Due to rounding, totals may not equal $100.0 \%$
(*) The NA category consists of geographies that have not been assigned an income classification.

## Economic Data

According to Moody's Analytics December 2019 Report, the Lexington-Fayette CSA economy is expanding at a modest tempo. Job additions in the private sector have slowed since mid-2019, and the complete count of payrolls from the Quarterly Census of Employment and Wages suggests that initial estimates of job growth from mid-2018 to mid-2019 overstate gains and will be adjusted down. The area's strengths include low business costs; an educated workforce; favorable location and infrastructure for shipping; and abundant developable land compared to other metro areas. However, the area has a high reliance on state government and slowing population growth. Public sector employment accounts for a significant portion of jobs in the area, led by the presence of the University of Kentucky. The state of Kentucky is facing budgetary issues which will curb government spending and will impact government payrolls. In addition, manufacturing will also prove to be one of the area's weakerperforming industries over the near term, with risks skewed to the downside. Transportation equipment manufacturing accounts for a well above-average two-fifths of factory jobs. Statewide exports of transportation equipment to China fell 7.0 percent in the first 11 months of 2019, compared with a similarly sized increase in exports of such goods to other countries.

Major employment industries in the area include government; professional and business services; and education and health services. Major employers in the area include University of Kentucky; Toyota Motor Manufacturing; Xerox; St. Joseph Hospital. The area is well-suited for growth in white-collar industries because of the presence of University of Kentucky. In addition to its below-average office rents, the area has a wealth of talent with the share of adults with a bachelor's degree or higher near 40 percent. Lexington ranks highest in housing affordability among South metro areas with above-average shares of college-educated residents.

## Community Contacts

Examiners considered six community contacts completed during the review period with entities serving the area. The contacts were with organizations focused on affordable housing, economic/small business development and community services. Contacts noted that affordable, quality, housing is a need in the area as during the housing crisis many homes in the area that were in relatively good shape, were bought by investors and have since been flipped and price higher. This reduced the availability of affordable homes in low-income areas. Other needs identified included affordable housing, particularly for the elderly, workforce development, financial education for youth, micro-loans for small businesses and housing rehabilitation loans.

Contacts also noted that financial institutions could support the needs in the community by providing construction financing; supporting the development of affordable housing; and providing technical assistance to area small businesses.

## Scope of Evaluation in Kentucky

The Lexington CSA received a full-scope review. The CSA accounts for 84.5 percent of the bank's deposits and 77.7 percent of lending in the state. The remaining three AAs received limited-scope reviews. Performance in limited-scope AAs and its effect on the CRA rating are discussed at the end of each test.

## CONCLUSIONS WITH RESPECT TO PERFORMANCE TESTS IN KENTUCKY

## LENDING TEST

The bank's performance under the Lending Test in the state of Kentucky is rated High Satisfactory.

## Conclusions for Area Receiving a Full-Scope Review

Based on a full-scope review, the bank's performance in the Lexington CSA is good based on overall good lending levels and good geographic distribution of loans and excellent borrower distribution of loans.

## Lending Activity

Lending levels reflect good responsiveness to the credit needs in the bank's AA.
Examiners considered the number and amount of home mortgage, small business, small farm loans originated or purchased relative to Chase's capacity based on deposits, competition, and market presence. Lending activity for home mortgage and small loans to businesses received the most weight in reaching conclusions. Respectively, home mortgage lending and small loans to businesses account for 37.5 percent and 60.5 percent of the loan volume in the state by number and 80.4 percent and 17.7 percent of loan volume by dollar. Small farm lending is not a strategic focus of the bank and received minimal weight in reaching conclusions. Farm loans represented 2.0 percent of the loan volume in the state by number 1.9 percent loan volume by dollar.

| Number of Loans* |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home Mortgage | Small <br> Business | Small <br> Farm | Community Development | Total | \% State <br> Loans | \% State <br> Deposits |
| Lexington- <br> Fayette- <br> Richmond- <br> Frankfort CSA | 4,847 | 6,991 | 247 | 0 | 12,085 | 77.7 | 84.5 |
| Bowling GreenGlasgow CSA | 360 | 1,279 | 23 | 0 | 1,662 | 10.7 | 2.8 |
| $\begin{aligned} & \text { Owensboro } \\ & \text { MSA } \end{aligned}$ | 389 | 853 | 43 | 0 | 1,285 | 5.2 | 10.1 |
| Kentucky Non-MSA | 230 | 286 | 5 | 0 | 521 | 6.4 | 2.6 |
| Total | 5,827 | 9,409 | 318 | 0 | 15,553 | 100 | 100 |

*The tables present the data for all assessment areas. The narrative below addresses performance in full-scope areas only.

| Dollar Volume of Loans* (in \$000s) |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment <br> Area | Home <br> Mortgage | Small <br> Business | Small <br> Farm | Community <br> Development | Total | \% State* <br> Loans | \% State <br> Deposits |
| Lexington- <br> Fayette- <br> Richmond- <br> Frankfort <br> CSA | 888,249 | 179,223 | 19,886 | 0 | $1,087,358$ | 85.4 | 84.5 |
| Bowling <br> Green- <br> Glasgow CSA | 60,409 | 24,427 | 182 | 0 | 85,018 | 6.7 | 2.8 |
| Owensboro <br> MSA | 47,514 | 17,828 | 3,811 | 0 | 69,153 | 4.2 | 10.1 |
| Kentucky <br> Non-MSA | 27,204 | 3,833 | 52 | 0 | 31,089 | 3.7 | 2.6 |
| Total | 1023376 | 225311 | 23931 | 0 | 1272618 | 100 | 100 |

*The tables present the data for all assessment areas. The narrative below addresses performance in full-scope areas only.

Chase ranked first in deposits of 36 institutions with market share of 17.7 percent.
In overall HMDA lending, Chase ranked third with 5.0 percent market share placing. This is a highly competitive market with 368 mortgage lenders. No lender dominated the mortgage market. The top two lenders and their market share are University of Kentucky Federal Credit Union (6.4 percent) and Central Bank and Trust (5.7 percent).

In small loans to businesses, Chase ranked second with 16.8 percent market share out of 98 institutions. American Express National Bank led the market with 20.1 percent market share and PNC Bank, N.A. followed Chase with 7.4 percent of the market.

Chase ranked first in small loans to farms 29.23 percent market share. There are 18 lenders in the CSA. The other major lenders and their market are John Deere, Financial, F.S.B. (16.92 percent) and Central Bank and Trust (13.3 percent).

## Distribution of Loans by Income Level of the Geography

The bank exhibits a good geographic distribution of loans in its AA.

## Home Mortgage Loans

Refer to Table O in the state of Kentucky section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of home mortgage loan originations and purchases for this evaluation is good. The following information was taken into consideration when determining this rating.

- The limited proportion of housing units in low-income geographies, particularly OOUs (4.3 percent), constrained lending opportunities; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of OOUs in those geographies.
- The high level of competition in the AA (368 home mortgage lenders) was also considered and examiners placed greater significance on performance compared to the aggregate of lenders.
- Between 2017 and 2019, the proportion of loans in low-income areas was near to the proportion of OOUs in those geographies and the aggregate distribution of loans. The proportion of loans in moderate-income areas exceeded the proportion of OOUs in those geographies and near to the aggregate distribution of loans.
- The performance in low- and moderate-income geographies during the 2014 and 2016 time periods was inconsistent with 2017 to 2019. The proportion of loans in low-income geographies is well below the proportion of OOUs in those geographies and the aggregate distribution of loans. The proportion of loans in moderate-income geographies was below the proportion of OOUs and near to the aggregate distribution of loans.


## Small Loans to Businesses

Refer to Table Q in the state of Kentucky section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to businesses.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to businesses for this evaluation is good. The following information was taken into consideration when determining this rating.

- Between 2017 and 2019, the proportion of loans to small businesses in low- and moderate-income was near to the proportion of small businesses and well-below the aggregate distribution of loans.
- The performance in low- and moderate-income geographies during the 2014 and 2016 periods was consistent with 2017 to 2019. The proportion of loans to small businesses in low- and moderateincome was near to the proportion of small businesses and well-below the aggregate distribution of loans.


## Small Loans to Farms

Refer to Table S in the state of Kentucky section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to farms.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to farms is good. The following information was taken into consideration when determining this rating.

- The limited percentage of farms in low-income geographies (4.6 percent) constrained lending opportunities; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of farms in those geographies.
- Between 2017 and 2019, the proportion of loans to small farms in low-income geographies exceeds both the proportion of farms in those geographies and the aggregate distribution of loans. The proportion of loans to small farms in moderate-income geographies was significantly below both the proportion of farms in those geographies and the aggregate distribution of loans.
- Performance in low- and moderate-income geographies during the 2014 to 2016 period was inconsistent with the performance during 2017 to 2019 period. Between 2014 and 2016, the proportion of loans to small farms in low-income geographies was well below the proportion of farms in those geographies and exceeded aggregate distribution of loans. The proportion of loans to small farms in moderate-income geographies was below the proportion of farms in those geographies and exceeded the aggregate distribution of loans.


## Lending Gap Analysis

A review of home mortgage loans, small loans to business, and small loans to farms including summary reports and AA maps did not identify any unexplained conspicuous lending gaps in the bank's activities.

## Distribution of Loans by Income Level of the Borrower

The bank exhibits an excellent distribution of loans among individuals of different income levels and business and farms of different sizes, given the product lines offered by the bank.

## Home Mortgage Loans

Refer to Table P in the state of Kentucky section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall borrower distribution of home mortgage loan originations and purchases for this evaluation is excellent. The following information was taken into consideration when determining this rating.

- Profile data indicates that there are high levels of poverty in the AA, resulting in difficulty in lending to low-income families.
- Greater significance was placed on the performance against the aggregate distribution as well as the moderate-income borrower distribution.
- During 2017 to 2019, the proportion of loans to low- and moderate-income borrowers was near to the proportion of low- and moderate-income families in the AA and exceeded the aggregate distribution of loans.
- Performance in low- and moderate-income geographies between 2014 and 2016 was consistent with performance in 2017 to 2019. The proportion of loans to low- and moderate-income borrowers was near to the proportion of low- and moderate-income families in the AA and exceeded the aggregate distribution of loans.


## Small Loans to Businesses

Refer to Table R in the state of Kentucky section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to businesses.

Based on the data in the tables and the following factors, the distribution of the bank's originations and purchases of small loans to businesses by revenue category is good. The following information was taken into consideration when determining this rating.

- Greater significance was placed on the aggregate performance.
- In all time periods, the bank's distribution of small loans to businesses with revenues of $\$ 1$ million or less was below the percentage of small businesses located in the AA and exceeded the aggregate distribution.


## Small Loans to Farms

Refer to Table T in the state of Kentucky section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to farms.

Based on the data in the table and the following considerations, the distribution of the bank's originations and purchases of small loans to farms by revenue category is good. The following information was taken into consideration when determining this rating.

- Between 2017 and 2019, the bank's percentage of loans to farms with revenues of $\$ 1$ million or less was below the percentage of businesses and significantly exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 and 2019. The bank's percentage of loans to farms with revenues of $\$ 1$ million or less was below the percentage of businesses and significantly exceeded the aggregate distribution.


## Community Development Lending

The bank did not originate any CD loans during the evaluation period.
While the bank was unable to make any CD loans during the period, the bank continued to meet the needs of the low- and moderate-income individuals and geographies in Lexington CSA through qualified CD investments and service activities.

The Lending Activity Tables, shown above, set forth the information and data used to evaluate the bank's level of CD lending. These tables include all CD loans, including multifamily loans that also qualify as CD loans.

## Product Innovation and Flexibility

The bank makes extensive use of innovative and/or flexible lending practices to serve AA credit needs. As outlined below, a total of 1,724 loans were funded totaling $\$ 232.4$ million. Refer to the comments in the Product Innovation and Flexibility section of this performance evaluation for additional details regarding the programs.

| Loan Type | Number of <br> Loans | Dollar Amount <br> $\mathbf{( \$ 0 0 0 ' s )}$ |
| :--- | :---: | :---: |
| DreaMaker | 341 | 50,540 |
| FHA | 269 | 31,734 |
| HARP | 152 | 16,752 |
| VA | 171 | 32,507 |
| SBA | 30 | 4,944 |
| USDA | 761 | 95,919 |

## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall High Satisfactory Lending Test rating and did not change the initial overall conclusions based on the AA receiving the full-scope review. Based on limited-scope reviews, the bank's performance under the Lending Test in the Bowling Green KY MSA, Owensboro KY MSA, and Kentucky Non-MSA is weaker than the bank's overall performance under the Lending Test in the full-scope area. This is primarily due to the weaker geographic distribution performance. Performance in the limited-scope areas did not affect the overall Lending Test rating for the state of Kentucky.

Refer to Tables O through T in the state of Kentucky section of appendix D for the facts and data that support these conclusions.

## INVESTMENT TEST

The bank's performance under the Investment Test in the state of Kentucky is rated Outstanding.

## Conclusions for Area Receiving a Full-Scope Review

Based on a full-scope review, the bank's performance in the Lexington CSA is excellent.

The bank has an excellent level of qualified CD investments and grants, but not in a leadership position, particularly those that are not routinely provided by private investors. The current and prior period qualified investments represent 14.2 percent of tier 1 capital allocated to the AA. A large majority ( 76.3 percent) of total investments represent current period investments.

The bank exhibits excellent responsiveness to credit and community economic development needs. All current and prior period investments are considered responsive to credit and community economic development needs such as affordable housing and community service. Nearly all the current period investments support affordable housing, which is an identified need in the community. Additionally, the bank made two grants totaling $\$ 119$ thousand to support community services. All prior period investments are LIHTC investments that support affordable housing.

The bank makes significant use of innovative and/or complex investments to support CD initiatives. One current period investment, which accounted for 57.5 percent of the total dollar amount of current investments is considered complex as it is a Direct Investment LIHTC transaction. Additionally, one prior period investment, which accounted for 40.1 percent of the total dollar amount of prior investments still outstanding, is considered complex as a Direct Investment LIHTC transaction.

| Qualified Investments - State of Kentucky |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area (AA) | Prior Period* |  | Current Period |  | Total |  |  |  | UnfundedCommitments** |  |
|  | \# | \$(000's) | \# | \$(000's) | \# | \% of Total \# | \$(000's) | \% of Total \$ | \# | \$(000's) |
| Full Review: |  |  |  |  |  |  |  |  |  |  |
| Lexington-Fayette-RichmondFrankfort CSA | 8 | 7,456 | 11 | 24,023 | 19 | 15.57 | 31,478 | 24.45 | 0 | 0 |
| Limited Review |  |  |  |  |  |  |  |  |  |  |
| Bowling Green-Glasgow CSA | 6 | 7,926 | 7 | 3,768 | 13 | 10.66 | 11,694 | 9.08 | 0 | 0 |
| Owensboro MSA | 4 | 3,069 | 3 | 2,034 | 7 | 5.74 | 5,103 | 3.96 | 0 | 0 |
| KY Non-Metro AA | 0 | 0 | 1 | 1,608 | 1 | 0.82 | 1,608 | 1.25 | 0 | 0 |
| Statewide Investments with Purpose, Mandate, or Function (P/M/F) to Serve AAs | 0 | 0 | 54 | 55,717 | 54 | 44.26 | 55,717 | 43.27 | 0 | 0 |
| Statewide Investments with Purpose, Mandate, or Function (P/M/F) to Serve AAs | 27 | 23,123 | 1 | 45 | 28 | 22.95 | 23,168 | 17.99 | 0 | 0 |

Prior Period Investments' means investments made in a previous evaluation period that are outstanding as of the examination date.
Unfunded Commitments' means legally binding investment commitments that are tracked and recorded by the institution's financial reporting system.
Examples of CD Investments in the AA include:

- The bank made two investments totaling $\$ 1$ million in a LIHTC fund. This affordable housing property created 206 affordable units and was included in this fund's portfolio at the time of the bank's investment.
- The bank provided a $\$ 74,500$ grant to a community and technical college to support their relationship with a local high school. A college program was developed and enrolled approximately 125 students allowing them to spend time on the college campus interacting with students and faculty, participating in educational opportunities, and hearing presentations from academic and business leaders. Sixty-two percent of the student population is eligible for the Federal Free or Reduced Lunch Program in Jefferson County.
- The bank provided a $\$ 45,000$ grant to an organization for their economic empowerment project targeting low-income individuals in Fayette County. The organization collaborated with the community and technical college system to provide financial economic empowerment services such as financial education classes, credit building, Individual Development Accounts, micro-loans, and free tax preparation. The partnership enabled the expansion of its recognized economic empowerment project to serve students in a ready-to-work program that is designed to assist and support low-income parents.


## Statewide Investment in the State of Kentucky

The bank has 82 current and prior period investments with and without a $P / M / F$ to serve AAs in the state of Kentucky. These CD investments and grants primarily support affordable housing, with a few supporting community service, and one supporting revitalization/stabilization efforts. These investments enhanced the bank's performance in the state of Kentucky.

## Conclusions for Areas Receiving Limited-Scope Reviews

Based on limited-scope reviews, the bank's performance under the Investment Test in the Bowling Green MSA, Owensboro MSA and the combined Kentucky Non-Metro AA is consistent with the bank's overall excellent performance under the Investment Test in the full-scope area.

## SERVICE TEST

The bank's performance under the Service Test in state of Kentucky is rated High Satisfactory.

## Conclusions for Area Receiving a Full-Scope Review

Based on a full-scope review, the bank's performance in the Lexington CSA is good.

## Retail Banking Services

Service delivery systems are readily accessible to geographies and individuals of different income levels in the bank's full-scope AA.

Examiners evaluated the data as outlined in the Scope section at the front of this document including bank-provided data on usage of branches adjacent to low- and moderate-income geographies by individuals residing in those geographies and on increases in the usage of alternative delivery systems.

## Lexington CSA

Based on the data in the table below and performance context, the branch distribution is excellent. In low- and moderate-income geographies, the distribution is respectively near to and exceeds the percentage of the population. The bank had one branch in a low-income geography and four branches in moderate-income geographies. The distribution was augmented by two MUI tract branches that serve low-income tracts and four MUI tract branches that serve moderate-income tracts. Examiners reviewed data on the accounts held and transactions conducted at the MUI branches and confirmed they were serving the adjacent low- and moderate-income populations.

| Distribution of Branch Delivery System |  |  |  |  |  |  |  | As of December 31, 2019 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Deposits <br> \% of Rated <br> Area <br> Deposits in <br> AA | \# of <br> BANK <br> Branches | Branches |  |  |  |  | Population |  |  |  |
|  |  |  | \% of <br> Rated <br> Area <br> Branches <br> in AA | Location of Branches by Income of Geographies (\%) |  |  |  | \% of Population within Each Geography |  |  |  |
|  |  |  |  | Low | Mod | Mid | Upp | Low | Mod | Mid | Upp |
| Lexington CSA |  |  |  |  |  |  |  |  |  |  |  |
|  | 84.5 | 15 | 71.4 | 6.7 | 26.7 | 46.7 | 20.0 | 8.1 | 23.4 | 35.7 | 32.9 |

* May not add up to 100 percent due to geographies with unknown tract income level and rounding

Alternative delivery systems did not significantly enhance the delivery of banking services to geographies and individuals of all income levels. The OCC considered the availability and use of alternative delivery systems over the evaluation period. This included review of the bank's 31 deposittaking ATMs, online banking, mobile banking, and telephone banking to determine the effectiveness of
these systems to make retail banking services available to individuals in low- and moderate-income geographies. The bank decreased the deposit-taking ATMs in low- and moderate-income geographies from the prior rating period to two ( 6.5 percent) deposit-taking ATMs in low-income geographies and eleven ( 35.5 percent) ATMs in moderate-income geographies. However, bank-provided data on use of online, mobile, and telephone banking showed increases in the adoption of these services by low- and moderate-income individuals from the prior rating period.

| Distribution of Branch Openings/Closings |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | \# of Branch Openings | \# of Branch Closings | Net change in Location of Branches (+ or -) |  |  |  |
|  |  |  | Low | Mod | Mid | Upp |
| Lexington, CSA | 0 | 3 | -1 | - | -1 | -1 |

The bank's opening and closing of branches has generally not adversely affected the accessibility of its delivery systems, particularly in low- and moderate-income geographies and/or to low- and moderateincome individuals. The bank closed one branch in a low-income geography and did not open or close any branches in moderate-income geographies. The branch closure was due to reduced customer usage and unprofitability. Despite the branch closure, branch locations remained accessible to geographies and individuals of different income levels in the bank's AA.

Services, including where appropriate, business hours, do not vary in a way that inconveniences, the AA, particularly low- and moderate-income geographies and/or individuals. Generally, branches are open Monday through Thursday from 9:00 am to 5:00 pm, Friday from 9:00 am to 6:00 pm and Saturday from 9:00 am to 1:00 pm. All retail banking services are available at all branches within the low- and moderate-income geographies.

## Community Development Services

The bank provides an adequate level of CD services.
Bank records show that employees provided technical assistance and/or job-specific expertise for 238 CD service activities to 10 organizations for a total of 819 qualified hours of service. All the bank's assistance was to organizations that provide community services to low- and moderate-income individuals and families. The services were responsive to the needs of the AA, particularly financial education. The following are examples of CD services provided in this AA:

- Three bank employees provided 27 hours of home ownership education benefitting 195 low- and moderate-income individuals. The employees provided information on mortgage products, services, and programs targeting low- and moderate-income homebuyers.
- Two bank employees provided 39 hours of financial literacy education benefitting 1,499 low- and moderate-income individuals. The employees provided personal finance education in savings methods, budgeting, consumer rights, and the value of money via an educational workshop.


## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall High Satisfactory Service Test rating and did not significantly change the initial overall conclusions based on the AA receiving a full-scope review. Based on limited-scope reviews, the bank's performance under the Service Test in the Bowling Green-Glasgow, KY, Owensboro, KY, and KY non-MSA AAs is weaker than the bank's overall performance under the Service Test in the full-scope area. Weaker performance in the Bowling Green-Glasgow, KY and Owensboro, KY AAs is due to weaker branch distribution in low- and moderate-income geographies. For the KY non-MSA AA, the OCC based these conclusions on the provision of services to the AA in general, as there are no low- and moderate-income census tracts in the MSA.

## State Rating

## State of Louisiana

CRA rating for the State of Louisiana ${ }^{17}$ : Satisfactory
The Lending Test is rated: Low Satisfactory
The Investment Test is rated: High Satisfactory
The Service Test is rated: High Satisfactory
The major factors that support this rating include:

- A good level of lending activity.
- Adequate geographic distribution of home mortgage loans and small loans to businesses.
- Good borrower distribution of home mortgage loans and small loans to businesses.
- A low level of CD loans, which negatively affected the rating.
- The extensive use of innovative/flexible products, which positively affected the rating.
- A good level of qualified investments that displayed excellent responsiveness to credit and community economic development needs.
- The occasional use of innovative and/or complex investments to support CD initiatives.
- A good level of statewide investments.
- Retail service delivery systems that are readily accessible to geographies and individuals of different income levels.
- An adequate level of CD services that were responsive to AA needs.


## Description of Institution's Operations in Louisiana

The state of Louisiana is Chase's $10^{\text {th }}$ largest rating area based on deposits of $\$ 17.5$ billion, representing 1.3 percent of the bank's total deposits. As of December 31, 2019, the bank operated 119 branches and 346 deposit-taking ATMs within the rating area, representing 2.4 percent of total branches and 2.1 percent of total ATMs. The bank originated and purchased approximately $\$ 7.0$ billion in loans or 1.0 percent of total bank loan originations and purchases during the evaluation period in the state.

There were 128 institutions operating 1,435 offices in the state of Louisiana. Chase ranked second in deposit market share with 16.5 percent. The other major banks and their deposit market share are Capital One, N.A. (16.9 percent), Hancock Whitney Bank (12.7 percent), and Iberia Bank ( 8.4 percent).

The bank delineated nine AAs in Louisiana. The Baton Rouge MSA and Monroe-Ruston CSA, which combined account for 41 percent of the deposits and 23 percent of lending in the state, received fullscope reviews. The Alexandria MSA, Houma-Thibodaux MSA, Lafayette-Opelousas-Morgan City CSA, Lake Charles MSA, Louisiana Non-MSA (DeRidder), New Orleans-Metairie-Hammond CSA, and Shreveport-Bossier City MSA received limited-scope reviews. Refer to appendix A for a complete description of each AA.

## Baton Rouge MSA

The following table provides a summary of the demographics that includes housing and business information for the Baton Rouge MSA. Table A indicates that the volume of OOUs is small in lowincome census tracts ( 4.0 percent) and over 25.9 percent of families in the AA are low-income. The Baton Rouge MSA's cost of housing is generally affordable. The median housing value in the Baton Rouge MSA is 2.5 times the median income, three times the moderate-income, and five times the lowincome, indicating the proportion of OOUs that are affordable to low-income borrowers is more limited. One simplistic method used to determine housing affordability assumes a maximum monthly principal and interest payment of no more than 30 percent of the applicant's income.

In the Baton Rouge MSA, assuming a 30 -year mortgage with a five percent interest rate, three percent down payment, and accounting for homeowners insurance, real estate taxes, but no other monthly expenses, a low-income borrower making $\$ 32,797$ per year (or less than 50 percent of the FFIEC adjusted median family income in the MSA) could afford a $\$ 105,102$ mortgage with a payment of $\$ 984$ per month; a moderate-income borrower earning $\$ 52,450$ per year (or less than 80 percent of the FFIEC adjusted median family income in the AA) could afford a $\$ 198,796$ mortgage with a payment of $\$ 1,574$ per month.

Median rents and the percentage of families below poverty level suggest rental housing is also unaffordable for some low-income residents.


## Economic Data

According to Moody's Analytics January 2020 Report, payrolls in the Baton Rouge area are rising rapidly after a year of almost zero growth. The construction industry is a major driver of this growth, with new industrial projects lifting demand for contractors. The uptick in net hiring has spurred workers to re-enter the labor force, which is now expanding for the first time since early 2018. The unemployment rate has risen since the summer, but labor force expansion is to blame rather than layoffs. Unfortunately, most new jobs pay low wages, slowing income growth. Moody's identifies several strengths in the area including low business costs; high housing affordability; and the presence of a large research university that is a source of stable employment. An expanding chemical manufacturing industry will be the predominant positive force in the area's economy over the next few years. Many new chemical plants are opening across the state to take advantage of cheap natural gas feedstock, pipeline access, and proximity to shipping routes for export. Baton Rouge will reap rewards from new investment given that several companies including Methanex, ExxonMobil, and Shell have announced significant investments for the construction of new facilities, creating a boost for the construction industry. Major employment sectors in the area include construction, education and health services, and government. The area's major employers include Turner Industries Group LLC (a construction engineering company); Louisiana State University; Performance Contractors; and Our Lady of the Lake Regional Medical Center. Net hiring in the area has been fast enough to spur increased demand in the housing market. House price gains accelerated in 2019.

## Community Contacts

Three community contacts completed during the examination period with organizations and entities serving the community were reviewed to ascertain community credit needs. The organizations contacted focus on activities such small business as well as community and economic development. Contacts noted that the area is currently experiencing a boom in housing construction and several contractors are in the area. This increase in construction and renovation is partly due to the flooding that occurred in 2017 due to the hurricanes. The area is also seeing an increase in the manufacturing and retail sectors. Contacts indicated that there are opportunities available for bank involvement. While banks are providing donations to local organizations, financial education is a greater need. Banks could become more involved by providing face-to-face training on credit awareness, small business consulting, and entrepreneurial education. Other banking and credit needs include:

- Financial education
- Low-income housing
- Business lines of credit
- Startup/expansion business loans
- Refinance business loans


## Monroe-Ruston CSA

The following table provides a summary of the demographics that includes housing and business information for the Monroe-Ruston CSA. Table A indicates that the volume of OOUs is smaller in lowand moderate-income census tracts ( 8.5 and 11.5 percent) than in MUI geographies. and over 26.9 percent of families in the AA are low-income. The Monroe-Ruston CSA's cost of housing is generally affordable. The median housing value in the Monroe-Ruston CSA is two times the median income, three times the moderate-income, and five times the low-income, indicating the proportion of OOUs that are affordable to low-income borrowers is more limited. One simplistic method used to determine
housing affordability assumes a maximum monthly principal and interest payment of no more than 30 percent of the applicant's income.

In the Monroe-Ruston CSA, assuming a 30-year mortgage with a five percent interest rate, three percent down payment, and accounting for homeowners insurance, real estate taxes, but no other monthly expenses, a low-income borrower making $\$ 24,087$ per year (or less than 50 percent of the FFIEC adjusted median family income in the MSA) could afford a $\$ 63,574$ mortgage with a payment of $\$ 723$ per month; a moderate-income borrower earning $\$ 38,538$ per year (or less than 80 percent of the FFIEC adjusted median family income in the AA) could afford a $\$ 164,174$ mortgage with a payment of $\$ 1,156$ per month.

Median rents and the percentage of families below poverty level (19.5 percent) suggest rental housing is also unaffordable for some low-income residents.

| Table A - Demographic Information of the Assessment Area Assessment Area: 384 Monroe-Ruston LA 2017-2019 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Demographic Characteristics | \# | $\begin{aligned} & \text { Low } \\ & \text { \% of \# } \end{aligned}$ | Moderate \% of \# | Middle \% of \# | $\begin{aligned} & \text { Upper } \\ & \text { \% of \# } \end{aligned}$ | $\begin{gathered} \text { NA* } \\ \text { \% of \# } \end{gathered}$ |
| Geographies (Census Tracts) | 50 | 22.0 | 14.0 | 24.0 | 38.0 | 2.0 |
| Population by Geography | 203,118 | 15.5 | 16.1 | 22.8 | 45.7 | 0.0 |
| Housing Units by Geography | 85,448 | 15.3 | 13.9 | 22.8 | 48.0 | 0.0 |
| Owner-Occupied Units by Geography | 43,661 | 8.5 | 11.5 | 21.9 | 58.1 | 0.0 |
| Occupied Rental Units by Geography | 31,198 | 22.6 | 16.1 | 23.4 | 37.9 | 0.0 |
| Vacant Units by Geography | 10,589 | 22.0 | 17.1 | 24.8 | 36.1 | 0.0 |
| Businesses by Geography | 19,755 | 15.8 | 12.6 | 21.1 | 50.3 | 0.2 |
| Farms by Geography | 476 | 5.5 | 7.1 | 24.6 | 62.6 | 0.2 |
| Family Distribution by Income Level | 47,725 | 25.0 | 15.7 | 15.2 | 44.1 | 0.0 |
| Household Distribution by Income Level | 74,859 | 26.9 | 14.5 | 14.8 | 43.9 | 0.0 |
| Median Family Income MSA 33740 Monroe, LA MSA |  | \$48,173 | Median Housing Value |  |  | \$117,358 |
| Median Family Income NonMSAs - LA |  | \$46,614 | Median Gross Rent |  |  | \$674 |
|  |  | Families Below Poverty Level | 19.5\% |
| Source: 2015 ACS and 2019 D\&B Data <br> Due to rounding, totals may not equal $100.0 \%$ <br> (*) The NA category consists of geographies that have not been assigned an income classification. |  |  |  |  |  |  |

## Economic Data

According to Moody's Analytics January 2020 Report, the area economy is in trouble. Nonfarm employment fell throughout 2019. Between mid-2018 and 2019, employment fell by about 1.5 percent. Employment declines are widespread, with about 70 percent of industries currently trimming payrolls. Most of the recent job losses have been high-paying positions. The population is declining in the area. The area has a low-per capita income and below average educational attainment. Despite recent investment in manufacturing, the industry will not be a source of new jobs. Manufacturing in Monroe is concentrated in paper production and poultry processing and neither segment is poised for an immediate turnaround. Weak demographics along with poor income growth has led to a decline in demand for consumer services. Retail is already shedding staff, and employment in leisure/hospitality is flat. Total income is rising more slowly than inflation, limiting household spending. Major employment industries include education and health services; retail trade; and government. Major employers in the area include Centurylink; Foster Farms; St. Francis Specialty Hospital, Inc., and JP Morgan Chase. Poor labor market outcomes have reduced housing demand. House prices have fallen since midyear, more than erasing gains made in early 2019.

## Community Contacts

Two community contacts completed during the examination period with organizations and entities serving the community were reviewed to ascertain community credit needs. The organizations contacted focus on activities such as small business as well as community and economic development. Contacts indicated that there was a need to develop more affordable multi-family housing for low-income residents in the area. The area is also in need of small business incubators to provide workshops, seminars, classes, advice, and financial options to new and existing small businesses. There are opportunities for participation by local financial institutions to support area needs, including developing partnerships with area non-profits. Contacts also indicated that there was a need to repurpose vacant and abandoned commercial properties. Other identified needs in the area include:

- Workforce development training to align skills with employer needs
- Small dollar loans/micro-lending to small business owners
- Support for programs to promote entrepreneurship for low-income individuals


## Scope of Evaluation in Louisiana

The Baton Rouge MSA and Monroe-Ruston CSA received full-scope reviews. The two areas account for 41 percent of the deposits and 23 percent of the lending in the state. More weight was placed on performance in the Baton Rouge MSA based on the bank's higher level of deposits and lending. These AAs were selected as they had not received a full-scope review in recent performance evaluations. The remaining seven AAs in the state of Louisiana received limited-scope reviews. Performance in limited-scope AAs and its effect on the CRA rating are discussed at the end of each test.

## CONCLUSIONS WITH RESPECT TO PERFORMANCE TESTS IN LOUISIANA

## LENDING TEST

The bank's performance under the Lending Test in the state of Louisiana is rated Low Satisfactory.

Performance in AAs receiving limited-scope reviews was factored together with performance from AAs receiving full-scope reviews to determine the state's overall Low Satisfactory Lending Test rating. Limited-scope conclusions did not significantly affect the initial overall conclusions based on the AAs receiving full-scope review.

## Conclusions for Areas Receiving a Full-Scope Review

Based on full-scope reviews, the bank's performance in the Baton Rouge MSA and MonroeRuston CSA is adequate. Overall good lending levels and good borrower distribution of loans offset adequate geographic distribution of loans, and a low level of CD lending. In addition, product innovation and flexibility were considered favorably.

## Lending Activity

Lending levels reflect good responsiveness to the credit needs in the bank's AAs.
Examiners considered the number and amount of home mortgage, small business, and small farm loans originated or purchased relative to Chase's capacity based on deposits, competition, and market presence. Lending activity for home mortgage and small loans to businesses received the most weight in reaching conclusions. Respectively, home mortgage lending and small loans to businesses account for 27.9 percent and 71.1 percent of the loan volume in the state by number and 68.2 and 28.0 percent of loan volume by dollar. Small farm lending is not a strategic focus of the bank and received minimal weight in reaching conclusions. Farm loans represented 0.83 percent of the loan volume in the state by number and 0.32 percent loan volume by dollar.

| Number of Loans* |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home Mortgage | Small Business | Small Farm | Community Development | Total |  | \% State <br> Deposits |
| Baton Rouge | 6,031 | 11,603 | 86 | 4 | 17,724 | 19.8 | 37.2 |
| Monroe-Ruston | 1,089 | 2,052 | 67 | 2 | 3,210 | 3.6 | 3.8 |
| Alexandria MSA | 517 | 1,128 | 35 | 2 | 1,682 | 1.9 | 1.7 |
| Houma-Thibodaux | 1,948 | 2,555 | 54 | 0 | 4,557 | 5.1 | 3.2 |
| Lafayette- <br> Opelousas-Morgan City | 2,961 | 8,893 | 199 | 3 | 12,056 | 13.5 | 9.5 |
| Lake CharlesJennings | 1,217 | 3,035 | 43 | 1 | 4,296 | 4.8 | 4.0 |
| Louisiana NonMSA (DeRidder) | 149 | 314 | 15 | 2 | 480 | 0.5 | 0.3 |
| New Orleans-Metairie-Hammond | 9,684 | 30,274 | 179 | 12 | 40,149 | 44.9 | 34.0 |


| Shreveport-Bossier <br> City | 1,460 | 3,804 | 64 | 2 | 5,330 | 6.0 | 6.2 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total | 25,036 | 63,658 | 742 | 28 | 89,484 | 100.0 | 100.0 |

*Due to rounding, totals may not equal $100.0 \%$. The tables present the data for all assessment areas. The narrative below addresses performance in full-scope areas only.

| Dollar Volume of Loans*'(000's) |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home <br> Mortgage | Small <br> Business | Small <br> Farm | Community <br> Development | Total | \% <br> State <br> Loans | \% State <br> Deposits |
| Baton Rouge | $1,345,014$ | 406,696 | 1,372 | 21,902 | $1,774,984$ | 24.8 | 37.2 |
| Monroe-Ruston | 156,966 | 63,932 | 5,374 | 795 | 227,067 | 3.3 | 3.8 |
| Alexandria MSA | 67,679 | 18,517 | 1,714 | 7,935 | 95,845 | 1.4 | 1.7 |
| Houma- <br> Thibodaux | 293,102 | 76,843 | 409 | 0 | 370,354 | 5.4 | 3.2 |
| Lafayette- <br> Opelousas- <br> Morgan City | 499,597 | 282,638 | 5,815 | 23,200 | 811,250 | 11.6 | 9.5 |
| Lake Charles- <br> Jennings | 189,303 | 99,860 | 2,706 | 2,647 | 294,516 | 4.3 | 4.0 |
| Louisiana Non- <br> MSA (DeRidder) | 19,797 | 4,034 | 805 | 13,925 | 38,561 | 0.6 | 0.3 |
| New Orleans- <br> Metairie- | $1,950,632$ | 890,486 | 1,841 | 155,130 | $3,038,089$ | 43.7 | 34.0 |
| Hammond |  |  |  |  |  |  |  |

*Due to rounding, totals may not equal $100.0 \%$. The tables present the data for all assessment areas. The narrative below addresses performance in full-scope areas only.

## Baton Rouge MSA

Chase ranked first in deposits out of 34 institutions with 35.5 percent market share.
In overall home mortgage lending, Chase ranked second out of 415 lenders with 4.9 percent market share, placing it in the top one percent of lenders. This is a highly competitive market with no significantly dominant lender. The top lender was GMFS LLC with 9.5 percent market share.

In small loans to businesses, Chase ranked third out of 97 institutions with 10.0 percent market share, placing it in the top three percent of lenders. The other major lenders and respective market shares are American Express National Bank (17.9 percent) and Lake Forest Bank and Trust (11.5 percent).

In small loans to farms, Chase ranked second out of 11 lenders with a 20.9 percent market share. The other major lenders and respective market shares are John Deere Financial, F.S.B. (29.9 percent), Wells Fargo Bank, N.A. (16.4 percent), Capital One, N.A. (7.5 percent), and Bank of America, N.A. (7.5 percent).

## Monroe-Ruston CSA

Chase ranked first in deposits of 17 institutions with market share of 35.5 percent.

In overall home mortgage lending, Chase ranked sixth out of 221 lenders with 4.2 percent market share, placing it in the top three percent of lenders. This is a highly competitive market. The top three lenders and their market share are Origin Bank ( 8.0 percent), BancorpSouth Bank ( 6.3 percent), and Wells Fargo Bank, N.A. (5.4 percent).

In small loans to businesses, Chase ranked fourth out of 63 institutions with 7.6 percent market share. The top three lenders and their market share are Origin Bank ( 15.5 percent), American Express National Bank (14.9 percent), and Lake Forest Bank and Trust (8.3 percent).

In small loans to farms, Chase ranked second out of the 10 lenders with a 20.5 percent market share. The other major lenders and respective market shares are John Deere Financial, F.S.B (21.8 percent), Wells Bank, N.A. (20.5 percent), and BancorpSouth (15.4 percent).

## Distribution of Loans by Income Level of the Geography

The bank exhibits an adequate geographic distribution of loans in its AAs.

## Home Mortgage Loans

Refer to Table O in the state of Louisiana section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of home mortgage loan originations and purchases is adequate. The following information was taken into consideration when determining this rating.

## Baton Rouge MSA

- The limited proportion of housing units in low-income geographies, particularly OOUs (4.0 percent), constrained lending opportunities; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of OOUs in those geographies.
- The level of competition in the AA (415 home mortgage lenders) was also considered and examiners placed greater significance on performance compared to the aggregate of lenders.
- Between 2017 and 2019, the proportion of loans in low-income areas was well below both the percentage of owner-occupied units and the aggregate distribution of loans. In moderate-income areas, the proportion of loans was below the percentage of owner-occupied units and near to the aggregate distribution of loans.
- During 2014 through 2016, performance in low-income geographies was well below the percentage of owner-occupied units and below the aggregate distribution of loans. The performance in moderate-income geographies was well below the percentage of owner-occupied units and near to the aggregate distribution of loans.


## Monroe-Ruston CSA

- The smaller proportion of housing units in low- and moderate-income geographies was considered, particularly OOUs ( 20.0 percent), which provided less lending opportunity compared to opportunities in MUI geographies (80.0 percent OOUs).
- The level of competition in the AA (221 home mortgage lenders) was also considered and examiners placed greater significance on performance compared to the aggregate of lenders.
- Between 2017 and 2019, the proportion of loans in low- and moderate-income areas was near to both the percentage of owner-occupied units and the aggregate distribution of loans.
- Between 2014 and 2016, performance was weaker than in 2017 to 2019. The proportion of loans in low-income areas was well below the percentage of owner-occupied units and near to the aggregate distribution of loans. The proportion of loans in moderate- income areas was below the percentage of owner-occupied units and exceeded the aggregate distribution of loans.


## Small Loans to Businesses

Refer to Table Q in the state of Louisiana section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to businesses.

Based on the data in the table and the following considerations, the bank's overall geographic distribution of small loans to businesses for this evaluation is adequate. The following information was taken into consideration when determining this rating.

## Baton Rouge MSA

- The small proportion of businesses in low-income geographies ( 6.5 percent) and competition between 97 lenders constrains lending opportunities to existing businesses. Therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of businesses in those geographies.
- Performance against the aggregate distribution of lenders was given additional consideration as it reflects the difficulties all lenders are experiencing due to the economic constraints discussed above under the Description of the Full-Scope AA.
- Between 2017 and 2019, the proportion of small loans to businesses in low-income geographies was well below both the proportion of businesses and the aggregate distribution, while the proportion of small loans to businesses in moderate-income geographies was below both the proportion of businesses and the aggregate distribution
- During 2014 to 2016, the bank's proportion of small loans to businesses in low- and moderateincome geographies was respectively well below and below the proportion of businesses and the aggregate distribution.


## Monroe-Ruston CSA

- Performance against the aggregate distribution of lenders was given additional consideration as it reflects the difficulties all lenders are experiencing due to the economic constraints discussed above under the Description of the Full-Scope AA.
- Between 2017 and 2019, the proportion of small loans to businesses in low-income geographies was well below both the proportion of businesses and the aggregate distribution, while the proportion of small loans to businesses in moderate-income geographies was below the proportion of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's proportion of small loans to businesses in low- and moderateincome geographies was respectively well below and below the proportion of businesses. The proportion of loans in low- and moderate-income geographies was respectively below and near to the aggregate distribution.


## Small Loans to Farms

Refer to Table $S$ in the state of Louisiana section of appendix $D$ for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to farms.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to farms is poor. The following information was taken into consideration when determining this rating.

## Baton Rouge MSA

- The limited number of farms in low-income geographies ( 3.6 percent), constrained lending opportunities; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher number of farms in those geographies.
- The fact that farm lending is not a focus of the bank was also considered.
- Between 2017 and 2019, the proportion of loans to small farms in low-income geographies met the proportion of farms in those geographies and significantly exceeded the aggregate distribution of all lenders. The proportion of loans to small farms in moderate-income geographies was well below the proportion of farms in those geographies and near to the aggregate distribution of all lenders.
- Performance in low- and moderate-income geographies during the 2014 to 2016 period was weaker than performance during the 2017 to 2019 period. The proportion of loans to small farms in lowincome geographies was below the proportion of farms in those geographies and well below the aggregate distribution for the geographies. The proportion of loans to small farms in moderateincome geographies was well below both the proportion of farms in those geographies and the aggregate distribution.


## Monroe-Ruston CSA

- The limited percentage of farms in low-income geographies ( 5.5 percent), constrained lending opportunities; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of farms in those geographies.
- The fact that farm lending is not a focus of the bank was also considered.
- Between 2017 and 2019, the proportion of loans to small farms in low-income geographies was well below both the proportion of farms and the aggregate distribution of all lenders. The proportion of loans to small farms in moderate-income geographies was below the proportion of farms and the aggregate distribution.
- The proportion of loans to small farms in low-income geographies was well below both the proportion of farms and aggregate distribution. The proportion of loans to small farms in moderateincome geographies was well below the proportion of farms and exceeded the aggregate distribution.


## Lending Gap Analysis

A review of home mortgage loans, small loans to business, and small loans to farms including summary reports and AA maps did not identify any unexplained conspicuous lending gaps in the bank's activities.

## Distribution of Loans by Income Level of the Borrower

The bank exhibits a good distribution of loans among individuals of different income levels and business and farms of different sizes, given the product lines offered by the institution.

## Home Mortgage Loans

Refer to Table P in the state of Louisiana section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall borrower distribution of home mortgage loan originations and purchases for this evaluation is good. The following information was taken into consideration when determining this rating.

## Baton Rouge MSA

- Greater significance was placed on performance against the aggregate distribution as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of the Full-Scope AA.
- Examiners particularly considered the high level of poverty and housing affordability challenges, especially for low-income borrowers.
- Between 2017 and 2019, the proportion of loans to low-income borrowers was well below the percentage of low-income families and below the aggregate distribution of lenders. The proportion of moderate-income loans met the proportion of moderate-income families and was near to the aggregate distribution of all lenders.
- During 2014 to 2016 the bank's performance was generally consistent with performance between 2017 to 2019. The proportion of loans to low-income borrowers was well below the percentage of low-income families and near to the aggregate distribution of lenders. The proportion of moderateincome loans exceeded the proportion of moderate-income families and was near to the aggregate distribution.


## Monroe-Ruston CSA

- Greater significance was placed on performance against the aggregate distribution as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of the Full-Scope AA.
- Examiners particularly considered the high level of poverty, unemployment rate, and housing affordability challenges, especially for low-income borrowers.
- Between 2017 and 2019, the proportion of loans to low-income borrowers was well below the percentage of low-income families but exceeded the aggregate distribution of lenders. The proportion of moderate-income loans was well below the proportion of moderate-income families and below the aggregate distribution of all lenders.
- During 2014 to 2016, the bank's lending to moderate-income borrowers was stronger than performance between 2017 to 2019. The proportion of loans to low-income borrowers was well below the percentage of low-income families and below the aggregate distribution of lenders. The proportion of moderate-income loans exceeded both the proportion of moderate-income families and the aggregate distribution.


## Small Loans to Businesses

Refer to Table R in the state of Louisiana section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to businesses.

Based on the data in the tables and the following factors, the distribution of the bank's originations and purchases of small loans to businesses by revenue category is good. The following information was taken into consideration when determining this rating.

## Baton Rouge MSA

- Greater significance was placed on performance against the aggregate distribution of lenders as it reflects the difficulties all lenders are experiencing due to the economic constraints discussed above under the Description of the Full-Scope AA.
- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was weaker than performance between 2017 and 2019. The bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was well below the percentage of businesses and exceeded the aggregate distribution.


## Monroe-Ruston CSA

- Greater significance was placed on performance against the aggregate distribution of lenders as it reflects the difficulties all lenders are experiencing due to the economic constraints discussed above under the Description of the Full-Scope AA.
- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was weaker than performance between 2017 and 2019. The bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was well below the percentage of businesses and exceeded the aggregate distribution.


## Small Loans to Farms

Refer to Table T in the state of Louisiana section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to farms.

Based on the data in the table and the following considerations, the distribution of the bank's originations and purchases of small loans to farms by revenue category is good. The following information was taken into consideration when determining this rating.

## Baton Rouge MSA

- Greater significance was placed on performance against the aggregate distribution of lenders as it reflects the difficulties all lenders are experiencing due to the economic constraints discussed above under the Description of the Full-Scope AA.
- The fact that farm lending is not a focus of the bank was considered.
- Between 2017 and 2019, the bank's percentage of loans to farms with revenues of $\$ 1$ million or less was near to the percentage of farms and significantly exceeded the aggregate distribution.
- During 2014 to 2016, the bank's percentage of loans to farms with revenues of $\$ 1$ million or less was below the percentage of farms and significantly exceeded the aggregate distribution.


## Monroe-Ruston CSA

- Greater significance was placed on performance against the aggregate distribution of lenders as it reflects the difficulties all lenders are experiencing due to the economic constraints discussed above under the Description of the Full-Scope AA.
- The fact that farm lending is not a focus of the bank was considered.
- Between 2017 and 2019, the bank's percentage of loans to farms with revenues of $\$ 1$ million or less was below the percentage of farms and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 and 2019. The bank's percentage of loans to farms with revenues of $\$ 1$ million or less was below the percentage of farms and exceeded the aggregate distribution.


## Community Development Lending

The institution has made a low level of CD loans.
The Lending Activity Tables, shown above, set forth the information and data used to evaluate the institution's level of CD lending. These tables include all CD loans, including multifamily loans that also qualify as CD loans.

## Baton Rouge MSA

The bank made four CD loans in its AA for a total of $\$ 21.9$ million, which represents 2.6 percent of the tier 1 capital allocated to the AA.

Examples of CD loans include:

- In February 2015, the bank made a $\$ 9.3$ million construction loan to build a new apartment complex in a moderate-income tract in Baton Rouge, LA. The project created 144 affordable housing units for low- and moderate-income senior residents age 55 and older.
- In May 2018, the bank made a $\$ 5.5$ million construction loan develop 48 new affordable housing units for low- and moderate-income seniors in Baton Rouge, LA.


## Monroe-Ruston CSA

The bank made two CD loans in its AA for a total of $\$ 795,000$, which represents 0.9 percent of the tier 1 capital allocated to the AA.

An example of CD loans includes:

- In October 2014, the bank made a $\$ 765,000$ loan to provide affordable housing in an area that the National Low-Income Housing Coalition identified as being in need. Sixty one of the 67 units will be restricted to low- and moderate-income families and individuals.


## Product Innovation and Flexibility

The bank made extensive use of innovative and/or flexible lending practices to serve AA credit needs in each of the full-scope AAs reviewed. Refer to the comments in the Product Innovation and Flexibility section of this performance evaluation for additional details regarding the programs.

## Baton Rouge MSA

As outlined below, a total of 2,696 loans were funded totaling $\$ 478.8$ million.

| Loan Type | Number of <br> Loans | Dollar Amount <br> $\mathbf{( \$ 0 0 0 ' s )}$ |
| :--- | :---: | :---: |
| DreaMaker | 191 | 33,808 |
| FHA | 450 | 57,461 |
| HARP | 256 | 31,845 |
| VA | 118 | 21,411 |
| SBA | 57 | 10,703 |
| USDA | 1,624 | 323,555 |

## Monroe-Ruston CSA

As outlined below, a total of 648 loans were funded totaling $\$ 83.1$ million.

| Loan Type | Number of <br> Loans | Dollar Amount <br> $\mathbf{( \$ 0 0 0 ' s )}$ |
| :--- | :---: | :---: |
| DreaMaker | 18 | 2,381 |
| FHA | 71 | 8,188 |
| HARP | 71 | 7,865 |
| VA | 46 | 7,412 |
| SBA | 10 | 934 |
| USDA | 432 | 56,289 |

## Conclusions for Areas Receiving a Limited-Scope Review

Performance in the limited-scope AAs was factored into the state's overall Low Satisfactory Lending Test rating and did not significantly affect the initial overall conclusions based on the AAs receiving full-scope review. Based on limited-scope reviews, the bank's performance under the Lending Test in the New Orleans-Metairie-Hammond CSA and in the Lafayette-Opelousas-Morgan City CSA is stronger than the bank's overall adequate performance in the full-scope areas. In the Alexandria MSA, Houma-Thibodaux MSA, Lake Charles MSA, Shreveport-Bossier City MSA, and Louisiana Non-MSA (DeRidder), performance is consistent with the bank's overall performance under the Lending Test in the full-scope areas.

Refer to Tables O through T in the state of Louisiana section of appendix D for the facts and data that support these conclusions.

## INVESTMENT TEST

The bank's performance under the Investment Test in the state of Louisiana is rated High Satisfactory.

## Conclusions for Area Receiving a Full-Scope Review

Based on full-scope reviews, the bank's performance in the Baton Rouge MSA is adequate and in Monroe-Ruston CSA is excellent.

## Number and Amount of Qualified Investments

| Qualified Investments - State of Louisiana |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area (AA) | Prior Period* |  | Current Period |  | Total |  |  |  | Unfunded Commitments** |  |
|  | \# | \$(000's) | \# | \$(000's) | \# | \% of Total \# | \$(000's) | $\begin{gathered} \hline \% \text { of } \\ \text { Total \$ } \end{gathered}$ | \# | \$(000's) |
| Full Review: |  |  |  |  |  |  |  |  |  |  |
| Baton Rouge MSA | 18 | 8,409 | 29 | 11,044 | 47 | 17.47 | 19,453 | 13.50 | 0 | 0 |
| Monroe-Ruston CSA | 11 | 6,192 | 6 | 385 | 17 | 6.32 | 6,577 | 4.56 | 0 | 0 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |
| Alexandria MSA | 4 | 1,156 | 0 | 0 | 4 | 1.49 | 1,156 | 0.80 | 0 | 0 |
| Houma-Thibodaux MSA | 2 | 980 | 1 | 7,727 | 3 | 1.12 | 8,706 | 6.04 | 0 | 0 |
| Lafayette-OpelousasMorgan City CSA | 11 | 1,512 | 16 | 8,745 | 27 | 10.04 | 10,258 | 7.12 | 0 | 0 |
| Lake Charles MSA | 4 | 1,396 | 0 | 0 | 4 | 1.49 | 1,396 | 0.97 | 0 | 0 |
| New Orleans-MetairieHammond CSA | 35 | 18,026 | 63 | 53,859 | 98 | 36.43 | 71,885 | 49.88 | 0 | 0 |
| Shreveport-Bossier City MSA | 12 | 729 | 9 | 1,019 | 21 | 7.81 | 1,748 | 1.21 | 0 | 0 |
| LA Non-Metro AA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0 | 0 |
| Statewide Investments with Purpose, Mandate, or Function ( $\mathrm{P} / \mathrm{M} / \mathrm{F}$ ) to Serve AAs | 0 | 0 | 11 | 21,599 | 11 | 4.09 | 21,599 | 14.99 | 0 | 0 |
| Statewide Investments with No Purpose, Mandate, or Function (P/M/F) to Serve AAs | 36 | 1,304 | 1 | 27 | 37 | 13.75 | 1,331 | 0.92 | 0 | 0 |
| Total | 133 | 39,704 | 136 | 104,406 | 269 | 100.00 | 144,109 | 100.00 | 0 | 0 |

** Unfunded Commitments' means legally binding investment commitments that are tracked and recorded by the institution's financial reporting system.

## Baton Rouge MSA

The bank has an adequate level of qualified investments and grants, but not in a leadership position, particularly those that are not routinely provided by private investors. The current and prior period qualified investments represent 2.3 percent of tier 1 capital allocated to the AA.

The bank exhibits excellent responsiveness to credit and community economic development needs. All current period investments and 84.4 percent of the total dollar amount of prior period investments are considered responsive to credit and community economic development needs such as affordable housing, community service, and revitalization/stabilization efforts. The bank made three qualified investments totaling $\$ 9.7$ million supporting affordable housing in the current period. Twenty-six current period grants totaled $\$ 1.3$ million with 50.4 percent of the total dollar amount supporting revitalization/stabilization efforts, 41.0 percent supporting community service, and 8.6 percent supporting affordable housing. Additionally, all prior period investments still outstanding supported affordable housing.

The bank occasionally uses innovative and/or complex investments to support CD initiatives. None of the current period investments are considered innovative and/or complex. However, 6.1 percent of the total dollar amount of current period investments are considered catalyst investments as they are part of
a local government plan for revitalization/stabilization that will encourage future growth and improvement. Additionally, 63.5 percent of the total dollar amount of prior investments still outstanding are considered complex as they are Direct Investment LIHTC transactions.

Examples of CD Investments in the AA include:

- The bank provided $\$ 7.4$ million of equity in a project that was funded by a LIHTC fund investment, contributing to the creation of 100 affordable housing units.
- The bank provided a $\$ 100,000$ grant to a redevelopment authority to allow them to redevelop Baton Rouge's oldest commercial corridor into a transit-oriented neighborhood. The goal was to help stabilize and revitalize the Plank Road corridor communities with opportunities for existing and new businesses, including workforce development and reduction of crime and public health hazards. The bank's support helped with the efforts to build strong communities where blight mitigation and property stabilization is a priority and helped them grow and stabilize the area.
- The bank provided five grants totaling $\$ 339,000$ to a redevelopment organization whose mission is to develop and promote the growth and revitalization of mid-city Baton Rouge by attracting new and retaining current residents.
- Three grants helped revitalize and stabilize communities through redeveloping underutilized or vacant buildings, in this case, redevelopment of three historic fire stations that are no longer in service. Revitalization of these three underutilized buildings will drive economic growth, preserve historical sites, and inspire reinvestment in low- and moderate-income communities. These investments serve a catalyst for other community development activities for revitalization or stabilization that will encourage future growth and improvements in the area.
- One grant was for to provide continuous support for the organization's home ownership program, which serves as a HUD approved housing counseling agency that provides credit counseling, firsttime home buyer education, financial literacy and foreclosure intervention and default counseling in East Baton Rouge and surrounding parishes. A significant majority or 90 percent of its program participants earn an annual income that is less than 80 percent the area's median family income.
- The remaining grant was for the organization's leadership program, geared to residents demonstrating an interest in leading neighborhood change. Residents will be recruited from several areas, Old South Baton Rouge, Convention Street, Glen Oaks, Scotlandville, and Plank Road, and will receive training on effective strategies for improved neighborhood development.


## Monroe-Ruston CSA

The bank has an excellent level of qualified CD investments and grants, but not in a leadership position, particularly those that are not routinely provided by private investors. The current and prior period qualified investments represent 7.6 percent of tier 1 capital allocated to the AA.

The bank exhibits excellent responsiveness to credit and community economic development needs. All current and prior period investments are considered responsive to credit and community economic development needs such as affordable housing and community service. The bank made six current period grants totaling $\$ 385$ thousand with 84.4 percent of the total dollar amount supporting community
service and 15.6 percent supporting affordable housing. Additionally, all prior period investments still outstanding supported affordable housing.

The bank makes significant use of innovative and/or complex investments to support CD initiatives. None of the current period investments are considered innovative and/or complex. However, 85.7 percent of the total dollar amount of prior investments still outstanding are considered complex as they are Direct Investment LIHTC transactions.

Examples of CD Investments in the AA include:

- The bank provided four grants totaling $\$ 314,980$ to a local foundation to support their Workforce Solution's Program to benefit low-income students in Monroe.
- One grant supported the Foundation's workforce development plan, including specific needs of businesses. Focusing on those needs, area institutions of higher education developed programs to teach and train students. After graduation, students were linked back to employers for placement in good jobs with benefits.
- One grant supported the foundation's Accounting Tech Program for high school students in Quachita Parish, LA. The program prepares participants to work as bookkeepers, tax preparers and other careers in high demand in the region. It also prepares the students to enroll at in a local community college and university. The community college will work in partnership with Monroe City Schools to develop and supervise a remedial math program for students who want to enroll in the Accounting Tech program but need to improve their math score.
- Two grants were provided for the foundation's healthcare workforce strategy to benefit low-income residents in Monroe, LA. Funding will support the foundation's workforce development plan in partnership with another organization that find solutions for employers who could not find skilled and qualified employees.
- The bank provided a $\$ 60,000$ grant to community development corporation, located in Monroe, for its neighborhood revitalization pilot project. Funding was used to launch a 24 -month pilot project focused on cultivating neighborhood developers with the capacity to build affordable housing and assist low- and moderate-income families in attaining homeownership. Eighty percent of those who benefitted are of low- and moderate-income. The project was a collaboration with the City of Monroe's Planning and Urban Development Department targeting South Monroe neighborhoods struggling with blight, aging housing stock and in need of new investment. The project provided certification training and support for small contractors/developers/individuals interested in being neighborhood developers that advanced a system to transfer adjudicated property to those who complete the program and to build affordable homes for first-time homebuyers.
- The bank provided a $\$ 10,000$ grant to an organization to cover its operating expenses. The organization provides individuals with developmental disabilities assistance with learning social and other skills and teaches those without disabilities how to relate without hesitations. The majority of those the organization serves are of low-income.


## Statewide Investments in the State of Louisiana

The bank has 48 current and prior period CD investments and grants with and without a $\mathrm{P} / \mathrm{M} / \mathrm{F}$ to serve AAs in the broader statewide or regional area. Ninety-four percent support affordable housing and six percent support community services. These statewide investments further supported the bank's overall good performance under the Investment Test in the state of Louisiana.

## Conclusions for Areas Receiving Limited-Scope Reviews

Based on limited-scope reviews, the bank's performance under the Investment Test in the Lafayette-Opelousas-Morgan City CSA is consistent with the bank's overall good performance under the Investment Test in the full-scope areas. Performance under the Investment Test in the New Orleans-Metairie-Hammond CSA and Houma-Thibodaux MSA is stronger than the bank's overall good performance under the Investment Test in the full-scope areas. Stronger performance is due to a higher level of investments. Performance under the Investment Test in the Shreveport-Bossier City MSA, Alexandria MSA, Lake Charles-Jennings CSA, and LA Non-Metro AA is weaker than the bank's overall good performance under the Investment Test in the full-scope areas. Weaker performance is based on low levels of qualified investments. Performance differences in the limited-scope AAs did not impact the overall Investment Test rating for the state of Louisiana.

## SERVICE TEST

The bank's performance under the Service Test in state of Louisiana is rated Outstanding.

## Conclusions for Areas Receiving Full-Scope Reviews

Based on a full-scope review, including the data in the tables below, the bank's performance in the Baton Rouge MSA is excellent and the bank's performance in the Monroe-Ruston CSA is excellent.

## Retail Banking Services

Service delivery systems are readily accessible to geographies and individuals of different income levels in the bank's AA.

## Baton Rouge MSA

Based on the data in the table below, the branch distribution in low- and moderate-income geographies exceeds the percentage of the population in these respective geographies.

## Monroe-Ruston CSA

Based on the data in the table below, the branch distribution in low- and moderate-income geographies is near to the percentage of the population in these respective geographies. When considering the four adjacent branches, two serving low- income geographies, and two serving moderate-income geographies the distribution exceeds the percentage of populations within both low- and moderate-income geographies.

Examiners considered internal data provided by Chase indicating the extent to which adjacent branches, located in middle- and upper-income geographies, are being used by customers residing in nearby lowand moderate-income geographies. Middle- and upper-income branch usage data had a positive impact on the evaluation of the accessibility of service delivery systems.

| Distribution of Branch Delivery System |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Deposits percent of Rated Area Deposits in AA | Branches |  |  |  |  |  | Populationpercent of Population withinEach Geography |  |  |  |
|  |  | \# of <br> BANK <br> Branches | percent of Rated Area Branches in AA | Location of Branches by Income of Geographies (\% percent) |  |  |  |  |  |  |  |
|  |  |  |  | Low | Mod | Mid | Upp | Low | Mod | Mid | Upp |
| Baton <br> Rouge <br> MSA | 100 | 25 | 100 | 8.0 | 32.0 | 32.0 | 28.0 | 7.5 | 22.5 | 33.6 | 36.3 |
| Monroe- <br> Ruston <br> CSA | 100 | 8 | 100 | 12.5 | 12.5 | 37.5 | 37.5 | 15.5 | 16.1 | 22.8 | 45.7 |

* May not add up to 100 percent due to geographies with unknown tract income level and rounding


## Baton Rouge MSA

The OCC considered alternative delivery systems, including the bank's 72 ATMs, online banking, mobile banking, and telephone banking in evaluating the accessibility of delivery systems to deliver retail banking services to low- and moderate-income geographies. Bank-provided data for online, mobile, and telephone banking showed increases in the adoption of these services by low- and moderateincome individuals. Alternative delivery systems enhance the delivery of banking services to geographies and individuals of all income levels and had a positive effect on the retail banking services conclusion.

## Monroe-Ruston CSA

The OCC considered alternative delivery systems, including the bank's 20 ATMs, online banking, mobile banking, and telephone banking in evaluating the accessibility of delivery systems to deliver retail banking services to low- and moderate-income geographies. Bank-provided data for online, mobile, and telephone banking showed increases in the adoption of these services by low-income individuals and decreases in the adoption of these services by moderate-income individuals. Alternative delivery systems generally enhance the delivery of banking services to geographies and individuals of all income levels and had a neutral effect on the retail banking services conclusion.

| Distribution of Branch Openings/Closings |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment | \# of Branch Openings | \# of Branch Closings | Net change in Location of Branches (+ or -) |  |  |  |
|  |  |  | Low | Mod | Mid | Upp |
| Baton Rouge MSA | 1 | 7 | -1 | -1 | -1 | -3 |
| Monroe-Ruston CSA | 0 | 3 | -1 | -1 | 0 | -1 |

## Baton Rouge MSA

To the extent changes have been made, the bank's closing of branches has not adversely affected the accessibility of its delivery systems, the accessibility of its delivery systems, particularly in low- and moderate-income geographies and/or to low- and moderate-income individuals. The bank closed one branch in a low-income and one in a moderate-income geography. The branch closures did not negatively impact the branch distribution relative to the population residing in those geographies.

Based on branch usage data, the OCC considered these branch closures to be mitigated. The closure in a low- and moderate-income geography was the result of a market exit, reduced customer usage trends, or branch consolidation based on the bank's retail branch consolidation strategy. Despite the branch closure, branch locations remained accessible to geographies and individuals of different income levels in the bank's AA.

Services, including where appropriate, business hours, do not vary in a way that inconveniences its AA, particularly low- and moderate-income geographies and/or individuals. Generally, branches are open Monday through Friday from 9:00 am to 5:00 pm and Saturday from 9:00 am to 1:00 pm.

All retail banking services are available at all branches within the low- and moderate-income geographies.

## Monroe-Ruston CSA

To the extent changes have been made, the bank's closing of branches has not adversely affected the accessibility of its delivery systems, the accessibility of its delivery systems, particularly in low- and moderate-income geographies and/or to low- and moderate-income individuals. The bank closed one branch in a low-income and one in a moderate-income geography. The branch closures did not negatively impact the branch distribution relative to the population residing in those geographies.

Based on branch usage data, the OCC considered these branch closures to be mitigated. The closure in a low- and moderate-income geography was the result of a market exit, reduced customer usage trends, or branch consolidation based on the bank's retail branch consolidation strategy. Despite the branch closure, branch locations remained accessible to geographies and individuals of different income levels in the bank's AA.

Services, including where appropriate, business hours, do not vary in a way that inconveniences its AA, particularly low- and moderate-income geographies and/or individuals. Generally, branches are open Monday through Friday from 9:00 am to 6:00 pm and Saturday from 9:00 am to 2:00 pm.

All retail banking services are available at all branches within the low- and moderate-income geographies.

## Community Development Services

## Baton Rouge MSA

The bank provides an adequate level of CD services.

Bank records show that employees provided technical assistance and/or job-specific expertise for 174 CD service activities to 16 organizations for a total of 372 qualified hours of service. All the bank's assistance was to organizations that provide community services to low- and moderate-income individuals and families. The services were responsive to the needs of the AA particularly financial education. The following are examples of CD services provided in this AA:

- Bank employees conducted 78 financial education and first-time homebuyer seminars conjunction with a non-profit organization that served 548 low- and moderate-income individuals.


## Monroe-Ruston CSA

The bank provides an adequate level of CD services.
Bank records show that employees provided technical assistance and/or job-specific expertise for 54 CD service activities to 6 organizations for a total of 150 qualified hours of service. All the bank's assistance was to organizations that provide community services to low- and moderate-income individuals and families. The services were responsive to the needs of the AA particularly financial education. The following are examples of CD services provided in this AA:

- Bank employees conducted 43 financial literacy seminars conjunction with a non-profit organization that served 215 low- and moderate-income individuals.


## Conclusions for Areas Receiving Limited-Scope Reviews

Based on limited-scope reviews, the bank's performance under the Service Test in the Lafayette-Opelousas-Morgan City, LA and Lake Charles-Jennings, LA AAs is consistent with the bank's overall performance under the Service Test in the full-scope area. The bank's performance under the Service Test in the Alexandria, LA; Houma-Thibodaux, LA; New Orleans-Metairie-Hammond, LA-MS; and Shreveport-Bossier City, LA AAs is weaker than the bank's overall performance under the Service Test in the full-scope area due to lower percentage of branch distribution in low- and moderate-income geographies.

Based on a limited-scope review, the bank's performance under the Service Test in the DeRidder-Fort Polk South, LA CSA is weaker than the bank's overall performance under the Service Test in the fullscope area. The OCC based limited-scope conclusions on the provision of services to the AA in general as there are no low- and moderate-income census tracts in the CSA.

## SERVICE TEST

The bank's performance under the Service Test in state of Louisiana is rated High Satisfactory.

## Conclusions for Areas Receiving Full-Scope Reviews

Based on a full-scope review, including the data in the tables below, the bank's performance in the Baton Rouge MSA and the Monroe-Ruston CSA is good. More weight was given to the Baton Rouge, LA MSA due to the larger deposit base, lending, and branch presence.

## Retail Banking Services

Service delivery systems are readily accessible to geographies and individuals of different income levels in the bank's full-scope AAs.

Examiners evaluated the data as outlined in the Scope section at the front of this document including bank-provided data on usage of branches adjacent to low- and moderate-income geographies by individuals residing in those geographies and on increases in the usage of alternative delivery systems.

## Baton Rouge MSA

Based on the data in the table below and performance context, the branch distribution is excellent. In low- and moderate-income geographies, the distribution exceeds the percentage of the population. The bank had two branches in low-income geographies and eight branches in moderate-income geographies. The distribution was augmented by one MUI tract branch that serves low-income tracts and one MUI tract branches that serves moderate-income tracts. Examiners reviewed data on the accounts held and transactions conducted at the MUI branches and confirmed they were serving the adjacent low- and moderate-income populations.

## Monroe-Ruston CSA

Based on the data in the table below and performance context, the branch distribution is good. In lowand moderate-income geographies, the distribution is near to the percentage of the population. The bank had one branch in a low-income geography and one branch in a moderate-income geography. The distribution was augmented by one MUI tract branch that serves low-income tracts and two MUI tract branches that serve moderate-income tracts. Examiners reviewed data on the accounts held and transactions conducted at the MUI branches and confirmed they were serving the adjacent low- and moderate-income populations.

| Distribution of Branch Delivery System |  |  |  |  |  |  |  | As of December 31, 2019 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Deposits | Branches |  |  |  |  |  | Population |  |  |  |
|  | \% of Rated Area Deposits in AA | \# of <br> BANK <br> Branches | \% of <br> Rated <br> Area <br> Branches <br> in AA | Location of Branches by Income of Geographies (\%) |  |  |  | \% of Population within Each Geography |  |  |  |
|  |  |  |  | Low | Mod | Mid | Upp | Low | Mod | Mid | Upp |
| Baton <br> Rouge MSA | 37.2 | 25 | 21.0 | 8.0 | 32.0 | 32.0 | 28.0 | 7.5 | 22.5 | 33.6 | 36.3 |
| Monroe- <br> Ruston CSA | 3.8 | 8 | 6.7 | 12.5 | 12.5 | 37.5 | 37.5 | 15.5 | 16.1 | 22.8 | 45.7 |

* May not add up to 100 percent due to geographies with unknown tract income level and rounding


## Baton Rouge MSA

Alternative delivery systems enhanced the delivery of banking services to geographies and individuals of all income levels. The OCC considered the availability and use of alternative delivery systems over the evaluation period. This included review of the bank's 72 deposit-taking ATMs, online banking, mobile banking, and telephone banking to determine the effectiveness of these systems to make retail banking services available to individuals in low- and moderate-income geographies. The bank increased the deposit-taking ATMs in low- and moderate-income geographies by 50.0 percent over the prior rating period to eight ( 11.1 percent) deposit-taking ATMs in low-income geographies and 22 (30.6 percent)

ATMs in moderate-income geographies. Additionally, bank-provided data on use of online, mobile, and telephone banking showed increases in the adoption of these services by low- and moderate-income individuals from the prior rating period.

## Monroe-Ruston CSA

Alternative delivery systems generally enhanced the delivery of banking services to geographies and individuals of all income levels. The OCC considered the availability and use of alternative delivery systems over the evaluation period. This included review of the bank's 20 deposit-taking ATMs, online banking, mobile banking, and telephone banking to determine the effectiveness of these systems to make retail banking services available to individuals in low- and moderate-income geographies. The bank decreased the deposit-taking ATMs in low- and moderate-income geographies to two (10.0 percent) deposit-taking ATMs in low-income geographies and four (20.0 percent) ATMs in moderate-income geographies. Bank-provided data on use of online, mobile, and telephone banking showed increases in the adoption of these services by low- and moderate-income individuals from the prior rating period.

| Distribution of Branch Openings/Closings |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment <br> Area | \# of Branch <br> Openings | \# of Branch <br> Closings | Net change in Location of Branches <br> $(+$ or -$)$ |  |  |  |  |
|  |  | Low | Mod | Mid | Upp |  |  |
| Baton Rouge <br> MSA | 1 | 7 | -1 | -1 | -1 | -3 |  |
| Monroe-Ruston <br> CSA | 0 | 3 | -1 | -1 | 0 | -1 |  |

## Baton Rouge MSA

The bank's opening and closing of branches has generally not adversely affected the accessibility of its delivery systems, particularly in low- and moderate-income geographies and/or to low- and moderateincome individuals. The bank closed one branch in a low-income geography and closed one branch in a moderate-income geography. Branch closures were due to reduced customer usage and proximity to other Chase branches. Despite the branch closures, branch locations remained accessible to geographies and individuals of different income levels in the bank's AA.

Services, including where appropriate, business hours, do not vary in a way that inconveniences its AA, particularly low- and moderate-income geographies and/or individuals. Generally, branches are open Monday through Friday from 9:00 am to 5:00 pm and Saturday from 9:00 am to 1:00 pm. All retail banking services are available at all branches within the low- and moderate-income geographies.

## Monroe-Ruston, CSA

The bank's opening and closing of branches has generally not adversely affected the accessibility of its delivery systems, particularly in low- and moderate-income geographies and/or to low- and moderateincome individuals. The bank closed one branch in a low-income geography and closed one branch in a moderate-income geography. Branch closures were due to proximity to other Chase branches. Despite the branch closures, branch locations remained accessible to geographies and individuals of different income levels in the bank's AA as the three adjacent branches provided continued accessibility to customers in the low- and moderate-income geographies.

Services, including where appropriate, business hours, do not vary in a way that inconveniences its AA, particularly low- and moderate-income geographies and/or individuals. Generally, branches are open Monday through Friday from 9:00 am to 6:00 pm and Saturday from 9:00 am to 2:00 pm. All retail banking services are available at all branches within the low- and moderate-income geographies.

## Community Development Services

## Baton Rouge MSA

The bank provides an adequate level of CD services.
Bank records show that employees provided technical assistance and/or job-specific expertise for 174 CD service activities to 16 organizations for a total of 372 qualified hours of service. All the bank's assistance was to organizations that provide community services to low- and moderate-income individuals and families. The services were responsive to the needs of the AA, particularly financial education. The following is an example of CD services provided in this AA:

- Bank employees conducted 78 financial education and first-time homebuyer seminars conjunction with a non-profit organization that served 548 low- and moderate-income individuals.


## Monroe-Ruston CSA

The bank provides an adequate level of CD services.
Bank records show that employees provided technical assistance and/or job-specific expertise for 54 CD service activities to 6 organizations for a total of 150 qualified hours of service. All the bank's assistance was to organizations that provide community services to low- and moderate-income individuals and families. The services were responsive to the needs of the AA particularly financial education. The following is an example of CD services provided in this AA:

- Bank employees conducted 43 financial literacy seminars conjunction with a non-profit organization that served 215 low- and moderate-income individuals.


## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall High Satisfactory Service Test rating and did not significantly change the initial overall conclusions based on the AAs receiving full-scope review. Based on limited-scope reviews, the bank's performance under the Service Test in the Lafayette-Opelousas-Morgan City, LA and Lake Charles-Jennings, LA AAs is stronger than the bank's overall performance under the Service Test in the full-scope areas due to stronger branch distribution. Performance in the Houma-Thibodaux, LA and Shreveport-Bossier City, LA AAs is consistent with performance in full-scope AAs, while performance in the Alexandria, LA and New Orleans-Metairie-Hammond, LA-MS AAs is weaker than the bank's performance in the full-scope areas due to weaker branch distribution in low- and moderate-income geographies. The bank's performance under the Service Test in the DeRidder-Fort Polk South, LA CSA is also weaker than the bank's overall performance under the Service Test in the full-scope areas. The OCC based limited-scope conclusions on the provision of services to the AA in general as there are no low- and moderate-income census tracts in the CSA.

## State Rating

## State of Massachusetts

CRA rating for the State of Massachusetts ${ }^{\mathbf{1 8} \text { : Outstanding }}$
The Lending Test is rated: Outstanding
The Investment Test is rated: Outstanding
The Service Test is rated: High Satisfactory
The major factors that support this rating include:

- An excellent level of lending activity.
- A good geographic distribution of home mortgage loans and small loans to businesses.
- Good borrower distribution of home mortgage loans and small loans to businesses.
- A leader in making CD loans, which had significantly positive affect on the rating.
- The extensive use of flexible products, which had a positive effect on the rating.
- An excellent level of CD investments that demonstrated excellent responsiveness to credit and community economic development needs.
- The extensive use of innovative and/or complex qualified investments.
- A high level of investments in the broader statewide areas.
- Weak performance in limited-scope areas had a negative effect on readily accessible retail service delivery systems in the full-scope AA.
- Leadership in providing CD services that are responsive to AA needs.


## Description of Institution's Operations in Massachusetts

The state of Massachusetts is Chase's $30^{\text {th }}$ largest rating area based on its total deposits of $\$ 178.7$ million, representing less than one percent of the bank's total deposits. As of December 31, 2019, the bank operated 15 branches and 103 deposit-taking ATMs within the rating area, representing 0.3 percent of total branches and 0.6 percent of total ATMs. The bank originated and purchased approximately $\$ 7.5$ billion in loans or 1.1 percent of total bank loan originations and purchases during the evaluation period in the state.

According to FDIC deposit market share data, as of June 30, 2019, there were 143 banks operating 2,137 branches in the state of Massachusetts. The bank-maintained six branches with deposits of $\$ 178.0$ million in the state ranking it $111^{\text {th }}$ in deposit market share with 0.1 percent. State Street Bank and Trust Company was first in deposit market share with 26.3 percent, followed by Bank of America, N.A. with 19.3 percent and Citizens Bank with 10.4 percent.

The bank delineated three AAs in the state of Massachusetts. The Boston-Worcester-Providence CSA (Boston CSA), which accounts for 100 percent of the bank's deposits in Massachusetts, received a fullscope review. The bank entered the Worcester MSA portion of the rating area on March 20, 2019, and the Cambridge-Newton-Framingham MD portion of the rating area on March 21, 2019. The Pittsfield MSA and Springfield MSA, which have only deposit-taking ATMs and no branches, received limitedscope reviews. The delineated AAs are described in appendix A.

[^116]
## Boston CSA

The following table provides a summary of the demographics that includes housing and business information for the Boston CSA. Table A indicates that the volume of OOUs is small in low-income census tracts ( 3.5 percent) and over 23.5 percent of families in the AA are low-income. The Boston CSA's high cost of housing also limits access to affordable homeownership among LMI borrowers. The median housing value in the Boston CSA is approximately 4.2 times the averaged median income across the CSA, 5.3 times the moderate-income, and 8.5 times the low-income, indicating a limited proportion of OOUs are affordable to low- and moderate-income borrowers. One simplistic method used to determine housing affordability assumes a maximum monthly principal and interest payment of no more than 30 percent of the applicant's income.

In the Boston CSA, assuming a 30-year mortgage with a 5 percent interest rate, and not accounting for down payment, homeowners insurance, real estate taxes, or any additional monthly expenses, a lowincome borrower making $\$ 45,369$ per year (or less than 50 percent of the FFIEC adjusted median family income in the CSA) could afford a $\$ 164,991$ mortgage with a payment of $\$ 1,361$ per month; a moderateincome borrower earning $\$ 72,590$ per year (or less than 80 percent of the FFIEC adjusted median family income in the AA) could afford a $\$ 294,779$ mortgage with a payment of $\$ 2,178$ per month.

Median rents and the percentage of families below poverty level suggest rental housing is also unaffordable for many low-income residents.

| Table A - Demographic Information of the Assessment Area Assessment Area: 148 Boston-Worcester-Providence MA-NH-CT CSA 2017-2019 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Demographic Characteristics | \# | Low <br> \% of \# | Moderate \% of \# | Middle \% of \# | Upper <br> \% of \# | $\begin{aligned} & \text { NA* } \\ & \text { \% of \# } \end{aligned}$ |
| Geographies (Census Tracts) | 1,088 | 12.0 | 19.5 | 37.3 | 29.2 | 1.9 |
| Population by Geography | 5,081,221 | 10.0 | 19.4 | 38.9 | 31.3 | 0.3 |
| Housing Units by Geography | 2,049,323 | 9.7 | 20.0 | 39.9 | 30.2 | 0.3 |
| Owner-Occupied Units by Geography | 1,163,856 | 3.5 | 14.3 | 44.1 | 38.0 | 0.1 |
| Occupied Rental Units by Geography | 748,516 | 18.9 | 27.9 | 33.8 | 18.9 | 0.5 |
| Vacant Units by Geography | 136,951 | 11.8 | 24.6 | 38.3 | 24.9 | 0.5 |
| Businesses by Geography | 418,244 | 7.2 | 14.9 | 36.6 | 40.5 | 0.7 |
| Farms by Geography | 8,327 | 3.1 | 11.0 | 43.8 | 42.0 | 0.1 |
| Family Distribution by Income Level | 1,216,812 | 23.5 | 16.2 | 19.4 | 40.9 | 0.0 |
| Household Distribution by Income Level | 1,912,372 | 26.7 | 14.4 | 16.3 | 42.7 | 0.0 |
| Median Family Income MSA - 14454 Boston, MA |  | \$90,699 | Median Housing Value |  |  | \$385,202 |
| Median Family Income MSA - 15764 Cambridge-Newton-Framingham, MA |  | \$100,380 | Median Gross Rent |  |  | \$1,232 |
| Median Family Income MSA - 49340 Worcester, MA-CT MSA |  | \$81,137 | Families Below Poverty Level |  |  | 7.7\% |
| Source: 2015 ACS and 2019 D\&B Data <br> Due to rounding, totals may not equal $100.0 \%$ <br> (*) The NA category consists of geographies that have not been assigned an income classification. |  |  |  |  |  |  |

## Economic Data

According to the September 2019 Moody's Analytics report the area has a highly educated workforce with a large presence of biotech and IT firms that bolsters high wage employment. Major employment industries include healthcare, education, professional and business services. Major employers include Partners Healthcare, University of Massachusetts, Stop and Shop Supermarkets, Steward Healthcare System, and Harvard University. Unemployment is low; however, the area has a high cost of living and high housing costs which makes it difficult to attract workers to fill lower-wage and mid-wage jobs, particularly in industries not related to biotech or IT.

## Community Contacts

A review was conducted of seven community contacts completed during the examination period. The contacts were conducted with organizations located throughout the rating area. The mission of the organizations contacted focused on several areas including affordable housing, community development, and community revitalization. The area is served by numerous nonprofits, community development financial institutions, and community development entities providing multiple opportunities for participation and support by area financial institutions. Most contacts noted the high cost of housing in the area as a significant concern as most low- and moderate-income residents are challenged in finding both affordable rental housing as well as homes to purchase. The contacts identified the following needs in the community:

- Affordable Housing, including affordable rental housing
- Housing Counseling Assistance
- Loan programs for small businesses that do not meet traditional lending requirements
- Loan programs to support the rehabilitation of older housing
- Support for financial education programs
- Low cost deposit and loan products to help low and moderate-income individuals establish and repair credit.


## Scope of Evaluation in Massachusetts

The Boston CSA, which accounts for 100 percent of the bank's deposits in Massachusetts, received a full-scope review. The remaining AAs in the state of Massachusetts received a limited-scope review. Performance in limited-scope AAs and its effect on the CRA rating are discussed at the end of each test.

## CONCLUSIONS WITH RESPECT TO PERFORMANCE TESTS IN MASSACHUSETTS

## LENDING TEST

The bank's performance under the Lending Test in the state of Massachusetts is rated Outstanding.
Performance in AAs receiving limited-scope reviews was factored together with performance from AAs receiving full-scope reviews to determine the state's overall Outstanding Lending Test rating. Limitedscope conclusions did not significantly affect the initial overall conclusions based on the AAs receiving full-scope review.

## Conclusions for Area Receiving a Full-Scope Review

Based on a full-scope review, the bank's performance in the Boston CSA is excellent. Overall excellent lending levels and leadership in CD lending enhance good geographic and borrower distribution of loans. Product innovation and flexibility was also considered favorably.

## Lending Activity

Lending levels reflect excellent responsiveness to AA credit needs.
Examiners considered the number and amount of home mortgage, small business, and small farm loans originated or purchased relative to Chase's capacity based on deposits, competition, and market presence. Lending activity for home mortgage and small loans to businesses received the most weight in reaching conclusions. Respectively, home mortgage lending and small loans to businesses account for 36.7 percent and 62.9 percent of the loan volume in the state by number and 92.9 and 4.3 percent of loan volume by dollar. Small farm lending is not a strategic focus of the bank and received minimal weight in reaching conclusions. Farm loans represented 0.2 percent of the loan volume in the state by number and 0.02 percent loan volume by dollar.

| Number of Loans* |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home Mortgage | Small Business | Small Farm | Community Development | Total | \% State <br> Loans | \% State <br> Deposits |
| Boston-WorcesterProvidence CSA | 15,032 | 24,664 | 101 | 33 | 39,830 | 95.8 | 100.0 |
| Pittsfield MSA | 90 | 616 | 10 | 0 | 716 | 1.7 | 0.0 |
| Springfield MSA | 159 | 851 | 9 | 0 | 1,019 | 2.5 | 0.0 |
| Total | 15,281 | 26,131 | 120 | 33 | 41,565 | 100.0 | 100.0 |

*The tables present the data for all assessment areas. The narrative below addresses performance in full-scope areas only.

| Dollar Volume of Loans* ('000's) |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home <br> Mortgage | Small <br> Business | Small <br> Farm | Community <br> Development | Total | \% <br> State* <br> Loans | \% State <br> Deposits |
| Boston-Worcester- <br> Providence | $6,902,557$ | 303,783 | 1,046 | 205,955 | $7,413,341$ | 98.9 | 100.0 |
| Pittsfield MSA | 27,582 | 9,988 | 86 | 0 | 37,656 | 0.5 | 0.0 |
| Springfield MSA | 31,338 | 10,210 | 89 | 0 | 41,637 | 0.6 | 0.0 |
| Total | $6,961,477$ | 323,981 | 1,221 | 205,955 | $7,492,634$ | 100.0 | 100.0 |

*The tables present the data for all assessment areas. The narrative below addresses performance in full-scope areas only.
Chase ranked 111th in deposits with 0.1 percent market share.
In overall home mortgage lending, Chase ranked seventh out of 593 lenders with a 2.6 percent market share. Other lenders in the market include Citizens Bank, N.A. ( 5.5 percent), Wells Fargo Bank, N.A. (4.9 percent), and Bank of America, N.A. (3.7 percent).

In small loans to businesses, Chase ranked third out of 182 lenders with 9.9 percent market share. Other major lenders are American Express National Bank (26.2 percent), Bank of America, N.A. (12.9 percent), and Citibank, N.A. (7.4 percent).

In small loans to farms, Chase ranked first out of 18 lenders with a 29.9 percent market share. The other major lenders and respective market shares are U.S. Bank, N.A. (19.0 percent), Bank of America, N.A. (17.0 percent), and Capital One, N.A. (9.3 percent).

The comparison between deposit and lending market share rankings supports the bank's excellent responsiveness. Factors considered included:

## Distribution of Loans by Income Level of the Geography

The bank exhibits a good geographic distribution of loans in its AA.

## Home Mortgage Loans

Refer to Table O in the state of Massachusetts section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of home mortgage loan originations and purchases for this evaluation is good. The following information was taken into consideration when determining this rating.

- The limited proportion of housing units in low-income geographies, particularly OOUs ( 3.5 percent), constrained lending opportunities; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of OOUs in those geographies.
- The high level of competition in the AA was also considered and examiners placed greater significance on performance compared to the aggregate of lenders.
- Between 2017 and 2019, the proportion of loans in low-income areas was near to the percentage of owner-occupied units and below the aggregate distribution of loans. In moderate-income areas the proportion of loans exceeded the percentage of owner-occupied units and was near to the aggregate distribution of loans.
- During 2014 through 2016, performance in low-and moderate-income geographies was below the percentage of owner-occupied units and the aggregate distribution of loans.


## Small Loans to Businesses

Refer to Table Q in the state of Massachusetts section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to businesses.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to businesses for this evaluation is good. The following information was taken into consideration when determining this rating.

- The small proportion of businesses in low-income geographies (7.2 percent) and competition between 593 lenders constrained lending opportunities to existing businesses. Therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of businesses in those geographies.
- Performance against the aggregate distribution of lenders was given additional consideration as it reflects the difficulties all lenders are experiencing due to the economic constraints discussed above under the Description of the Full-Scope AA.
- Between 2017 and 2019, the proportion of small loans to businesses in low-income geographies was below both the proportion of businesses and the aggregate distribution, while the proportion of small loans to businesses in moderate-income geographies exceeded both the proportion of businesses and the aggregate distribution
- During 2014 to 2016, the proportion of small loans to businesses in low-income geographies was below both the proportion of businesses and near to the aggregate distribution, while the proportion of small loans to businesses in moderate-income geographies exceeded both the proportion of businesses and the aggregate distribution.


## Small Loans to Farms

Refer to Table S in the state of Massachusetts section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to farms.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to farms is good. The following information was taken into consideration when determining this rating.

- The limited number of farms in low-income geographies, (3.1 percent), constrained lending opportunities; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher number of farms in those geographies.
- The fact that farm lending is not a focus of the bank was also considered.
- Between 2017 and 2019, the proportion of loans to small farms in low-income geographies was below the proportion of farms in those geographies and near to the aggregate distribution of all lenders. The proportion of loans to small farms in moderate-income geographies was near to the proportion of farms in those geographies and exceeded the aggregate distribution of all lenders.
- During 2014 to 2016 period the bank made no loans to small farms in low- or moderate-income geographies.


## Lending Gap Analysis

A review of home mortgage loans, small loans to business, and small loans to farms including summary reports and AA maps did not identify any unexplained conspicuous lending gaps in the bank's activities.

## Distribution of Loans by Income Level of the Borrower

The bank exhibits a good distribution of loans among individuals of different income levels and business and farms of different sizes, given the product lines offered by the institution.

## Home Mortgage Loans

Refer to Table P in the state of Massachusetts section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall borrower distribution of home mortgage loan originations and purchases for this evaluation is good. The following information was taken into consideration when determining this rating.

- Greater significance was placed on performance against the aggregate distribution as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of the Full-Scope AA.
- Examiners particularly considered housing affordability challenges for low- and moderate-income borrowers.
- Between 2017 and 2019, the proportion of loans to low-income borrowers was well below the percentage of low-income families and the aggregate distribution of lenders. The proportion of moderate-income loans was near to the proportion of moderate-income families and below the aggregate distribution.
- During 2014 to 2016 the bank's performance was generally consistent with performance between 2017 to 2019. The proportion of loans to low-income borrowers was well below the percentage of low-income families and near to the aggregate distribution of lenders. The proportion of moderateincome loans was below the proportion of moderate-income families and the aggregate distribution.


## Small Loans to Businesses

Refer to Table R in the state of Massachusetts section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to businesses.

Based on the data in the tables and the following factors, the distribution of the bank's originations and purchases of small loans to businesses by revenue category is good. The following information was taken into consideration when determining this rating.

- Greater significance was placed on performance against the aggregate distribution of lenders as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of the Full-Scope AA.
- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with its performance between 2017 and 2019. The bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.


## Small Loans to Farms

Refer to Table T in the state of Massachusetts section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to farms.

Based on the data in the table and the following considerations, the distribution of the bank's originations and purchases of small loans to farms by revenue category is good. The following information was taken into consideration when determining this rating.

- Greater significance was placed on performance against the aggregate distribution of lenders as it reflects the difficulties all lenders are experiencing due to the economic constraints discussed above under the Description of the Full-Scope AA.
- The fact that farm lending is not a focus of the bank was considered.
- Between 2017 and 2019, the bank's percentage of loans to farms with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 and 2019. The bank's percentage of loans to farms with revenues of $\$ 1$ million or less was below the percentage of farms and exceeded the aggregate distribution.


## Community Development Lending

The bank is a leader in making CD loans.
The Lending Activity Tables, shown above, set forth the information and data used to evaluate the institution's level of CD lending. These tables include all CD loans, including multifamily loans that also qualify as CD loans.

The bank made 33 CD loans in its AA for a total of $\$ 206.0$ million, which represents 894.7 percent of the tier 1 capital allocated to the AA.

Examples of CD loans in the AA include:

- In November 2014, the bank provided a $\$ 7.7$ million loan to preserve the availability of 60 units of affordable housing, which will be comprised of 39 one-bedroom units, 17 two-bedroom units, three three-bedroom units, and one studio unit. The project was located in Belmont, MA.
- In April 2017, the bank provided a total of $\$ 1.7$ million in community service loans. The proceeds were used by a community center in a low-income census tract in the Boston area. The center provides high impact programs that help youth in the Allston-Brighton community succeed academically, explore, and master the arts, develop career readiness skills, and adopt healthy lifestyles.
- In July 2019, the bank provided a loan for $\$ 40.0$ million to create 55 affordable housing units in public transportation-oriented areas. The project was aligned with the Concord-Alewife Plan, which included addressing the housing stock and affordability needs in Cambridge, MA.


## Product Innovation and Flexibility

The bank makes extensive use of innovative and/or flexible lending practices in order to serve AA credit needs. As outlined below, a total of 1,210 loans were funded totaling $\$ 384.2$ million. Refer to the comments in the Product Innovation and Flexibility section of this performance evaluation for additional details regarding the programs.

| Loan Type | Number of <br> Loans | Dollar Amount <br> $\mathbf{( \$ 0 0 0 ’ \mathbf { s } )}$ |
| :--- | :---: | :---: |
| DreaMaker | 710 | 236,754 |
| FHA | 221 | 75,069 |
| HARP | 184 | 35,986 |
| VA | 83 | 33,886 |
| SBA | 0 | 0 |
| USDA | 12 | 2,512 |

## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall Outstanding Lending Test rating and did not significantly affect the initial overall conclusions based on the AAs receiving fullscope review. Examiners considered that there are no deposits attributed to these AAs and the bank's presence is limited to deposit-taking ATMs. Based on limited-scope reviews, the bank's performance under the Lending Test in the Pittsfield MSA and Springfield MSA is weaker than the bank's overall performance under the Lending Test in the full-scope area. Weaker performance results from weaker geographic and borrower distributions.

Refer to Tables O through T in the state of Massachusetts section of appendix D for the facts and data that support these conclusions.

## INVESTMENT TEST

The bank's performance under the Investment Test in the state of Massachusetts is rated Outstanding.

## Conclusions for Area Receiving a Full-Scope Review

Based on a full-scope review, the bank's performance in the Boston CSA is excellent.
The bank has an excellent level of qualified investment, often in a leadership position, particularly those that are not routinely provided by private investors. The current and prior period qualified investments represent 746.0 percent of tier 1 capital allocated to the AA. A significant majority, or 91.4 percent of total investments, represent current period investments.

The bank exhibits excellent responsiveness to credit and community economic development needs. The bank made 36 CD investments totaling $\$ 149.7$ million, with 72.3 percent supporting affordable housing, 13.4 percent supporting community service, and 14.3 percent supporting revitalization/stabilization efforts. 44 grants totaled $\$ 7.3$ million with 98.6 percent supporting community service and 1.4 percent supporting revitalization/stabilization efforts. All prior period investments still outstanding are considered responsive to credit and community economic development needs such as affordable housing
and community service. In addition, 18 of the current period investments, or 26.5 percent, are catalysts for future development and investment and mainly relate to NMTC financings.

The bank makes extensive use of innovative and/or complex investments to support CD initiatives. Exclusive of grants, 25 of the 80 current period investments are considered complex as they are mainly related to Direct Investment LIHTC and NMTC transactions. Additionally, 19.7 percent of the total dollar amount of prior investments still outstanding consist of complex Direct Investment LIHTC and NMTC transactions.

Examples of CD Investments in the AA include:

- The bank provided $\$ 23.1$ million in a LIHTC investment that contributed to the creation of 95 affordable housing units to be used by low- and moderate-income individuals and families.
- The bank provided $\$ 2.2$ million of equity in a LIHTC, which contributed to the creation of 83 affordable housing units in a low- and moderate-income facility for senior living. This facility provides senior care options that includes assisted living and independent living for elderly lowincome adults in this AA.
- The bank provided a $\$ 7.2$ million NMTC equity investment that was used for a hotel project, located in a low-income tract in Boston's Dudley Square community. The project was part of a greater neighborhood urban renewal effort to redevelop the Dudley Square area as detailed in the Roxbury Strategic Master Plan. This project was the primary component of a multi-use development project consisting of a 135 -room hotel and commercial/retail space that will help with the revitalization of the low-income area. The Hotel and adjacent retail component created 40 permanent jobs and the construction created over 250 jobs.

| Qualified Investments - State of Massachusetts |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area (AA) | Prior Period* |  | Current Period |  | Total |  |  |  | $\begin{gathered} \text { Unfunded } \\ \text { Commitments } \\ * * \\ \hline \end{gathered}$ |  |
|  | \# | \$(000's) | \# | \$(000's) | \# | \% of <br> Total <br> \# | \$(000's) | $\begin{gathered} \hline \% \text { of } \\ \text { Total } \\ \$ \$ \\ \hline \end{gathered}$ | \# | \$(000's) |
| Full Review: |  |  |  |  |  |  |  |  |  |  |
| Boston-Worcester-Providence CSA | 43 | 14,733 | 80 | 156,987 | 123 | 73.6 | 171,720 | 68.1 | 0 | 0 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |
| Pittsfield MSA | 3 | 626 | 0 | 0 | 3 | 1.8 | 626 | 0.2 | 0 | 0 |
| Springfield MSA | 4 | 612 | 2 | 7,117 | 6 | 3.6 | 7,729 | 3.1 | 0 | 0 |
| Statewide Investments with Purpose, Mandate, or Function (P/M/F) to Serve AAs | 0 | 0 | 25 | 45,869 | 25 | 15.0 | 45,869 | 18.2 | 0 | 0 |
| Statewide Investments with No Purpose, Mandate, or Function (P/M/F) to Serve AAs | 10 | 26,116 | 0 | 0 | 10 | 6.0 | 26,116 | 10.4 | 0 | 0 |

Prior Period Investments' means investments made in a previous evaluation period that are outstanding as of the examination date.
Unfunded Commitments' means legally binding investment commitments that are tracked and recorded by the institution's financial reporting system.

## Statewide Investment in the State of Massachusetts

The bank has qualified investments throughout the state of Massachusetts whose $\mathrm{P} / \mathrm{M} / \mathrm{F}$ include serving the AAs. Forty-eight percent support affordable housing, 29 percent support community services, and 22 percent support revitalization/stabilization. Affordable housing and support for community service organizations are particular needs within the state. Investments with no $\mathrm{P} / \mathrm{M} / \mathrm{F}$ to serve AAs support affordable housing and community services. Investments with and without a $\mathrm{P} / \mathrm{M} / \mathrm{F}$ to serve AAs represent 29 percent of total state qualified investments. These investment in the broader statewide area further support the bank's overall performance under the Investment Test in state of Massachusetts.

## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall Outstanding Investment Test rating and did not change the initial overall conclusions based on the AA receiving a full-scope review. Based on limited-scope reviews, the bank's performance under the Investment Test in the Pittsfield MSA and Springfield MSA is consistent with the bank's overall performance under the Investment Test in the full-scope area.

## SERVICE TEST

The bank's performance under the Service Test in Massachusetts is rated High Satisfactory. Weak performance in limited-scope areas had a negative effect on strong performance in the full-scope AA.

## Conclusions for Area Receiving a Full-Scope Review

Based on a full-scope review, the bank's performance in the Boston CSA is excellent.

## Retail Banking Services

Service delivery systems are readily accessible to geographies and individuals of different income levels in the bank's full-scope AA.

Examiners evaluated the data as outlined in the Scope section at the front of this document including bank-provided data on usage of branches adjacent to low- and moderate-income geographies by individuals residing in those geographies and on increases in the usage of alternative delivery systems.

Based on the data in the table below and performance context, the branch distribution is good. In lowand moderate-income geographies, the distribution respectively exceeds and is well below the percentage of the population. The bank had three branches in low-income geographies and one branch in a moderate-income geography. The distribution was augmented by three MUI tract branches that serve moderate-income tracts. Examiners reviewed data on the accounts held and transactions conducted at the MUI branches and confirmed they were serving the adjacent moderate-income populations.

| Distribution of Branch Delivery System |  |  |  |  |  |  |  | As of December 31, 2019 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Deposits <br> \% of Rated <br> Area <br> Deposits in <br> AA | Branches |  |  |  |  |  | Population |  |  |  |
|  |  | \# of <br> BANK <br> Branches | \% of <br> Rated <br> Area <br> Branches in AA | Location of Branches by Income of Geographies (percent) |  |  |  | \% of Population within Each Geography |  |  |  |
|  |  |  |  | Low | Mod | Mid | Upp | Low | Mod | Mid | Upp |
| Boston-WorcesterProvidence, CSA | 100 | 15 | 100 | 20.0 | 6.7 | 6.7 | 66.7 | 10.0 | 19.4 | 38.9 | 31.3 |

* May not add up to 100 percent due to geographies with unknown tract income level and rounding

Alternative delivery systems enhanced the delivery of banking services to geographies and individuals of all income levels. The OCC considered the availability and use of alternative delivery systems over the evaluation period. This included review of the bank's 96 deposit-taking ATMs, online banking, mobile banking, and telephone banking to determine the effectiveness of these systems to make retail banking services available to individuals in low- and moderate-income geographies. The bank increased the deposit-taking ATMs in low- and moderate-income geographies by almost 100.0 percent as there was only one ATM in this AA during the prior evaluation period. The bank installed or acquired 17 (17.7 percent) deposit-taking ATMs in low-income geographies and eight ( 8.3 percent) ATMs in moderate-income geographies. Additionally, bank-provided data on use of online, mobile, and telephone banking showed increases in the adoption of these services by low- and moderate-income individuals from the prior rating period.

| Distribution of Branch Openings/Closings |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment | \# of Branch Openings | \# of Branch Closings | Net change in Location of Branches(+ or -) |  |  |  |
|  |  |  | Low | Mod | Mid | Upp |
| Boston CSA | 15 | 0 | +3 | +1 | +1 | +10 |

The bank's opening and closing of branches has improved the accessibility of its delivery systems, particularly in low- and moderate-income geographies and/or to low- and moderate-income individuals. The bank opened three branches in low-income geographies and one branch in a moderate-income geography. The increase in branches in this AA was part of the bank's branch expansion strategy. The bank did not close any branches during the evaluation period.

Services, including where appropriate, business hours, do not vary in a way that inconveniences its AA, particularly low- and moderate-income geographies and/or individuals. Generally, branches are open Monday through Thursday from 9:00 am to 5:00 pm, Friday from 9:00 am to 6:00 pm and Saturday from 9:00 am to 1:00 pm. All retail banking services are available at all branches within the low- and moderate-income geographies.

## Community Development Services

The bank was a leader in providing CD services that are responsive to AA needs.

Bank records show that employees provided their financial or job-specific expertise and/or technical assistance for 394 CD service activities to 38 organizations, logging 1,699 qualified hours. All of the bank's assistance were to organizations that provide community services to low- and moderate-income individuals and families. The bank's CD services were responsive to the community needs in the AA, particularly financial literacy. The following are examples of CD services provided:

- The bank provided financial literacy training to more than 950 low- and moderate-income individuals.
- The bank provided six homebuyer seminars to more than 250 low- and moderate-income individuals.


## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall High Satisfactory Service Test rating and had a negative effect on the initial overall conclusions based on the AAs receiving fullscope review. Based on limited-scope reviews, the bank's performance under the Service Test in the Pittsfield, MA and Springfield, MA AAs is very poor and weaker than the bank's excellent performance under the Service Test in the full-scope area due to very weak branch distribution in low- and moderateincome geographies.

## State Rating

## State of Michigan

CRA rating for the State of Michigan ${ }^{19}$ : Outstanding
The Lending Test is rated: High Satisfactory
The Investment Test is rated: Outstanding
The Service Test is rated: Outstanding
The major factors that support this rating include:

- A good level of lending activity.
- Overall adequate geographic distribution of home mortgage loans and small loans to businesses.
- Overall good borrower distribution of home mortgage loans and small loans to businesses.
- A leader in making CD loans, which positively affected the rating.
- The extensive use of flexible products, which positively affected the rating.
- An excellent level of qualified investments, excellent responsiveness to credit and community economic development needs, and a high level of investments in the broader statewide or regional area.
- Retail service delivery systems are readily available to geographies and individuals of different income levels in the full-scope AA.
- Chase is a leader in providing CD services that are responsive to AA needs.


## Description of Institution's Operations in Michigan

The state of Michigan is Chase's fifth largest rating area based on aggregate deposits of $\$ 44.6$ billion, representing 3.2 percent of the bank's total deposits. As of December 31, 2019, the bank operated 209 branches and 479 deposit-taking ATMs within the rating area, representing 4.2 percent of total branches and 3.0 percent of total ATMs. The bank originated and purchased approximately $\$ 16.2$ billion in loans or 2.3 percent of total bank loan originations and purchases during the evaluation period in the state.

According to the FDIC Deposit Market Share Data, as of June 30, 2019, there were 118 banks operating 2,426 branches in the state of Michigan. Chase ranked first in deposit market share with 19.6 percent. Other major banks and their deposit market share are Comerica Bank ( 12.8 percent), Bank of America, N.A. (10.1 percent), and PNC Bank, N.A. (7.5 percent).

Chase has seven AAs in the state of Michigan and the Detroit-Warren-Ann Arbor, MI CSA (Detroit CSA) was selected for a full-scope review. The CSA consists of the Detroit-Warren-Dearborn, MI MSA, which includes the following MDs: Detroit-Dearborn-Livonia, MI MD and Warren-TroyFarmington Hills, MI MD. It also includes the following MSAs: Ann Arbor, MI MSA and Flint, MI MSA. The Grand Rapids-Wyoming-Muskegon MSA, Kalamazoo-Battle Creek-Portage CSA, LansingEast Lansing-Owosso MSA, Niles-Benton Harbor MSA, Saginaw MSA, and Michigan Non-MSA received limited-scope reviews. Refer to appendix A for a complete description of the AAs.

## Description of Full-Scope AA

[^117]The following table provides a summary of the demographic that includes housing and business information for the Detroit CSA. Table A indicates that the volume of OOUs is very small in lowincome CTs and over 23.0 percent of families in the AA are low-income with 12.8 percent below the poverty level. The median housing value in the Detroit CSA ranges from two to three times the median income, three times the moderate-income and five times the low-income, indicating a limited proportion of OOUs are affordable to low- income borrowers. One simplistic method used to determine housing affordability assumes a maximum monthly principal and interest payment of no more than 30 percent of the applicant's income.

In the Detroit CSA, assuming a 30-year mortgage with a five percent interest rate and three percent down payment, while not accounting for homeowners insurance, real estate taxes, or any additional monthly expenses, a low-income borrower making $\$ 26,367$ per year (or less than 50 percent of the FFIEC adjusted median family income in the CSA) could afford a $\$ 74,442$ mortgage loan with a payment of $\$ 791$ per month; a moderate-income borrower earning $\$ 42,186$ per year (or less than 80 percent of the FFIEC adjusted median family income in the CSA) could afford a $\$ 149,890$ mortgage loan with a payment of $\$ 1,266$ per month.

Median rents and the significant percentage of families below poverty level suggest rental housing is also unaffordable for many low-income residents.

| Table A - Demographic Information of the Assessment Area |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Ansessment Area: Detroit-Warren-Ann Arbor MI CSA 2017-2019 |  |  |  |  |  |  |

## Economic Data

According to Moody's Analytics October 2019 Report, the Detroit area's strengths include high housing affordability and a concentration of auto industry headquarters; production; and research and development. However, the area suffers from a below-average quality of life; eroding infrastructure; a challenging fiscal situation in the city; and persistent out migration. After nearly a decade of growth, the area economy is taking a breather. The unemployment rate has remained historically low, in the low 5.0 percent range, for the past year, but the labor force is no longer rising. Employment has slipped since the start of the year. Softness is widespread across industries, although losses have been particularly painful in healthcare and professional/business services. Investments by the logistics industry will keep transportation/warehousing payrolls moving in the right direction. Detroit has a high concentration of jobs in transportation/warehousing. Construction of the Gordie Howe International Bridge between Detroit and Windsor, Canada, which is slated for completion in 2024, will spur more traffic and growth in transportation-related industries. The auto industry is also very important to the Detroit economy with the three major automakers employing more than 117,000 people combined.

Major employment industries in the Detroit area include education and health services; professional and business services; and manufacturing. Major employers in in the area include Ford Motor Company; General Motors; University of Michigan; Chrysler Group LLC. Population trends in Detroit are weak. While net outflows have narrowed in recent years, the secular decline of manufacturing and low and falling living standards continues to weigh on Detroit's attractiveness. Household formation has flatlined and will reduce the need for additional housing supply. Sales of single-family homes have been flat and starts are trending lower.

## Community Contacts

Examiners considered three community contacts completed during the period with entities serving the area. The contacts were with organizations focused on affordable housing, economic development and community and social services. Contacts indicated that there are multiple economies at work in the Greater Detroit area and that Detroit was doing much worse than other Southeast Michigan cities as it relates to unemployment, workforce development, education, transportation, access to affordable housing and small business lending. Contacts noted that there were high concentrations of poverty in the area. Many residents reside in food deserts and are food insecure. Many of the available affordable housing units are substandard. Other needs identified in the community include access to affordable home renovation financing, adult literacy training, job training/workforce development, access to affordable childcare services for low- and moderate-income households, transportation assistance for low-income households, financial education programs and services targeted to individuals re-entering the community from the penal system, access to capital for small businesses, water infrastructure replacement and improvements, elimination of vacant and blighted properties, affordable housing (rental and owner-occupied) and credit counseling and credit repair.

Contacts noted that there are numerous opportunities available for banks to support the needs of the community including providing grant funding to support the programs and services of area non-profits; more collaboration with financial intermediaries, such as Community Development Financial Institutions; and offering flexible products and services that help bring low-income individuals into the financial mainstream.

## Scope of Evaluation in Michigan

The Detroit CSA received a full-scope review. The CSA accounts for 89.5 percent of deposits and 75.0 percent of the lending in the state. The remaining six AAs received a limited-scope review. Performance in limited-scope AAs that affected the CRA rating are discussed at the end of each test.

## CONCLUSIONS WITH RESPECT TO PERFORMANCE TESTS IN MICHIGAN

## LENDING TEST

The bank's performance under the Lending Test in the state of Michigan is rated High Satisfactory.
Performance in AAs receiving limited-scope reviews was factored together with performance from AAs receiving full-scope reviews to determine the state's overall High Satisfactory Lending Test rating. Limited-scope conclusions did not affect the initial overall conclusions based on the AAs receiving fullscope review.

## Conclusions for Area Receiving a Full-Scope Review

Based on a full-scope review, the bank's performance in the Detroit CSA is good. Overall good lending levels and borrower distribution of loans offset weaker adequate geographic distribution of loans. The bank's leadership in making CD loans affected the rating positively while product innovation and flexibility were also considered favorably.

## Lending Activity

Lending levels reflect good responsiveness to AA credit needs in the bank's AAs.
Examiners considered the number and amount of home mortgage, small business, small farm loans originated or purchased relative to Chase's capacity based on deposits, competition, and market presence. Lending activity for home mortgage and small loans to businesses received the most weight in reaching conclusions. Respectively, home mortgage lending and small loans to businesses account for 34.7 percent and 64.6 percent of the loan volume in the state by number and 75.1 and 20.1 percent of loan volume by dollar. Small farm lending is not a strategic focus of the bank and received minimal weight in reaching conclusions. Farm loans represented 0.68 percent of the loan volume in the state by number and 0.13 percent loan volume by dollar.

| Number of Loans* |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home <br> Mortgage | Small <br> Business | Small <br> Farm | Community <br> Development | Total | \% State <br> Loans | \% State <br> Deposits |
| Detroit-Warren-Ann Arbor, MI <br> CSA | 49,598 | 88,481 | 525 | 71 | 138,675 | 75.0 | 89.5 |
| Grand Rapids-Wyoming- <br> Muskegon, MI CSA | 7,033 | 16,026 | 237 | 9 | 23,305 | 12.6 | 4.9 |
| Lansing-East Lansing-Owosso, <br> MI | 2,742 | 4,141 | 108 | 2 | 6,993 | 3.4 | 1.6 |
| Saginaw, MI MSA | 592 | 1,391 | 38 | 0 | 2,021 | 1.1 | 0.7 |
| Niles-Benton Harbor, MI MSA | 981 | 1,865 | 78 | 1 | 2,925 | 1.6 | 0.6 |
| Kalamazoo-Battle Creek-Portage, <br> MI CSA | 1,091 | 2,544 | 58 | 1 | 3,694 | 2.0 | 0.5 |
| Michigan Non-MSA | 2,369 | 5,487 | 219 | 2 | 8,077 | 4.4 | 2.3 |
| Total | 64,406 | 119,935 | 1,263 | 86 | 185,690 | 100 | 100 |

*Due to rounding, totals may not equal $100.0 \%$. The tables present the data for all assessment areas. The narrative below addresses performance in fullscope areas only.

## Dollar Volume of Loans* (in \$000s)

| Assessment Area | Home <br> Mortgage | Small <br> Business | Small <br> Farm | Community <br> Development | Total | \% State <br> Loans | \% State <br> Deposits |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Detroit-Warren-Ann Arbor, MI <br> CSA | $9,710,881$ | $2,365,542$ | 9,327 | 635,591 | $12,721,341$ | 79.0 | 89.5 |
| Grand Rapids-Wyoming- <br> Muskegon, MI CSA | $1,156,029$ | 422,402 | 2,390 | 53,815 | $1,634,636$ | 10.2 | 4.9 |
| Lansing-East Lansing-Owosso, <br> MI | 399,321 | 121,748 | 1,152 | 18,800 | 541,021 | 2.6 | 1.6 |
| Saginaw, MI MSA | 65,227 | 61,865 | 828 | 39,816 | 167,736 | 1.0 | 0.7 |
| Niles-Benton Harbor, MI MSA | 243,572 | 65,338 | 2,239 | 0 | 311,149 | 2.0 | 0.6 |
| Kalamazoo-Battle Creek-Portage, <br> MI CSA | 188,068 | 82,701 | 610 | 6,730 | 278,109 | 1.7 | 0.5 |
| Michigan Non-MSA | 424,042 | 141,826 | 4,737 | 1,850 | 572,455 | 3.6 | 2.3 |
| Total | $12,187,140$ | $3,261,422$ | 21,283 | 756,602 | $16,226,447$ | 100 | 100 |

*Due to rounding, totals may not equal $100.0 \%$. The tables present the data for all assessment areas. The narrative below addresses performance in full-
scope areas only.
Chase ranked first in deposits of 47 institutions with market share of 30.9 percent.
In overall HMDA lending, Chase ranked second with 5.8 percent market share. This is a highly competitive market with 695 mortgage lenders. No lender dominated the mortgage market. Other major home lenders with respective market shares are Quicken Loans (8.3 percent), Huntington National Bank (4.7 percent), and Wells Fargo Bank, N.A. (3.9 percent).

Chase ranked second in small loans to businesses with 19.5 percent market share. There are 167 lenders in the CSA. Other major lenders are American Express National Bank ( 20.6 percent), Citibank, N.A. (11.5 percent), and Bank of America, N.A. ( 6.6 percent).

Chase ranked first in small loans to farms with 30.8 percent market share. There were 24 lenders in the CSA. Other major lenders and market share are John Deere Financial, F.S.B. (18.6 percent), U.S. Bank, N.A. (13.8 percent) and Huntington National Bank (9.7 percent).

## Distribution of Loans by Income Level of the Geography

The bank exhibits adequate geographic distribution of loans in its AA.

## Home Mortgage Loans

Refer to Table O in the state of Michigan section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of home mortgage loan originations and purchases for this evaluation is adequate. The following information was taken into consideration when determining this rating.

- The limited proportion of housing units in low-income geographies, particularly OOUs ( 6.3 percent), constrained lending opportunities; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of OOUs in those geographies.
- The high level of competition in the AA ( 695 home mortgage lenders) was also considered and examiners placed greater significance on performance compared to the aggregate of lenders.
- Between 2017 and 2019, the proportion of loans in low-income areas was significantly below the proportion of OOUs in those geographies and well-below aggregate distribution of loans. The proportion of loans in moderate-income areas was below the proportion of OOUs in those geographies and near to the aggregate distribution of loans.
- The performance in low- and moderate-income geographies during the 2014 and 2016 time periods was inconsistent with 2017 to 2019. The proportion of loans in low-income geographies is significantly below the proportion of OOUs in those geographies and near to the aggregate distribution of loans. The proportion of loans in moderate-income geographies is well-below the proportion of OOUs and near to the aggregate distribution of loans.


## Small Loans to Businesses

Refer to Table Q in the state of Michigan section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to businesses.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to businesses for this evaluation is adequate. The following information was taken into consideration when determining this rating.

- During the 2017 to 2019 period, the proportion of loans to small businesses in low- and moderateincome geographies was well-below and below the proportion of businesses in low- and moderateincome geographies and below the aggregate distribution of loans in those areas.
- The performance during the 2014 to 2016 time periods was consistent with 2017-2019. Between 2104 and 2016, the proportion of loans to small businesses in low- and moderate-income geographies was well-below and below the proportion of businesses in low- and moderate-income geographies and near to the aggregate distribution of loans in those areas.


## Small Loans to Farms

Refer to Table $S$ in the state of Michigan section of appendix $D$ for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to farms.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to farms is good. The following information was taken into consideration when determining this rating.

- The limited percentage of farms in low-income geographies (4.6 percent) constrained lending opportunities; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of farms in those geographies.
- Farm lending is not a focus of the bank, therefore, examiners placed greater significance on performance compared to aggregate of lender. Chase ranked first in deposit market share with 30.8 percent amongst the high level of competition in the AA ( 24 lenders).
- Between 2017 and 2019, the bank did not make any loans to small farms in low-income geographies and the proportion of loans to small farms in low-income geographies significantly below the proportion of farms in those geographies and the aggregate distribution.
- Between 2017 and 2019, the proportion of loans to small farms in moderate-income geographies was well-below to the proportion of farms in those geographies and below the aggregate distribution.
- Performance in low- and moderate-income geographies during the 2014 to 2016 period was better than the performance during the 2017 to 2019 period. The proportion of loans to small farms in lowincome geographies was well below the proportion of farms in those geographies and exceeded the aggregate distribution. The proportion of loans to small farms in moderate-income geographies near to the proportion of farms in those geographies and exceeded the aggregate distribution.


## Lending Gap Analysis

A review of home mortgage loans, small loans to business, and small loans to farms including summary reports and AA maps did not identify any unexplained conspicuous lending gaps in the bank's activities.

## Distribution of Loans by Income Level of the Borrower

The bank exhibits a good distribution of loans among individuals of different income levels and business and farms of different sizes, given the product lines offered by the bank.

## Home Mortgage Loans

Refer to Table P in the state of Michigan section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall borrower distribution of home mortgage loans originations and purchases is good. The following information was taken into consideration when determining this rating.

- Greater significance was placed on performance against the aggregate distribution as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of this Full-Scope AA.
- Examiners particularly considered housing affordability challenges for low- and moderate-income borrowers.
- Between 2017 and 2019, the proportion of loans to low-income borrowers was well below the percentage of low-income families and near to the aggregate distribution of lenders. The proportion of moderate-income loans exceeded the proportion of moderate-income families and the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 to 2019. The proportion of loans to low-income borrowers was well below the percentage of lowincome families and near to the aggregate distribution of lenders. The proportion of moderateincome loans exceeded the proportion of moderate-income families and was near to the aggregate distribution.


## Small Loans to Businesses

Refer to Table R in the state of Michigan section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to businesses

Based on the data in the tables and the following factors, the distribution of the bank's originations and purchases of small loans to businesses by revenue category is good. The following information was taken into consideration when determining this rating.

- Greater significance was placed on performance against the aggregate distribution of lenders as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of Full-Scope AA.
- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and significantly exceeded the aggregate distribution.
- Performance against both the aggregate and borrower distribution in 2014 through 2016 were consistent with 2017-2019. The bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and significantly exceeded the aggregate distribution.


## Small Loans to Farms

Refer to Table T in the state of Michigan section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to farms.

Based on the data in the table and the following considerations, the distribution of the bank's originations and purchases of small loans to farms by revenue category is good. The following information was taken into consideration when determining this rating.

- Between 2017 and 2019, the bank's percentage of loans to farms with revenues of $\$ 1$ million or less was below the percentage of businesses and substantially exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 and 2019. The bank's percentage of loans to farms with revenues of $\$ 1$ million or less was below the percentage of businesses and substantially exceeded the aggregate distribution.


## Community Development Lending

The bank is a leader in making CD loans.
The Lending Activity Tables, shown above, set forth the information and data used to evaluate the bank's level of CD lending. These tables include all CD loans, including multifamily loans that also qualify as CD loans.

There were 71 CD loans made for a total of $\$ 635$ million. This represents 12.4 percent of tier 1 capital allocated to the AA. The majority of the CD loans, 71.8 percent, were for community service purposes, which is a critical need in this AA.

Examples of CD loans in the AA include:

- In August 2016, Chase renewed a $\$ 100$ million line of credit to a foundation based in Troy, MI. Funding was used for general working capital and for work to expand opportunities in Detroit through grant making and investing in arts and culture, education, the environment, health, human services, and community development efforts, particularly in the city of Detroit.
- Chase made 26 loans over the period to Detroit Public Schools, amounting to $\$ 19.7$ million, to continue their effort to implement best practices regarding curriculum, academic intervention, and school improvements. The school system has 74.2 percent of the students who are eligible for the Federal Free or Reduced Lunch program.


## Product Innovation and Flexibility

The bank makes extensive use of innovative and/or flexible lending practices in order to serve AA credit needs. As shown in the table below, the bank originated 11,342 loans totaling nearly $\$ 1.6$ billion in the AA. Refer to the comments in the Product Innovation and Flexibility section of this performance evaluation for additional details regarding the programs.

| Loan Type | Number of <br> Loans | Dollar Amount <br> $\mathbf{( \$ 0 0 0 ' s )}$ |
| :--- | :---: | :---: |
| DreaMaker | 2,495 | 402,973 |
| FHA | 2,972 | 336,025 |
| HARP | 2,153 | 272,624 |
| VA | 772 | 148,645 |
| SBA | 521 | 149,041 |
| USDA | 2,429 | 299,623 |

## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall High Satisfactory Lending Test rating and did not significantly change the initial overall conclusions based on the AA receiving full-scope review. Based on limited-scope reviews, the bank's performance under the Lending Test in the Grand Rapids-Wyoming-Muskegon MSA, Kalamazoo-Battle Creek-Portage CSA, Lansing-East Lansing-Owosso MSA, Niles-Benton Harbor MSA, Saginaw MSA, and Michigan Non-MSA is weaker than the bank's overall good performance under the Lending Test in the full-scope area. Performance is weaker primarily due to lower levels of CD lending.

Refer to Tables O through T in the state of Michigan section of appendix D for the facts and data that support these conclusions.

## INVESTMENT TEST

The bank's performance under the Investment Test in the state of Michigan is rated Outstanding.

## Conclusions for Area Receiving a Full-Scope Review

Based on a full-scope review, the bank's performance in the Detroit CSA is excellent.
The bank has an excellent level of qualified CD investments and grants, often in a leadership position, particularly those that are not routinely provided by private investors. The current and prior period qualified investments represent 8.7 percent of tier 1 capital allocated to the AA. Nearly 94 percent of total investments represent current period investments.

The bank exhibits excellent responsiveness to credit and community economic development needs. The bank investments included 46.9 percent supporting revitalization/stabilization efforts, 31.2 percent supporting community services, 20.6 percent supporting affordable housing, and 1.3 percent supporting economic development. In total, 3,214 low- and moderate-income new housing units were created, and 9,777 housing units were retained.

The bank makes occasional use of innovative and/or complex investments to support CD initiatives. Twenty-two ( 29 percent of the total dollar amount) of current investments are considered complex. Additionally, 15.8 percent of the total dollar amount of prior investments still outstanding are considered complex. Both current and prior period investments are Direct Investment LIHTC transactions and NMTC financings. Of the 60 current period investments, 50 percent of the total dollar amount are considered catalyst investments that will encourage future growth and improvements or are part of local government plans for community revitalization/stabilization. The bank plays a leadership role in helping the City of Detroit strengthen its redevelopment efforts. The bank is investing $\$ 100$ million over a five-year period to accelerate blight removal, help residents prepare for new jobs and provide funds for home loans.

| Qualified Investments - State of Michigan |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area (AA) | Prior Period* |  | Current Period |  | Total |  |  |  | Unfunded Commitments** |  |
|  | \# | \$(000's) | \# | \$(000's) | \# | \% of Total \# | \$(000's) | \% of <br> Total \$ | \# | \$(000's) |
| Full Review: |  |  |  |  |  |  |  |  |  |  |
| Detroit-Warren-Ann Arbor CSA | 106 | 27,240 | 295 | 418,074 | 401 | 61.88 | 445,314 | 70.97 | 0 | 0 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |
| Grand Rapids-KentwoodMuskegon CSA | 34 | 16,866 | 39 | 69,749 | 73 | 11.27 | 86,615 | 13.80 | 0 | 0 |
| Kalamazoo-Battle CreekPortage CSA | 14 | 6,853 | 8 | 25,973 | 22 | 3.40 | 32,825 | 5.23 | 0 | 0 |
| Lansing-East LansingOwosso CSA | 21 | 496 | 7 | 15,739 | 28 | 4.32 | 16,235 | 2.59 | 0 | 0 |
| Saginaw CSA | 5 | 295 | 3 | 399 | 8 | 1.23 | 695 | 0.11 | 0 | 0 |
| Niles MSA | 2 | 31 | 2 | 1,906 | 4 | 0.62 | 1,937 | 0.31 | 0 | 0 |
| MI Non-Metro AA | 9 | 454 | 9 | 5,186 | 18 | 2.78 | 5,640 | 0.90 | 0 | 0 |
| Statewide Investments with Purpose, Mandate, or Function to Serve AAs | 0 | 0 | 32 | 36,314 | 32 | 4.94 | 36,314 | 5.79 | 0 | 0 |
| Statewide Investments with Purpose, Mandate, or Function to Serve AAs | 60 | 1,873 | 2 | 28 | 62 | 9.57 | 1,901 | 0.30 | 0 | 0 |

Prior Period Investments' means investments made in a previous evaluation period that are outstanding as of the examination date. Unfunded Commitments' means legally binding investment commitments that are tracked and recorded by the institution's financial reporting system.

Examples of CD Investments in the AA include:

- The bank made two LIHTC investments totaling $\$ 33.2$ million for the rehabilitation of a historic, 10story, apartment building located in Detroit. The overall project consisted of 91 units in two separately financed phases. All are affordable to low- and moderate-income senior residents. Some units are fully accessible for residents with physical impairments or for residents with hearing or visual impairments.
- The bank made two NMTC investment totaling $\$ 11.9$ million to help a company fund two capital intensive projects/new product lines in Detroit, Michigan and Toledo, Ohio. For this investment, $\$ 5.9$ million was allocated to the Detroit AA. This manufacturing capacity expansion allowed for the addition of a primary customer, supported a new product offering, and expanded assembly support for multiple automotive manufacturers. The investments serve as a catalyst for other community development activities as it is part of a local government plan for revitalization or stabilization that will encourage future growth and improvements in the area.


## Statewide Investments in State of Michigan

The bank has 94 current and prior period investments totaling $\$ 38.2$ million with and without a $\mathrm{P} / \mathrm{M} / \mathrm{F}$ to serve AAs in the state of Michigan. These CD investments primarily support affordable housing with support for community services and revitalization/stabilization to a lesser extent. Qualified investments in the broader statewide or regional area represent 6.0 percent of total qualified investments in the state of Michigan. These investments enhanced the bank's overall performance in the state of Michigan.

## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall Outstanding Investment Test rating and did not significantly change the initial overall conclusions based on the AA receiving a fullscope review. Based on limited-scope reviews, the bank's performance in the Grand Rapids-WyomingMuskegon CSA, Lansing-East Lansing-Owosso CSA and Kalamazoo-Battle Creek-Portage CSA is consistent with the overall excellent performance under the Investment Test in the full-scope area. Strong performance is due to a higher level of investments in relation to allocated tier 1 capital. The bank's performance under the Investment Test in the Niles-Benton Harbor MSA, the Saginaw MSA, and the Michigan Non-Metro AA is weaker than the bank's overall excellent performance under the Investment Test in the full-scope area. Weaker performance is due to a lower level of qualified investments.

## SERVICE TEST

The bank's performance under the Service Test in state of Michigan is rated Outstanding.

## Conclusions for Area Receiving a Full-Scope Review

Based on a full-scope review, the bank's performance in the Detroit CSA is excellent.

## Retail Banking Services

Service delivery systems are readily accessible to geographies and individuals of different income levels in the bank's full-scope AA.

Examiners evaluated the data as outlined in the Scope section at the front of this document including bank-provided data on usage of branches adjacent to low-and moderate-income geographies by individuals residing in those geographies and on increases in the usage of alternative delivery systems.

## Detroit CSA

Based on the data in the table below and performance context, the branch distribution is excellent. In low- and moderate-income geographies, the distribution is respectively near to and below the percentage of the population. The bank had 16 branches in low-income geographies and 24 branches in moderateincome geographies. The distribution was augmented by six MUI tract branches that serve low-income tracts and 23 MUI tract branches that serve moderate-income tracts. Examiners reviewed data on the accounts held and transactions conducted at the MUI branches and confirmed they were serving the adjacent low- and moderate-income populations.

| Distribution of Branch Delivery System |  |  |  |  |  |  |  | As of December 31, 2019 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Deposits | Branches |  |  |  |  |  |  |  |  |  |
| Assessment | \% of Rated Area | \# of <br> BANK <br> Branches | \% of <br> Rated <br> Area <br> Branches in AA | Location of Branches by Income of Geographies (\%) |  |  |  | \% of Population within Each Geography |  |  |  |
| Area | Deposits in AA |  |  | Low | Mod | Mid | Upp | Low | Mod | Mid | Upp |
| Detroit- <br> Warren-Ann <br> Arbor CSA | 89.5 | 153 | 73.2 | 10.5 | 15.7 | 37.9 | 35.3 | 10.7 | 22.9 | 34.5 | 31.5 |

[^118]Alternative delivery systems enhanced the delivery of banking services to geographies and individuals of all income levels. The OCC considered the availability and use of alternative delivery systems over the evaluation period. This included review of the bank's 392 deposit-taking ATMs, online banking, mobile banking, and telephone banking to determine the effectiveness of these systems to make retail banking services available to individuals in low- and moderate-income geographies. The bank increased the deposit-taking ATMs in low- and moderate-income geographies by 13.3 percent over the prior rating period to ten ( 4.0 percent) deposit-taking ATMs in low-income geographies and 41 (16.6 percent) ATMs in moderate-income geographies. Additionally, bank-provided data on use of online, mobile, and telephone banking showed increases in the adoption of these services by low- and moderate-income individuals from the prior rating period.

| Distribution of Branch Openings/Closings |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | \# of Branch Openings | \# of Branch Closings* | Net change in Location of Branches (+ or -) |  |  |  |
|  |  |  | Low | Mod | Mid | Upp |
| Detroit-Warren-Ann Arbor CSA | 0 | 45 | -4 | -7 | -25 | -8 |

$\left({ }^{*}\right)$ There is one branch closure in a geography that has not been assigned an income classification and is referred to as NA.
The bank's opening and closing of branches, has adversely affected the accessibility of its delivery systems, particularly in low- and moderate-income geographies and/or to low- and moderate-income individuals. The bank closed four branches in low-income geographies and seven branches in moderateincome geographies. Branch closures were due to the bank's strategy to exit the market, reduced customer usage, and proximity to other Chase branches. Despite the branch closures, branch locations remained accessible to geographies and individuals of different income levels in the bank's AA due to the proximity of branches in MUI tracts used by individuals in low- and moderate-income tracts.

Services, including where appropriate, business hours, do not vary in a way that inconveniences its AA, particularly low- and moderate-income geographies and/or individuals. Generally, branches are open Monday through Thursday from 9:00 am to 5:00 pm, Friday from 9:00 am to 6:00 pm and Saturday from 9:00 am to 1:00 pm. All retail banking services are available at all branches within the low- and moderate-income geographies.

## Community Development Services

The bank was a leader in providing CD services that are responsive to AA needs.
Bank records show that employees provided 3,844 CD service activities to 100 organizations, logging 27,704 qualified hours which benefitted more than 12,700 low- and moderate-income individuals. All of the bank's assistance were to organizations that provide community services to low- and moderateincome individuals and families. The bank's community development services were responsive to the community needs in the AA, particularly homeownership counseling and financial literacy. The following are examples of CD services provided:

- The bank was responsive to a significant need in the AA by providing more than 210 financial literacy training sessions to more than 5,300 low- and moderate-income individuals. The bank partnered with a non-profit organization to provide financial capability and literacy education programs for citizens re-entering society after incarceration.
- The bank provided 142 homebuyer workshops and seminars to 4,211 low- and moderate-income individuals.


## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall Outstanding Service Test rating and did not significantly change the initial overall conclusions based on the AAs receiving fullscope review. Based on limited-scope reviews, the bank's performance under the Service Test in the Lansing-East Lansing-Owosso, MI and MI Non-Metro AAs is consistent with the bank's overall performance under the Service Test in the full-scope area. The bank's performance in the Grand Rapids-Kentwood-Muskegon, MI; Kalamazoo-Battle Creek-Portage, MI; Niles-Benton Harbor MI; and Saginaw-Midland-Bay City, MI AAs is weaker than the bank's overall performance under the Service Test in the full-scope area due to weaker branch distribution in low- and moderate-income geographies.

## State Rating

## State of Nevada

CRA rating for the State of Nevada ${ }^{20}$ : Satisfactory
The Lending Test is rated: High Satisfactory
The Investment Test is rated: Outstanding
The Service Test is rated: High Satisfactory
The major factors that support this rating include:

- A good level of lending activity.
- An adequate geographic distribution of home mortgage loans and small loans to businesses.
- A good borrower distribution of home mortgage loans and small loans to businesses.
- A relatively high level of CD loans that positively affected the rating
- The extensive use of innovative/flexible products that positively affected the rating.
- An excellent level of CD investments that displayed excellent responsiveness to credit and community economic development needs.
- The extensive use of innovative and/or complex qualified investments.
- Retail service delivery systems that are reasonably accessible to geographies and individuals of different income levels.
- Leadership in providing CD services that are responsive to AA needs.


## Description of Institution's Operations in Nevada

The state of Nevada is Chase's $18^{\text {th }}$ largest rating area based on its total deposits of $\$ 4.3$ billion, representing 0.3 percent of the bank's total deposits. As of December 31, 2019, the bank operated 56 branches and 179 deposit-taking ATMs within the rating area, representing 1.1 percent of total branches and 1.1 percent of total ATMs. The bank originated and purchased approximately $\$ 4.2$ billion in loans or 0.6 percent of total bank loan originations and purchases during the evaluation period in the state.

According to FDIC Deposit Market Share Data, as of June 30, 2019, there were 50 banks s operating 492 branches s in the state of Nevada. The bank maintained 52 offices with deposits of $\$ 4.3$ billion ranking it $9^{\text {th }}$ in deposit market share with 1.6 percent. Charles Schwab Bank was ranked $1^{\text {st }}$ in deposit market share with 69.9 percent, followed by Wells Fargo Bank, N.A. with 6.7 percent and Bank of America, N.A. with 5.7 percent.

The bank delineated two AAs in the state of Nevada. The Las Vegas-Henderson-Paradise, NV MSA (Las Vegas MSA) accounts for 97.0 percent of the bank's deposits and 98.8 percent of loans in Nevada and received a full-scope review. The Reno MSA received a limited-scope review. The delineated AAs are described in appendix A.

## Description of Full-Scope AA

The following table provides a summary of the demographics that includes housing and business information for the Las Vegas MSA. Table A indicates that the volume of OOUs is small in low-

[^119]income census tracts ( 1.9 percent) and over 20.7 percent of families in the AA are low-income. The Las Vegas MSA's cost of housing also limits access to affordable homeownership among LMI borrowers. The median housing value in the Las Vegas MSA is 2.8 times the median income, 3.5 times the moderate-income, and 5.6 times the low-income, indicating a proportion of OOUs are unaffordable to most low-income and many moderate-income borrowers. One simplistic method used to determine housing affordability assumes a maximum monthly principal and interest payment of no more than 36 percent of the applicant's income.

In the Las Vegas MSA, assuming a 30-year mortgage with a 5.0 percent interest rate, 3.0 down payment, and not accounting for homeowners insurance, real estate taxes, or any additional monthly expenses, a low-income borrower making $\$ 29,997$ per year (or less than 50 percent of the FFIEC adjusted median family income in the MSA) could afford a $\$ 91,774$ mortgage with a payment of $\$ 900$ per month; a moderate-income borrower earning $\$ 47,994$ per year (or less than 80 percent of the FFIEC adjusted median family income in the AA) could afford a $\$ 177,575$ mortgage with a payment of $\$ 1,440$ per month.

Median rents and the significant percentage of families below poverty level suggest rental housing is also unaffordable for many low-income residents.

| Table A - Demographic Information of the Assessment Area |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area: 332 Las Vegas-Henderson NV-AZ CSA 2017-2019 |  |  |  |  |  |  |  |

Source: 2015 ACS and 2019 D\&B Data
Due to rounding, totals may not equal $100.0 \%$
(*) The NA category consists of geographies that have not been assigned an income classification.

## Economic Data

According to the November 2019 Moody's Analytics Report, tourism is a key driver of the economy in the area led by gaming and entertainment. Las Vegas visitor volume is up 0.5 percent year to date through October, better than the 1.0 percent drop during the same period in 2018. Hotel occupancy is
rebounding, and gaming revenue is increasing. Furthermore, $\$ 16.2$ billion in tourism-related construction projects are scheduled to be completed over the next five years. Construction employment is rising and while it accounts for only 7 percent of employment in the area, it is responsible for 60.0 percent of the jobs created over the last year. Construction will remain a vital secondary driver of the economy. Major employment industries include leisure and hospitality services; professional and business services; and retail trade. Major employers in the area include MGM Resorts International; Caesar's Entertainment Corp; Station Casino Inc.; and Wynn Las Vegas LLC.

Moody's Analytics also states that after rising at one of the fastest paces among metro areas last year, house price appreciation in the area recently dipped below the U.S. average. Inventory has improved over the past year, but a four-month supply of homes for sale is still well below the six-month supply in a balanced market. Many potential homebuyers were priced out of the market last year as house prices rose twice as fast as incomes. An increase in construction of more affordable homes and multifamily units will support home sales over the near term.

## Community Contacts

A review was conducted of three community contacts completed during the examination period. The contacts were completed with organizations focused on affordable housing and small business support. Contacts noted that the area is experiencing strong economic growth which is leading to a higher cost of living. Much of the housing that is being constructed is geared towards middle and upper-income borrowers making it more difficult for first time home buyers and low-income households to secure long term housing. Contacts also noted that there are opportunities available for area banks to provide support for small businesses. Identified community needs include:

- Financing for small businesses with a particular emphasis on smaller dollar loans and loans for startup businesses
- Affordable multi-family housing development
- Flexible first-time home buyers' programs, including down payment assistance programs


## Scope of Evaluation in Nevada

The rating for the state of Nevada is based on an evaluation of the bank's performance in AAs as listed in appendix A. The Las Vegas MSA AA accounts for a significant majority, 97.0 percent, of the bank's deposits in Nevada and received a full-scope review. The remaining AA in the state of Nevada received a limited-scope review. Performance in limited-scope AAs and its effect on the CRA rating are discussed at the end of each test.

## CONCLUSIONS WITH RESPECT TO PERFORMANCE TESTS IN NEVADA

## LENDING TEST

The bank's performance under the Lending Test in the state of Nevada is rated High Satisfactory.
Performance in AAs receiving limited-scope reviews was factored together with performance from AAs receiving full-scope reviews to determine the state's overall High Satisfactory Lending Test rating. Limited-scope conclusions did not significantly affect the initial overall conclusions based on the AAs receiving full-scope review.

## Conclusions for Area Receiving a Full-Scope Review

Based on a full-scope review, the bank's performance in the Las Vegas MSA is good. Overall good lending levels, good borrower distribution of loans and a relatively high level of CD lending, offset weaker adequate geographic distribution. Product innovation and flexibility was considered favorably when determining the rating.

## Lending Activity

Lending levels reflect good responsiveness to AA credit needs.
Examiners considered the number and amount of home mortgage, small business, and small farm loans originated or purchased relative to Chase's capacity based on deposits, competition, and market presence. Lending activity for home mortgage and small loans to businesses received the most weight in reaching conclusions. Respectively, home mortgage lending and small loans to businesses account for 31.3 percent and 68.4 percent of the loan volume in the state by number and 85.6 and 13.3 percent of loan volume by dollar. Small farm lending is not a strategic focus of the bank and received minimal weight in reaching conclusions. Farm loans represented 0.1 percent of the loan volume in the state by number and 0.02 percent loan volume by dollar.

| Number of Loans* |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home <br> Mortgage | Small <br> Business | Small <br> Farm | Community <br> Development | \% of <br> State <br> Total | \% State <br> Deposits |  |
| Las Vegas-Henderson-Paradise <br> MSA | 14,524 | 31,843 | 83 | 7 | 46,457 | 98.8 | 97.0 |
| Reno MSA | 189 | 352 | 9 | 0 | 550 | 1.2 | 3.0 |
| Total | 14,713 | 32,195 | 92 | 7 | 47,007 | 100.0 | 100.0 |

*The tables present the data for all assessment areas. The narrative below addresses performance in full-scope areas only.

| Dollar Volume of Loans* (in \$000s) |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Home <br> Assessment Area <br> Mortgage | Small <br> Business | Small <br> Farm | Community <br> Development | Total | \% of <br> State <br> Loans | \% State <br> Deposits |
| Las Vegas-Henderson- <br> Paradise MSA | $3,552,157$ | 558,962 | 1,030 | 48,712 | $4,160,861$ | 98.0 | 97.0 |
| Reno MSA | 80,779 | 4,258 | 110 | 0 | 85,147 | 2.0 | 3.0 |
| Total | $3,632,936$ | 563,220 | 1,140 | 48,712 | $4,246,008$ | 100.0 | 100.0 |

*The tables present the data for all assessment areas. The narrative below addresses performance in full-scope areas only.
Chase ranked fifth in deposits out of 42 institutions with 6.8 percent market share.
In overall home mortgage lending, Chase ranked sixth out of 551 lenders with a 2.9 percent market share. Other lenders in the market include Wells Fargo Bank, N.A. (8.8 percent), U.S. Bank, N.A. (7.7 percent), and Quicken Loans (4.8 percent).

In small loans to businesses, Chase ranked first out of 140 lenders with 15.3 percent market share. Other major lenders are Wells Fargo Bank, N.A. (14.4 percent), American Express National Bank (14.1 percent), and Bank of America, N.A. (10.8 percent).

In small loans to farms, Chase ranked first out of ten lenders with a 31.8 percent market share. The other major lenders are Wells Fargo Bank, N.A. (23.8 percent), U.S. Bank, N.A. (23.8 percent), and Bank of America, N.A. (9.5 percent).

## Distribution of Loans by Income Level of the Geography

The bank exhibits adequate geographic distribution of loans in its AA.

## Home Mortgage Loans

Refer to Table O in the state of Nevada section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of home mortgage loan originations and purchases for this evaluation is adequate. The following information was taken into consideration when determining this rating.

- Examiners considered the limited proportion of housing units in low-income geographies, particularly OOUs (1.9 percent), which constrained lending opportunities.
- The high level of competition in the AA was also considered and examiners placed greater significance on performance compared to the aggregate of lenders.
- Between 2017 and 2019, the proportion of loans in low- and moderate-income areas was below the percentage of owner-occupied units and aggregate distribution of loans.
- During 2014 through 2016, performance in low-income geographies was well below both the percentage of owner-occupied units and aggregate distribution of loans, while performance in moderate-income geographies was well below the percentage of owner-occupied units and below the aggregate distribution of loans.


## Small Loans to Businesses

Refer to Table Q in the state of Nevada section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to businesses.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to businesses for this evaluation is adequate. The following information was taken into consideration when determining this rating.

- Examiners considered the small proportion of businesses in low-income geographies (3.6 percent) and competition between lenders.
- Performance against the aggregate distribution of lenders was given additional consideration as it reflects the difficulties all lenders are experiencing due to the economic constraints discussed above under the Description of the Full-Scope AA. The economic data particularly indicates the high cost of doing business and limited labor force as challenges for businesses.
- Between 2017 and 2019, the proportion of small loans to businesses in low-income geographies was well below the proportion of businesses and below the aggregate distribution, while the proportion of small loans to businesses in moderate-income geographies was below both the proportion of businesses and the aggregate distribution.
- During 2014 to 2016, the proportion of small loans to businesses in low-income geographies was well below the proportion of businesses and below the aggregate distribution, while the proportion of small loans to businesses in moderate-income geographies was below both the proportion of businesses and the aggregate distribution.


## Small Loans to Farms

Refer to Table $S$ in the state of Nevada section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to farms.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to farms is excellent. The following information was taken into consideration when determining this rating.

- The limited number of farms in low-income geographies, (2.3 percent), constrained lending opportunities; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher number of farms in those geographies.
- The fact that farm lending is not a focus of the bank was also considered.
- Between 2017 and 2019, the proportion of loans to small farms in low- and moderate-income geographies exceeded both the proportion of farms in those geographies and the aggregate distribution of all lenders.
- During 2014 to 2016, the proportion of loans to small farms in low- and moderate-income geographies exceeded both the proportion of farms in those geographies and the aggregate distribution of all lenders.


## Lending Gap Analysis

A review of home mortgage loans, small loans to business, and small loans to farms including summary reports and AA maps did not identify any unexplained conspicuous lending gaps in the bank's activities.

## Distribution of Loans by Income Level of the Borrower

The bank exhibits good distribution of loans among individuals of different income levels and business of different sizes.

## Home Mortgage Loans

Refer to Table P in the state of Nevada section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall borrower distribution of home mortgage loan originations and purchases for this evaluation is good. The following information was taken into consideration when determining this rating.

- Greater significance was placed on performance against the aggregate distribution as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of the Full-Scope AA.
- Examiners particularly considered housing affordability challenges for low-income borrowers.
- Between 2017 and 2019, the proportion of loans to low-income borrowers was well below the percentage of low-income families and exceeded the aggregate distribution of lenders. The proportion of moderate-income loans exceeded both the proportion of moderate-income families and the aggregate distribution.
- During 2014 to 2016, the proportion of loans to low-income borrowers was well below the percentage of low-income families and exceeded the aggregate distribution of lenders. The proportion of moderate-income loans exceeded the proportion of moderate-income families and was near to the aggregate distribution.


## Small Loans to Businesses

Refer to Table R in the state of Nevada section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to businesses.

Based on the data in the tables and the following factors, the distribution of the bank's originations and purchases of small loans to businesses by revenue category is good. The following information was taken into consideration when determining this rating.

- Greater significance was placed on performance against the aggregate distribution of lenders as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of the Full-Scope AA.
- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 and 2019. The bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.


## Small Loans to Farms

Refer to Table T in the state of Nevada section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to farms.

Based on the data in the table and the following considerations, the distribution of the bank's originations and purchases of small loans to farms by revenue category is good. The following information was taken into consideration when determining this rating.

- Greater significance was placed on performance against the aggregate distribution of lenders as it reflects the difficulties all lenders are experiencing due to the economic constraints discussed above under the Description of the Full-Scope AA.
- The fact that farm lending is not a focus of the bank was considered.
- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was near to the percentage of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was near to the percentage of businesses and exceeded the aggregate distribution.


## Community Development Lending

The bank made a relatively high level of CD loans.
The Lending Activity Tables, shown above, set forth the information and data used to evaluate the bank's level of CD lending. These tables include all CD loans, including multifamily loans that also qualify as CD loans.

The bank originated seven CD loans totaling $\$ 48.7$ million. This represents 9.0 percent of the tier 1 capital allocated to the AA. All CD loans were for affordable housing purposes, which is a critical need in this AA.

Examples of CD loans in the AA include:

- In July 2018, Chase originated a $\$ 10.0$ million construction loan for the renovation of a 100 -unit public housing complex. The project consists of 19 one-story apartment buildings. Seniors occupy the rental units, with 80 units to be rent restricted at 30 percent to 50 percent of the AMI and 20 units are covered under a 20 -year HAP project-based Section 8 contract. Southern Nevada Regional Housing Authority (SNRHA) is the Sponsor and will also serve as the property manager. The mission of HAP is to develop low-income housing for eligible residents of the Las Vegas area.
- In September 2019, Chase originated a $\$ 9.8$ million construction loan to renovate affordable apartment units located in Las Vegas. The project consists of 125 units, with 117 units rent restricted to low- and moderate-income individuals and or families. Sixty-six units will undergo substantial renovation and 59 units will require minimal upgrades. A mix of elderly, non-elderly, and disabled individuals currently occupy the units. A 20-year HAP project-based Section 8 contract will cover all units.


## Product Innovation and Flexibility

The bank makes extensive use of innovative and/or flexible lending practices in order to serve AA credit needs. As outlined below, a total of 2,982 loans were funded totaling $\$ 594.0$ million. Refer to the comments in the Product Innovation and Flexibility section of this performance evaluation for additional details regarding the programs.

| Loan Type | Number of <br> Loans | Dollar Amount <br> (\$000's) |
| :--- | :---: | :---: |
| DreaMaker | 381 | 74,956 |
| FHA | 1,015 | 163,673 |
| HARP | 729 | 104,682 |
| VA | 634 | 157,176 |
| SBA | 161 | 83,284 |
| USDA | 62 | 10,225 |

## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall High Satisfactory Lending Test rating and did not significantly affect the initial overall conclusions based on the AAs receiving full-scope review. Based on a limited-scope review, the bank's performance under the Lending Test in the Reno MSA is weaker than the bank's overall performance under the Lending Test in the full-scope area due to weaker borrower distributions and no CD lending activity.

Refer to Tables O through T in the state of Nevada section of appendix D for the facts and data that support these conclusions.

## INVESTMENT TEST

The bank's performance under the Investment Test in the state of Nevada is rated Outstanding.

## Conclusions for Area Receiving a Full-Scope Review

Based on a full-scope review, the bank's performance in the Las Vegas MSA AA is rated excellent.
The bank has an excellent level of qualified CD investments and grants, particularly those that are not routinely provided by private investors. The current and prior period investments dollar volume represents 13.9 percent of tier 1 capital allocated to the AA. A significant majority, or 77.6 percent of total investments represent current period investments.

The bank exhibits excellent responsiveness to the needs identified in this AA. Seventy percent of the bank's CD investments focused on affordable housing, which is an identified credit need in the AA. Additionally, the bank provided 11 grants totaling $\$ 400,000$ to a variety of organizations that primarily support community service and economic development needs. All prior period investments are related to LIHTC investments that support affordable housing.

The bank makes extensive use of innovative and/or complex investments to support CD initiatives. Exclusive of grants, the bank made 10 current period CD Investments that included seven complex NMTC investments and LIHTC projects. NMTC funding serve as catalysts for revitalization or stabilization that encourages future economic development, while LIHTC projects include participations from federal and state governments, local housing agencies, and real estate developers.

Examples of CD investments in the AA include:

- The bank invested $\$ 12.0$ million in a LIHTC fund for affordable housing development in the AA. The bank does not use a syndicator but employs a multi-disciplined approach that focuses on the long-term nature of the investment. The bank performs all the functions a syndicator would perform
through in-house expertise. The bank conducts the underwriting, pricing, and due diligence prior to originating the investment. After origination, it monitors construction quality, lease-up and performance of the property through stabilization. Finally, the bank manages the asset for the entire fifteen- year hold period, ensuring compliance with the LIHTC program and conducting annual onsite inspections.
- The bank made three grants totaling $\$ 100,000$ to an entity that is responsive to the need of preparing low- and moderate-income job-seekers for middle skills jobs through employer partnership pipelines and/or on-the-job technical skills training in order to maximize the quality of life for each individual served. This promotes economic stability for low- and moderate-income individuals in the bank's AA.

| Qualified Investments -State of Nevada |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area (AA) | Prior Period* |  | Current Period |  | Total |  |  |  | $\begin{gathered} \text { Unfunded } \\ \text { Commitments** } \end{gathered}$ |  |
|  | \# | \$(000's) | \# | \$(000's) | \# | \% of <br> Total <br> \# | \$(000's) | \% of Total \$ | \# | \$(000's) |
| Full Review: |  |  |  |  |  |  |  |  |  |  |
| Las Vegas-HendersonParadise MSA | 16 | 17,821 | 21 | 57,296 | 37 | 60.6 | 75,117 | 87.4 | 0 | 0 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |
| Reno MSA | 7 | 7,006 | 2 | 1,506 | 9 | 14.8 | 8,513 | 9.9 | 0 | 0 |
| Statewide Investments with Purpose, Mandate, or Function (P/M/F) to Serve AAs | 0 | 0 | 10 | 2,184 | 10 | 16.4 | 2,184 | 2.6 | 0 | 0 |
| Statewide Investments with No Purpose, Mandate, or Function (P/M/F) to Serve AAs | 3 | 27 | 2 | 80 | 5 | 8.2 | 107 | 0.1 | 0 | 0 |

* Prior Period Investments' means investments made in a previous evaluation period that are outstanding as of the examination date.
** Unfunded Commitments' means legally binding investment commitments that are tracked and recorded by the institution's financial reporting system.


## Statewide Investment in the State of Nevada

The bank has qualified investments throughout the state of Nevada whose $\mathrm{P} / \mathrm{M} / \mathrm{F}$ include serving the AAs. Thirty-four percent support affordable housing, 58 percent support community services, and eight percent support economic development. Investments with no $\mathrm{P} / \mathrm{M} / \mathrm{F}$ to serve AAs support affordable housing. Investments with and without a P/M/F to serve AAs represent $26.7 \%$ of total state qualified investments. The investments all address an identified community development need. These investment in the broader statewide area further support the bank's overall excellent performance under the Investment Test in state of Nevada.

## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AA was factored into the state's overall Outstanding Investment Test rating and did not significantly change the initial overall conclusions based on the AA receiving fullscope review. Based on a limited-scope review, the bank's performance under the Investment Test in the Reno MSA AA is consistent with the bank's overall excellent performance under the Investment

Test in the full-scope area. Performance in the limited-scope area did not impact the bank's Investment Test rating for the state of Nevada.

## SERVICE TEST

The bank's performance under the Service Test in state of Nevada is rated High Satisfactory.

## Conclusions for Area Receiving a Full-Scope Review

Based on a full-scope review, the bank's performance in the Las Vegas MSA is good.

## Retail Banking Services

Service delivery systems are reasonably accessible to geographies and individuals of different income levels in the bank's AA.

Examiners evaluated the data as outlined in the Scope section at the front of this document including bank-provided data on usage of branches adjacent to low- and moderate-income geographies by individuals residing in those geographies and on increases in the usage of alternative delivery systems.

Based on the data in the table below and performance context, the branch distribution is adequate. In low- and moderate-income geographies, the distribution is respectively well below and below the percentage of the population. The bank had no branches in low-income geographies and eight branches in moderate-income geographies. The distribution was augmented by seven MUI tract branches that serve moderate-income tracts. Examiners reviewed data on the accounts held and transactions conducted at the MUI branches and confirmed they were serving the adjacent moderate-income populations.

| Distribution of Branch Delivery System |  |  |  |  |  |  |  | $\begin{gathered} \text { As of December 31, } 2019 \\ \hline \text { Population } \\ \hline \end{gathered}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Deposits | Branches |  |  |  |  |  |  |  |  |  |
|  | \% of Rated Area Deposits in AA | \# of <br> BANK <br> Branches | \% of <br> Rated <br> Area <br> Branches in $\mathbf{A A}$ | Location of Branches by Income of Geographies (\%) |  |  |  | \% of Population within Each Geography |  |  |  |
|  |  |  |  | Low | Mod | Mid | Upp | Low | Mod | Mid | Upp |
| Las VegasHenderson MSA | 100 | 49 | 100 | 0.0 | 16.3 | 49.0 | 34.7 | 5.0 | 25.3 | 39.2 | 30.3 |

* May not add up to 100 percent due to geographies with unknown tract income level and rounding

Alternative delivery systems enhanced the delivery of banking services to geographies and individuals of all income levels. The OCC considered the availability and use of alternative delivery systems over the evaluation period. This included review of the bank's 153 deposit-taking ATMs, online banking, mobile banking, and telephone banking to determine the effectiveness of these systems to make retail banking services available to individuals in low- and moderate-income geographies. The bank increased the deposit-taking ATMs in moderate-income geographies by 47.8 percent over the prior rating period to 34 (22.2 percent). There were no deposit-taking ATMs in low-income geographies. However, bankprovided data on use of online, mobile, and telephone banking systems showed increases in the adoption of these services by low- and moderate-income individuals from the prior rating period.

| Distribution of Branch Openings/Closings |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment <br> Area | \# of Branch <br> Openings | \# of Branch <br> Closings | Net change in Location of Branches <br> (+ or -$)$ |  |  |  |
|  |  | Low | Mod | Mid | Upp |  |
| Las Vegas- <br> Henderson <br> MSA | 4 | 4 | 0 | -1 | 0 | +1 |

The bank's opening and closing of branches has not adversely affected the accessibility of its delivery systems, particularly in low- and moderate-income geographies and/or to low- and moderate-income individuals. The bank did not open or close any branches in the low-income geographies and closed one branch in a moderate-income geography. Branch closures were due to reduced customer usage and unprofitability. Despite the branch closures, branch locations remained generally accessible to geographies and individuals of different income levels in the bank's AA.

Services, including where appropriate, business hours, do not vary in a way that inconveniences its AA, particularly low- and moderate-income geographies and/or individuals. Generally, branches are open Monday through Friday from 9:00 am to 6:00 pm and Saturday from 9:00 am to 2:00 pm. All retail banking services are available at all branches within the moderate-income geographies.

## Community Development Services

The bank was a leader in providing CD services that are responsive to AA needs.
Bank records show that employees provided their financial or job-specific expertise and/or technical assistance for 243 qualified CD service activities to 29 organizations since the last evaluation, logging a total of 1,032 hours. All the bank's assistance was to organizations that provide community services to low- and moderate-income individuals and families. The bank's community development services were very responsive to the community needs in the AA, particularly affordable housing, and financial literacy. The following are examples of CD services provided:

- The bank provided financial incentives to 108 low- and moderate-income homebuyers to take homebuyer education from third-party organizations.
- Eighteen bank employees provided financial literacy training to low- and moderate-income participants of a national nonprofit whose program teaches students the basic concepts of financial literacy as it relates to everyday economics and how they apply this information into adulthood.


## Conclusions for Area Receiving a Limited-Scope Review

Performance in the limited-scope AAs was factored into the state's overall High Satisfactory Service Test rating and did not significantly change the initial overall conclusions based on the AAs receiving full-scope review. Based on a limited-scope review, the bank's performance under the Service Test in the Reno MSA is consistent with the bank's overall performance under the Service Test in the full-scope area.

## State Rating

## State of New York

CRA rating for the State of New York ${ }^{\mathbf{2 1}}$ : Outstanding
The Lending Test is rated: High Satisfactory
The Investment Test is rated: Outstanding
The Service Test is rated: Outstanding
The major factors that support this rating include:

- A good level of lending activity.
- An adequate geographic distribution of home mortgage loans and small loans to businesses.
- A good borrower distribution of home mortgage loans and small loans to businesses.
- A relatively high level of CD loans that positively affected the rating
- The extensive use of innovative/flexible products that positively affected the rating.
- An excellent level of CD investments that displayed excellent responsiveness to credit and community economic development needs.
- The extensive use of innovative and/or complex qualified investments.
- Retail service delivery systems that are readily accessible to geographies and individuals of different income levels.
- Leadership in providing CD services that are responsive to AA needs.


## Description of Institution's Operations in New York

The state of New York is Chase's $20^{\text {th }}$ largest rating area based on its total deposits of $\$ 4.1$ billion, representing 0.3 percent of the bank's total deposits. As of December 31, 2019, the bank operated 38 branches and 71 deposit-taking ATMs within the rating area, representing 0.7 percent of total branches and 0.4 percent of total ATMs. The bank originated and purchased approximately $\$ 1.2$ billion in loans or 0.2 percent of total bank loan originations and purchases during the evaluation period in the state.

According to FDIC Deposit Market Share Data as of June 30, 2019, there were 211 banks operating 4,795 branches in the state of New York. The bank-maintained 702 offices with deposits of $\$ 573.7$ billion in the state, ranking $1^{\text {st }}$ in deposit market share with 32.9 percent. Major competitors in the state include The Bank of New York Mellon with 7.1 percent market share, Citibank, N.A. with 6.3 percent market share, and HSBC Bank with 6 percent market share.

The bank delineated three AAs in the state of New York. The Rochester, NY MSA (Rochester MSA), which accounts for 67.0 percent of the bank's deposits and 62.9 percent of loans in New York, received a full-scope review. The Syracuse MSA and NY Non-Metro AA received limited-scope reviews. The delineated AAs are described in appendix A.

## Description of Full-Scope AA

The following table provides a summary of the demographics that includes housing and business information for the Rochester MSA. Table A indicates that the volume of OOUs is small in low-income

[^120]census tracts ( 3.8 percent) and over 21.6 percent of families in the AA are low-income. The Rochester MSA's cost of housing also limits access to affordable homeownership among some low-income borrowers. The median housing value in the Rochester MSA is 1.9 times the median income, 2.5 times the moderate-income, and 3.9 times the low-income, indicating a proportion of OOUs are unaffordable to some low-income borrowers. One simplistic method used to determine housing affordability assumes a maximum monthly principal and interest payment of no more than 36 percent of the applicant's income.

In the Rochester MSA, assuming a 30 -year mortgage with a 5.0 percent interest rate, 3.0 down payment, and not accounting for homeowners insurance, real estate taxes, or any additional monthly expenses, a low-income borrower making $\$ 33,878$ per year (or less than 50 percent of the FFIEC adjusted median family income in the MSA) could afford a $\$ 110,250$ mortgage with a payment of $\$ 1,016$ per month; a moderate-income borrower earning \$54,206 per year (or less than 80 percent of the FFIEC adjusted median family income in the AA) could afford a $\$ 207,147$ mortgage with a payment of $\$ 1,626$ per month.

Median rents and the significant percentage of families below poverty level suggest rental housing is also unaffordable for many low-income residents.

| Table A - Demographic Information of the Assessment Area Assessment Area: 464 Rochester-Batavia-Seneca Falls NY MSA 2017-2019 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Demographic Characteristics | \# | Low <br> \% of \# | Moderate \% of \# | Middle \% of \# | Upper <br> \% of \# | $\begin{aligned} & \text { NA* } \\ & \text { \% of \# } \end{aligned}$ |
| Geographies (Census Tracts) | 241 | 18.3 | 17.0 | 37.8 | 24.5 | 2.5 |
| Population by Geography | 950,964 | 10.3 | 14.9 | 43.0 | 31.3 | 0.6 |
| Housing Units by Geography | 414,117 | 10.8 | 15.9 | 44.0 | 29.3 | 0.1 |
| Owner-Occupied Units by Geography | 252,842 | 3.8 | 11.9 | 48.0 | 36.2 | 0.0 |
| Occupied Rental Units by Geography | 127,650 | 21.8 | 22.3 | 36.5 | 19.3 | 0.1 |
| Vacant Units by Geography | 33,625 | 22.1 | 21.1 | 42.0 | 14.8 | 0.1 |
| Businesses by Geography | 56,730 | 10.0 | 13.8 | 41.2 | 34.8 | 0.2 |
| Farms by Geography | 1,864 | 2.1 | 9.3 | 58.1 | 30.5 | 0.1 |
| Family Distribution by Income Level | 235,828 | 21.6 | 16.8 | 19.8 | 41.8 | 0.0 |
| Household Distribution by Income Level | 380,492 | 24.2 | 16.0 | 17.2 | 42.6 | 0.0 |
| Median Family Income MSA - 40380 Rochester, NY MSA |  | \$67,757 | Median Housing Value |  |  | \$132,957 |
|  |  |  | Median Gross Rent |  |  | \$821 |
|  |  |  | Families Below Poverty Level |  |  | 10.3\% |

Source: 2015 ACS and 2019 D\&B Data
Due to rounding, totals may not equal 100.0\%
(*) The NA category consists of geographies that have not been assigned an income classification.

## Economic Data

According to the September 2019 Moody's Analytics Report, the Rochester area's strengths include stability and support to high wage jobs from educational institutions and hospitals; housing that is relatively affordable; and solid educational attainment relative to other upstate and western New York
peers. However, the area does suffer from persistent out-migration from younger residents and the labor market is tightening. The area has an over dependence on legacy manufacturers such as Kodak and Xerox, which have both been steadily contracting and laying off employees. Hopes that a photonics hub would leverage the metro area's key assets and revitalize the economy are fading. The national photonics institute that was announced four years ago and was initially projected to create 6,000 jobs has been slow to launch. A photonics firm that announced plans to expand in the Rochester area just over a year ago, has changed course and is now laying off workers. Major employment industries include education and health services; government; professional and business services; and manufacturing. Anchor institutions the University of Rochester and Rochester Regional Health System are significant contributors to the local economy and major employers. Other major employers include Wegmans Food Markets; Paychex, Inc; and Rochester Institute of Technology. Moody's notes that the cost of housing in the area is relatively affordable, however, inventory is tight. The lack of homes is suppressing sales and bidding wars from potential home buyers are becoming more commonplace.

## Community Contacts

A review was conducted of three community contacts completed with organizations serving the area during the examination period. One of the contacts was completed with an organization focused on affordable housing, while the other contact was the result of a listening session completed with a variety of organizations serving the community. These organizations focused on areas such as affordable housing; workforce development; community services; community advocacy; and financial education. Contacts noted that the area has a tight housing supply which makes it difficult for the neediest residents to find decent and affordable housing. The area has a high poverty rate and the percentage of children in Rochester who live in poverty is among the highest in the country. Contacts noted that there is a significant need for affordable mortgage loans for low- and moderate-income borrowers; loans for smaller sized businesses, and affordable auto loans for low-income individuals, particularly for those who have had past credit challenges. Contacts also noted the need to support revitalization and stabilization efforts in low- and moderate-income neighborhoods in the area. There is also a significant need for community development loans, investments, and services in the City, with many opportunities for banks to be more engaged.

## Scope of Evaluation in New York

The rating for the state of New York is based on an evaluation of the bank's performance in AAs as listed in appendix A. The Rochester MSA accounts for 67.0 percent of the bank's deposits in New York and received a full-scope review. The remaining two AAs in the state of New York received limitedscope reviews. Performance in limited-scope AAs and its effect on the CRA rating are discussed at the end of each test.

## CONCLUSIONS WITH RESPECT TO PERFORMANCE TESTS IN NEW YORK

## LENDING TEST

The bank's performance under the Lending Test in the state of New York is rated High Satisfactory.
Performance in AAs receiving limited-scope reviews was factored together with performance from AAs receiving full-scope reviews to determine the state's overall High Satisfactory Lending Test rating.

Limited-scope conclusions did not significantly affect the initial overall conclusions based on the AAs receiving full-scope review.

## Conclusions for Area Receiving a Full-Scope Review

Based on a full-scope review, the bank's performance in the Rochester MSA is good. Overall good lending levels, good borrower distribution of loans and a relatively high level of CD lending, offset weaker adequate geographic distribution. Product innovation and flexibility was considered favorably when determining the rating.

## Lending Activity

Lending levels reflect good responsiveness to AA credit needs.
Examiners considered the number and amount of home mortgage, small business, and small farm loans originated or purchased relative to Chase's capacity based on deposits, competition, and market presence. Lending activity for home mortgage and small loans to businesses received the most weight in reaching conclusions. Respectively, home mortgage lending and small loans to businesses account for 21.1 percent and 77.3 percent of the loan volume in the state by number and 60.2 and 33.6 percent of loan volume by dollar. Small farm lending is not a strategic focus of the bank and received minimal weight in reaching conclusions. Farm loans represented 1.4 percent of the loan volume in the state by number and 0.30 percent loan volume by dollar.

| Number of Loans* |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home <br> Mortgage | Small <br> Business | Small <br> Farm | Community <br> Development | \% <br> Total | State <br> Loans | Deposits |
| Rochester, NY MSA | 2,758 | 12,613 | 216 | 10 | 15,597 | 62.9 | 67.0 |
| Syracuse, NY MSA | 2,217 | 5,656 | 105 | 7 | 7,985 | 32.2 | 29.7 |
| NY Non-Metro AA | 268 | 908 | 36 | 3 | 1,215 | 4.9 | 3.2 |
| Total | 5,243 | 19,177 | 357 | 20 | 24,797 | 100 | 100 |

*Due to rounding, totals may not equal $100.0 \%$. The tables present the data for all assessment areas. The narrative below addresses performance in full-scope areas only.

| Dollar Volume of Loans* (in \$000s) |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Home <br> Mortgage | Small <br> Business | Small <br> Farm | Community <br> Development | Total | \% <br> State <br> Loans | \% State <br> Deposits |
| Rochester, NY MSA | 381,560 | 231,278 | 2,108 | 37,825 | 652,771 | 55.8 | 67.0 |
| Syracuse, NY MSA | 278,011 | 147,192 | 451 | 19,785 | 445,439 | 38.1 | 29.7 |
| NY Non-Metro AA | 45,106 | 15,333 | 972 | 10,190 | 71,601 | 6.1 | 3.2 |
| Total | 704,677 | 393,803 | 3,531 | 67,800 | $1,169,811$ | 100 | 100 |

*Due to rounding, totals may not equal $100.0 \%$. The tables present the data for all assessment areas. The narrative below addresses performance in full-scope areas only.

Chase ranked second in deposits out of 19 institutions with 14.3 percent market share.
In overall home mortgage lending, Chase ranked 16th out of 279 lenders with a 2.2 percent market share. Other lenders in the market include ESL Federal Credit Union (17.6 percent), Wells Fargo Bank, N.A. ( 7.5 percent), and Premium Mortgage Corporation ( 5.8 percent).

In small loans to businesses, Chase ranked second out of 96 lenders with 17.3 percent market share. Other major lenders are M\&T Bank ( 21.6 percent), Canandaigua National Bank ( 15.5 percent), and KeyBank National Association (6.9 percent).

In small loans to farms, Chase ranked third out of 17 lenders with a 15.5 percent market share. The other major lenders are USNY Bank (27.0 percent), John Deere Financial, F.S.B. (18.1 percent), and Community Bank, N.A. (10.1 percent).

## Distribution of Loans by Income Level of the Geography

The bank exhibits an adequate geographic distribution of loans in its AA.

## Home Mortgage Loans

Refer to Table O in the state of New York section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of home mortgage loan originations and purchases for this evaluation is good. The following information was taken into consideration when determining this rating.

- Examiners considered the limited proportion of housing units in low-income geographies, particularly OOUs ( 3.8 percent), which constrained lending opportunities.
- The high level of competition in the AA was also considered and examiners placed greater significance on performance compared to the aggregate of lenders.
- Between 2017 and 2019, the proportion of loans in low-income areas was well below the percentage of owner-occupied units and aggregate distribution of loans. In moderate-income areas the proportion of loans was below the percentage of owner-occupied units and near to the aggregate distribution of loans.
- During 2014 through 2016, performance in low-income geographies was well below both the percentage of owner-occupied units and aggregate distribution of loans, while performance in moderate-income geographies was near to the percentage of owner-occupied units and exceeded the aggregate distribution of loans.


## Small Loans to Businesses

Refer to Table Q in the state of New York section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to businesses.

Based on the data in the table and the following considerations, the distribution of the bank's originations and purchases of small loans to businesses by revenue category is adequate. The following information was taken into consideration when determining this rating.

- Examiners considered the small proportion of businesses in low-income geographies ( 10.0 percent) and competition between lenders.
- Performance against the aggregate distribution of lenders was given additional consideration as it reflects the difficulties all lenders are experiencing due to the economic constraints discussed above under the Description of the Full-Scope AA. The economic data particularly indicates the high cost of doing business and limited labor force as challenges for businesses.
- Between 2017 and 2019, the proportion of small loans to businesses in low- and moderate-income geographies was below both the proportion of businesses and the aggregate distribution.
- During 2014 to 2016, the proportion of small loans to businesses in low-income geographies was well below the proportion of businesses and below the aggregate distribution, while the proportion of small loans to businesses in moderate-income geographies was well below both the proportion of businesses and the aggregate distribution.


## Small Loans to Farms

Refer to Table S in the state of New York section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to farms.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to farms is poor. The following information was taken into consideration when determining this rating.

- The limited number of farms in low-income geographies (2.1 percent) constrained lending opportunities; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher number of farms in those geographies.
- The fact that farm lending is not a focus of the bank was also considered.
- Between 2017 and 2019, the proportion of loans to small farms in low-income geographies was well below the proportion of farms in those geographies and exceeded the aggregate distribution of all lenders. The proportion of loans to small farms in moderate-income geographies was well below both the proportion of farms in those geographies and the aggregate distribution of all lenders.
- During 2014 to 2016, the proportion of loans to small farms in low- and moderate-income geographies was well below both the proportion of farms in those geographies and the aggregate distribution of all lenders.


## Lending Gap Analysis

A review of home mortgage loans, small loans to business, and small loans to farms including summary reports and AA maps did not identify any unexplained conspicuous lending gaps in the bank's activities.

## Distribution of Loans by Income Level of the Borrower

The bank exhibits a good distribution of loans among individuals of different income levels and business of different sizes.

## Home Mortgage Loans

Refer to Table P in the state of New York section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall borrower distribution of home mortgage loan originations and purchases for this evaluation is good. The following information was taken into consideration when determining this rating.

- Greater significance was placed on performance against the aggregate distribution as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of the Full-Scope AA.
- Examiners particularly considered housing affordability challenges for low-income borrowers.
- Between 2017 and 2019, the proportion of loans to low-income borrowers was below the percentage of low-income families and near to the aggregate distribution of lenders. The proportion of moderate-income loans exceeded the proportion of moderate-income families and was near to the aggregate distribution.
- During 2014 to 2016 the proportion of loans to low-income borrowers was below the percentage of low-income families and exceeded the aggregate distribution of lenders. The proportion of moderate-income loans exceeded the proportion of moderate-income families and was below the aggregate distribution.


## Small Loans to Businesses

Refer to Table R in the state of New York section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to businesses.

Based on the data in the tables and the following factors, the distribution of the bank's originations and purchases of small loans to businesses by revenue category is good. The following information was taken into consideration when determining this rating.

- Greater significance was placed on performance against the aggregate distribution of lenders as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of the Full-Scope AA.
- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 and 2019. The bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.


## Small Loans to Farms

Refer to Table T in the state of New York section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to farms.

Based on the data in the table and the following considerations, the distribution of the bank's originations and purchases of small loans to farms by revenue category is good. The following information was taken into consideration when determining this rating.

- Greater significance was placed on performance against the aggregate distribution of lenders as it reflects the difficulties all lenders are experiencing due to the economic constraints discussed above under the Description of the Full-Scope AA.
- The fact that farm lending is not a focus of the bank was considered.
- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.


## Community Development Lending

The bank made a relatively high level of CD loans.
The Lending Activity Tables, shown above, set forth the information and data used to evaluate the bank's level of CD lending. These tables include all CD loans, including multifamily loans that also qualify as CD loans.

The bank made 10 CD loans totaling $\$ 37.8$ million, which represents 11.0 percent of the tier 1 capital allocated to the AA. The majority of the CD loans, or 65.3 percent, were for affordable housing purposes, which is a critical need in this AA.

Examples of CD loans in the AA include:

- In October 2019, Chase originated a $\$ 7.4$ million construction loan to partially finance the development of an apartment complex located in Brockport, NY (Monroe County). The project will consist of 48 units of affordable housing available to households earning between 50 percent and 60 percent of the AMI. There will be eight units set aside for persons with physical disabilities and/or traumatic brain injuries with supportive services to be provided for them.
- In March 2017, Chase originated an $\$ 8.8$ million loan for the construction and rehabilitation of affordable housing in a low-income region of Rochester, NY. The project includes an existing threestory building, which was converted from a commercial space to residential units. The property will contain a total of 72 mixed-income affordable units with 68 units being restricted to 60 percent of the AMI. In addition, 16 of the units are set aside for tenants with intellectual and developmental disabilities.


## Product Innovation and Flexibility

The bank makes extensive use of innovative and/or flexible lending practices in order to serve AA credit needs. As shown in the table below, the bank originated 774 loans totaling $\$ 80.4$ million in the AA.

Refer to the comments in the Product Innovation and Flexibility section of this performance evaluation for additional details regarding the programs.

| Loan Type | Number of <br> Loans | Dollar Amount <br> (\$000's) |
| :--- | :---: | :---: |
| DreaMaker | 131 | 14,492 |
| Federal Housing Administration (FHA) | 273 | 24,052 |
| U.S. Department of Agriculture (USDA) | 256 | 25,977 |
| Veteran's Administration (VA) | 67 | 10,792 |
| Home Affordable Refinance Program (HARP) | 34 | 3,169 |
| Small Business Administration (SBA) | 13 | 1,968 |

## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall High Satisfactory Lending Test rating and did not significantly affect the initial overall conclusions based on the AAs receiving full-scope review. Based on limited-scope reviews, the bank's performance in the Syracuse MSA and NY Non-Metro AA is consistent with the bank's overall performance under the Lending Test in the fullscope area.

Refer to Tables O through T in the state of New York section of appendix D for the facts and data that support these conclusions.

## INVESTMENT TEST

The bank's performance under the Investment Test in the state of New York is rated Outstanding.

## Conclusions for Area Receiving a Full-Scope Review

Based on a full-scope review, the bank's performance in the Rochester MSA is excellent.
The bank has an excellent level of qualified CD investments and grants, particularly those that are not routinely provided by private investors. The current and prior period investments dollar volume represents 27.5 percent of tier 1 capital allocated to the AA. A significant majority, or 94.6 percent of total investments represent current period investments.

The bank exhibits excellent responsiveness to the community development needs in the AA including affordable housing and community services for low- and moderate-income individuals and geographies. All of the bank's current and prior period CD investments focused on affordable housing, an identified credit needs in the AA. Additionally, the bank provided 25 grants totaling $\$ 1.6$ million to a variety of organizations that primarily support community service needs. In total, the bank's investments helped create 955 and retain 1,808 low- and moderate-income affordable housing units.

The bank makes extensive use of innovative and/or complex investments to support CD initiatives. Exclusive of grants, the bank made six current period and one prior complex CD investments. These include five complex Direct Investment LIHTC transactions, where the bank manages the asset throughout the holding period using in-house expertise, and one transaction supporting a construction and rehabilitation of a 52 -unit housing unit building in a low-income area.

Examples of CD investments in the AA include:

- The bank made a $\$ 12.5$ million single Direct Investment LIHTC transaction to an organization that provided 160 rental units to low- and moderate-income individuals and families.
- The bank made six grants totaling $\$ 286,000$ to an entity that creates new low- and mid-skilled job opportunities in low- and moderate-income neighborhoods. The entity creates an accelerator to develop a pipeline of businesses that are investment ready. The program identifies businesses that are located or will locate in higher poverty neighborhoods and bring needed job opportunities for low- and mid-skill workers living in those low- and moderate-income communities. The majority of the business participants are low- and moderate-income individuals.

| Qualified Investments - State of New York |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area (AA) | Prior Period* |  | Current <br> Period |  | Total |  |  |  | $\begin{gathered} \text { Unfunded } \\ \text { Commitments** } \end{gathered}$ |  |
|  | \# | \$(000's) | \# | \$(000's) | \# | \% of Total \# | \$(000's) | \% of <br> Total \$ | \# | \$(000's) |
| Full Review: |  |  |  |  |  |  |  |  |  |  |
| Rochester MSA | 27 | 5,226 | 42 | 91,852 | 69 | 21.2 | 97,077 | 15.3 | 0 | 0 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |
| Syracuse MSA | 9 | 355 | 32 | 74,376 | 41 | 12.6 | 74,731 | 11.7 | 0 | 0 |
| NY Non-Metro AA | 2 | 509 | 3 | 43,246 | 5 | 1.6 | 43,755 | 6.9 | 0 | 0 |
| Statewide <br> Investments with <br> Purpose, Mandate, or Function ( $\mathrm{P} / \mathrm{M} / \mathrm{F}$ ) to Serve AAs | 34 | 23,671 | 95 | 358,212 | 129 | 39.7 | 381,884 | 60.0 | 0 | 0 |
| Statewide <br> Investments with No Purpose, Mandate, or Function (P/M/F) to Serve AAs | 67 | 22,356 | 14 | 16,585 | 81 | 24.9 | 38,941 | 6.1 | 0 | 0 |

* Prior Period Investments' means investments made in a previous evaluation period that are outstanding as of the examination date.
** Unfunded Commitments' means legally binding investment commitments that are tracked and recorded by the institution's financial reporting system.


## Statewide Investments in the State of New York

The bank has qualified investments throughout the state of New York whose $\mathrm{P} / \mathrm{M} / \mathrm{F}$ includes serving the AAs. Ninety-five percent support affordable housing, four percent support revitalization/stabilization, one percent support community service and one small investment supports economic development. Investments with no $\mathrm{P} / \mathrm{M} / \mathrm{F}$ to serve AAs support affordable housing, economic development, and community services. Investments with and without a $\mathrm{P} / \mathrm{M} / \mathrm{F}$ to serve AAs represent 58.9 percent of total state qualified investments. These investment in the broader statewide area further support the bank's overall excellent performance under the Investment Test in state of New York.

## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall Outstanding Investment Test rating and did not change the initial overall conclusions based on the AA receiving a full-scope review. Based on limited-scope reviews, the bank's performance under the Investment Test in the Syracuse MSA and the NY Non-Metro AA is consistent with the bank's overall excellent performance under the Investment Test in the full-scope area.

## SERVICE TEST

The bank's performance under the Service Test in state of New York is rated Outstanding.

## Conclusions for Area Receiving a Full-Scope Review

Based on a full-scope review, the bank's performance in the Rochester MSA is excellent.

## Retail Banking Services

Service delivery systems are readily accessible to geographies and individuals of different income levels in the bank's AA.

Examiners evaluated the data as outlined in the Scope section at the front of this document including bank-provided data on usage of branches adjacent to low- and moderate-income geographies by individuals residing in those geographies and on increases in the usage of alternative delivery systems.

Based on the data in the table below and performance context, the branch distribution is excellent. In low- and moderate-income geographies, the distribution is respectively near to and exceeds the percentage of the population. The bank had two branches in low-income geographies and six branches in moderate-income geographies. The distribution was augmented by one MUI tract branch that serves low-income tracts and one MUI tract branch that serves moderate-income tracts. Examiners reviewed data on the accounts held and transactions conducted at the MUI branches and confirmed they were serving the adjacent low- and moderate-income populations.

| Distribution of Branch Delivery System |  |  |  |  |  |  |  | As of December 31, 2019 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { Deposits } \\ \hline \text { \% of } \\ \text { Rated } \\ \text { Area } \\ \text { Deposits } \\ \text { in AA } \end{gathered}$ | Branches |  |  |  |  |  | Population |  |  |  |
| Assessment |  | \# of <br> BANK <br> Branches | $\%$ of <br> Rated <br> Area <br> Branches <br> in AA | Location of Branches by Income of Geographies (\%) |  |  |  | \% of Population within Each Geography |  |  |  |
|  |  |  |  | Low | Mod | Mid | Upp | Low | Mod | Mid | Upp |
| Rochester-BataviaSeneca Falls CSA | 67.0 | 23 | 60.5 | 8.7 | 26.1 | 34.8 | 30.4 | 10.3 | 14.9 | 43.0 | 31.3 |

* May not add up to 100 percent due to geographies with unknown tract income level and rounding

Alternative delivery systems enhanced the delivery of banking services to geographies and individuals of all income levels. The OCC considered the availability and use of alternative delivery systems over the evaluation period. This included review of the bank's 45 deposit-taking ATMs, online banking,
mobile banking, and telephone banking to determine the effectiveness of these systems to make retail banking services available to individuals in low- and moderate-income geographies. The bank increased the deposit-taking ATMs in low- and moderate-income geographies by 45.5 percent over the prior rating period to three ( 6.7 percent) deposit-taking ATMs in low-income geographies and 13 (28.9 percent) ATMs in moderate-income geographies. Additionally, bank-provided data on use of online, mobile, and telephone banking showed increases in the adoption of these services by low- and moderate-income individuals from the prior rating period.

| Distribution of Branch Openings/Closings |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | \# of Branch Openings | \# of Branch Closings | Net change in Location of Branches(+ or -) |  |  |  |
|  |  |  | Low | Mod | Mid | Upp |
| Rochester-Batavia-Seneca Falls CSA | 0 | 4 | -1 | 0 | -2 | -1 |

The bank's opening and closing of branches has not adversely affected the accessibility of its delivery systems, particularly in low- and moderate-income geographies and/or to low- and moderate-income individuals. The bank closed one branch in a low-income geography and did not open or close any branches in moderate-income geographies. The branch closure in the low-income geography was due reduced customer usage and unprofitability. Despite the branch closure, branch locations in general remained accessible to geographies and individuals of different income levels in the bank's AA.

Services, including where appropriate, business hours, do not vary in a way that inconveniences, its AA, particularly in low- and moderate-income geographies and/or to low- and moderate-income individuals. Generally, branches are open Monday through Friday from 8:30 am to 6:00 pm and Saturday from 9:00 am to 2:00 pm. All retail banking services are available at all branches within the low- and moderateincome geographies.

## Community Development Services

The bank was a leader in providing CD services that are responsive to AA needs.
Bank records show that employees provided their financial or job-specific expertise and/or technical assistance for 233 CD service activities to 15 organizations since the last evaluation, logging a total of 1,044 qualified hours. All the bank's assistance was to organizations that provide community services to low- and moderate-income individuals and families. The bank's CD services were very responsive to the community needs in the AA, particularly affordable housing. The following are examples of CD services provided:

- The bank provided financial incentives to 70 low- and moderate-income homebuyers to take homebuyer education from third-party organizations. Successfully completing the pre-purchase homebuyer education curriculum provides low- and moderate-income customers tools and resources to become financially successful homeowners.
- Eight bank employees provided technical assistance to the local office of a statewide nonprofit whose vision is to achieve social and economic justice for the people of New York State who are poor, disabled, or disenfranchised.


## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall Outstanding Service Test rating and did not significantly change the initial overall conclusions based on the AAs receiving fullscope review. Based on limited-scope reviews, the bank's performance under the Service Test in the NY Non-Metro AA is consistent with the bank's overall performance under the Service Test in the fullscope area. The bank's performance under the Service Test in the Syracuse MSA is good and weaker than the bank's overall performance under the Service Test in the full-scope area due to weaker branch distribution.

## State Rating

## State of Ohio

CRA rating for the State of Ohio ${ }^{\mathbf{2 2}}$ : Outstanding
The Lending Test is rated: High Satisfactory
The Investment Test is rated: Outstanding The Service Test is rated: Outstanding

The major factors that support this rating include:

- An excellent level of lending activity.
- Overall adequate geographic distribution of home mortgage loans and small loans to businesses.
- Overall good borrower distribution of home mortgage loans and small loans to businesses.
- Few, if any CD loans which has a negative effect on the Lending Test rating.
- The extensive use of flexible products, which positively affected the rating.
- An excellent level of qualified investments, excellent responsiveness to credit and community economic development needs, and qualified investments provided in a broader statewide or regional area.
- Retail service delivery systems are readily accessible to geographies and individuals of different income levels.
- Chase is a leader in providing CD services that are responsive to AA needs.


## Description of Institution's Operations in Ohio

The state of Ohio is Chase's ninth largest rating area based on aggregate deposits of $\$ 27.3$ billion, representing 2.0 percent of the bank's total deposits. As of December 31, 2019, the bank operated 214 branches and 499 deposit-taking ATMs within the rating area, representing 4.3 percent of total branches and 3 percent of total ATMs. The bank originated and purchased approximately $\$ 12.6$ billion in loans or 1.8 percent of total bank loan originations and purchases during the evaluation period in the state.

According to the FDIC Deposit Market Share Data, as of June 30, 2019, there were 188 banks operating 2,999 branches in the state of Ohio. Chase ranked second in deposit market share with 11.5 percent. Major competitors in the state based on deposit market share include Huntington National Bank (21.3 percent), PNC Bank, N.A. (10.2 percent), and KeyBank (9.9 percent).

Chase has delineated nine AAs in the state of Ohio. The Columbus-Marion-Zanesville, OH CSA was selected for a full-scope review. The CSA consists only of the Columbus, OH MSA. The Cleveland-Akron-Canton CSA, Lima MSA, Dayton-Springfield-Sidney CSA, Mansfield MSA, Toledo MSA, Weirton-Steubenville MSA, Youngstown-Warren-Boardman MSA, and the Ohio Non-Metro AA received limited-scope reviews. The bank's performance under the Lending Test in the Refer to appendix A for a complete description of the AAs.

[^121]
## Description of Full-Scope AA

The following table provides a summary of the demographic that includes housing and business information for the Columbus MSA. Table A indicates that the volume of OOUs is very small in lowincome CTs and over 22.3 percent of families in the AA are low-income with 10.5 percent below the poverty level. The median housing value in the Columbus MSA is three times the median income, three times the moderate-income and five times the low-income, indicating a limited proportion of OOUs are affordable to low-income borrowers. One simplistic method used to determine housing affordability assumes a maximum monthly principal and interest payment of no more than 30 percent of the applicant's income.

In the Columbus MSA, assuming a 30-year mortgage with a five percent interest rate and three percent down payment, while not accounting for homeowners insurance, real estate taxes, or any additional monthly expenses, a low-income borrower making $\$ 35,227$ per year (or less than 50 percent of the FFIEC adjusted median family income in the MSA) could afford a $\$ 116,713$ mortgage loan with a payment of $\$ 1,057$ per month; a moderate-income borrower earning $\$ 56,363$ per year (or less than 80 percent of the FFIEC adjusted median family income in the MSA) could afford a $\$ 217,444$ mortgage loan with a payment of $\$ 1,691$ per month.

| Table A - Demographic Information of the Assessment Area Assessment Area: Columbus OH MSA 2017-2019 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Demographic Characteristics | \# | Low <br> \% of \# | Moderate \% of \# | Middle \% of \# | Upper <br> \% of \# | $\begin{aligned} & \text { NA* } \\ & \text { \% of \# } \end{aligned}$ |
| Geographies (Census Tracts) | 433 | 15.2 | 24.5 | 32.6 | 26.8 | 0.9 |
| Population by Geography | 1,972,375 | 10.1 | 22.3 | 35.3 | 31.5 | 0.8 |
| Housing Units by Geography | 834,170 | 11.6 | 23.6 | 34.9 | 29.7 | 0.2 |
| Owner-Occupied Units by Geography | 465,470 | 5.2 | 18.7 | 38.0 | 38.1 | 0.0 |
| Occupied Rental Units by Geography | 291,050 | 17.9 | 30.2 | 31.6 | 19.9 | 0.4 |
| Vacant Units by Geography | 77,650 | 27.2 | 27.8 | 28.0 | 16.5 | 0.5 |
| Businesses by Geography | 142,477 | 9.0 | 18.3 | 31.2 | 41.1 | 0.5 |
| Farms by Geography | 4,485 | 4.5 | 14.9 | 46.8 | 33.8 | 0.1 |
| Family Distribution by Income Level | 480,828 | 22.3 | 17.1 | 19.6 | 41.0 | 0.0 |
| Household Distribution by Income Level | 756,520 | 24.2 | 16.4 | 17.2 | 42.1 | 0.0 |
| Median Family Income MSA - 18140 Columbus, OH MSA |  | \$70,454 | Median Housing Value |  |  | \$160,150 |
|  |  |  | Median Gross Rent |  |  | \$839 |
|  |  |  | Families Below Poverty Level |  |  | 10.5\% |

Source: 2015 ACS and 2019 D\&B Data
Due to rounding, totals may not equal 100.0\%
(*) The NA category consists of geographies that have not been assigned an income classification.

## Economic Data

According to the Moody's Analytics September 2019 report, the Columbus economy has gained ground and is now outperforming all the state's major metro areas year to date. The area's strengths include good prospects for high tech and other knowledge-based industries; favorable migration patterns and age
structure; a highly educated workforce; low-costs of living and doing business; and above-average house price growth. However, per capita income in the area is below the U.S. average and single-family residential building is weak. White collar services, healthcare, and government are driving employment in the area. Major employers in the area include Ohio State University; JP Morgan Chase; Ohio Health; and Nationwide. Housing demand in the area is strong and vacancy rates, in terms of both percentage of houses for sale and percentage of inventory for rent, are below both statewide and national averages.

## Community Contacts

Examiners considered six community contacts completed during the review period with entities serving the area. The contacts were with organizations focused on community revitalization and self-sufficiency for low-income households and individuals. Contacts noted that the population in the area is growing and because of increasing demand for housing, landlords are being more selective when screening potential tenants. As such, individuals with criminal histories, poor credit or past evictions have more difficulty in securing safe and affordable housing. Contacts also noted that despite the growing economy many families in the area are food insecure and rely on food pantries for assistance. Other needs identified by the contacts included greater access to affordable housing, small business loans, general operating support for area non-profits, affordable mortgage loans and rehabilitation loans.

## Scope of Evaluation in Ohio

The Columbus MSA received a full-scope review. The MSA accounts for 50.6 percent of the deposits and 37.9 percent of the lending in the state. The remaining eight AAs in the state of Ohio received limited-scope reviews. Performance in limited-scope AAs and its effect on the CRA rating are discuss at the end of each test.

## CONCLUSIONS WITH RESPECT TO PERFORMANCE TESTS IN OHIO

## LENDING TEST

The bank's performance under the Lending Test in the state of Ohio is rated High Satisfactory.

## Conclusions for Area Receiving a Full-Scope Review

Based on a full-scope review, the bank's performance in the Columbus MSA is good based on overall excellent lending levels, adequate geographic distribution of loans and good borrower distribution of loans.

## Lending Activity

Lending levels reflect excellent responsiveness to the credit needs in the bank's AA.
Examiners considered the number and amount of home mortgage, small business, small farm loans originated or purchased relative to Chase's capacity based on deposits, competition, and market presence. Lending activity for home mortgage and small loans to businesses received the most weight in reaching conclusions. Respectively, home mortgage lending and small loans to businesses account for 33.5 percent and 65.5 percent of the loan volume in the state by number and 75.4 percent and 23.5 percent of loan volume by dollar. Small farm lending is not a strategic focus of the bank and received
minimal weight in reaching conclusions. Farm loans represented 0.93 percent of the loan volume in the state by number 0.31 percent loan volume by dollar.

| Number of Loans* |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home <br> Mortgage | Small <br> Business | Small <br> Farm | Community <br> Development | Total | \% <br> State <br> Loans | State <br> Deposits |
| Columbus MSA | 23,585 | 41,312 | 476 | 6 | 65,379 | 37.9 | 50.6 |
| Cleveland-Akron-Canton <br> CSA | 19,850 | 44,843 | 295 | 27 | 65,015 | 37.7 | 27.5 |
| Dayton-Springfield-Sidney <br> CSA | 4,078 | 8,860 | 150 | 0 | 13,088 | 7.6 | 8.1 |
| Youngstown-Warren- <br> Boardman MSA | 2,145 | 4,074 | 70 | 0 | 6,289 | 3.6 | 3.6 |
| Lima MSA | 551 | 1,251 | 46 | 1 | 1,849 | 1.1 | 1.9 |
| Mansfield MSA | 513 | 1,282 | 20 | 0 | 1,815 | 1.2 | 0.7 |
| Toledo MSA | 783 | 1,917 | 42 | 0 | 2,742 | 1.6 | 0.0 |
| Weirton-Steubenville MSA | 221 | 302 | 3 | 0 | 526 | 0 | 0.4 |
| Ohio Non-MSA AA | 6,114 | 9,269 | 507 | 1 | 15,891 | 9.2 | 7.3 |
| Total | 57,840 | 113,110 | 1,609 | 35 | 172,594 | 100 | 100 |

*Due to rounding, totals may not equal $100.0 \%$. The tables present the data for all assessment areas. The narrative below addresses performance in fullscope areas only.

| Dollar Volume of Loans* (in \$000s) |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home <br> Mortgage | Small <br> Business | Small <br> Farm | Community <br> Development | \% <br> Total | \% State <br> Loans |
| Deposits |  |  |  |  |  |  |$|$

*Due to rounding, totals may not equal $100.0 \%$. The tables present the data for all assessment areas. The narrative below addresses performance in fullscope areas only.

Chase ranked second in deposits of 55 institutions with market share of 22.3 percent.
In overall HMDA lending, Chase ranked second with 6.0 percent market share. This is a highly competitive market with 592 mortgage lenders. The top lender in this market is Huntington National Bank with 12.7 percent market share with U.S. Bank, N.A. behind Chase with 4.8 percent market share.

Chase ranked first in small loans to businesses with 25.4 percent market share. There were 139 lenders in this MSA. Other major lenders and their market share are American Express National Bank (14.7 percent), PNC Bank, N.A. (13.0 percent), and Huntington National Bank (7.4 percent).

Chase ranked second in small loans to farms 20.3 percent market share. There are 26 lenders in the MSA. The other major lender in this market is John Deere, Financial, F.S.B. with 20.5 percent market share. Huntington National Bank is ranked third with 11.9 percent market share.

## Distribution of Loans by Income Level of the Geography

The bank exhibits an adequate geographic distribution of loans in its AA.

## Home Mortgage Loans

Refer to Table O in the state of Ohio section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of home mortgage loan originations and purchases for this evaluation is adequate. The following information was taken into consideration when determining this rating.

## Columbus MSA

- The limited proportion of housing units in low-income geographies, particularly OOUs ( 5.2 percent), constrained lending opportunities; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of OOUs in those geographies.
- The high level of competition in the AA (592 home mortgage lenders) was also considered and examiners placed greater significance on performance compared to the aggregate of lenders.
- Between 2017 and 2019, the proportion of loans in low- and moderate-income areas was near to the proportion of OOUs in those geographies and the aggregate distribution of loans.
- The performance in low- and moderate-income geographies during the 2014 and 2016 time periods was inconsistent with 2017 to 2019. The proportion of loans in low- and moderate-income geographies is well below the proportion of OOUs in those geographies, and below the aggregate distribution of loans.


## Small Loans to Businesses

Refer to Table Q in the state of Ohio section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to businesses.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to businesses for this evaluation is adequate. The following information was taken into consideration when determining this rating.

- Ohio is ranked the third worst state in the country for business tax advantages.
- The overall AA scores poorly in small-business vitality.
- Between 2017 and 2019, the proportion of loans to small businesses in low- and moderate-income geographies was below the proportion of small businesses in those areas and well-below the aggregate distribution of loans.
- The performance in low- and moderate-income geographies during the 2014 and 2016 time periods was generally consistent with 2017 to 2019. The proportion of loans to small businesses in low- and moderate-income geographies was below the proportion of small businesses in those areas and the aggregate distribution of loans.


## Small Loans to Farms

Refer to Table $S$ in the state of Ohio section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to farms.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to farms is good. The following information was taken into consideration when determining this rating.

- The limited percentage of farms in low-income geographies (4.5 percent) constrained lending opportunities; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of farms in those geographies.
- Between 2017 and 2019, the proportion of loans to small farms in low-income geographies was significantly below the proportion of farms in those geographies and significantly exceeded the aggregate distribution of all lenders. The proportion of loans to small farms in moderate-income geographies was near to the proportion of farms in those geographies and exceeded the aggregate distribution of all lenders.
- Performance in low- and moderate-income geographies during the 2014 to 2016 period was weaker than performance during 2017 to 2019 period. The proportion of loans to small farms in low-income geographies was significantly below both the proportion of farms in those geographies and the aggregate distribution. The proportion of loans to small farms in moderate-income geographies was well below the proportion of farms in those geographies and below the aggregate distribution.


## Lending Gap Analysis

A review of home mortgage loans, small loans to business, and small loans to farms including summary reports and AA maps did not identify any unexplained conspicuous lending gaps in the bank's activities.

## Distribution of Loans by Income Level of the Borrower

The bank exhibits a good distribution of loans among individuals of different income levels and business of different sizes.

## Home Mortgage Loans

Refer to Table P in the state of Ohio section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall borrower distribution of home mortgage loan originations and purchases for this evaluation is good. The following information was taken into consideration when determining this rating.

- Between 2017 and 2019, the performance to low- and moderate-income borrowers was near to both the proportion of low- and moderate-income families and the aggregate distribution.
- Performance in low-income geographies between 2014 and 2016 was consistent with performance in 2017 to 2019. The performance to low- and moderate-income borrowers was near to both the proportion of low- and moderate-income families and the aggregate distribution.


## Small Loans to Businesses

Refer to Table R in the state of Ohio section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to businesses.

Based on the data in the tables and the following factors, the distribution of the bank's originations and purchases of small loans to businesses by revenue category is good. The following information was taken into consideration when determining this rating.

- In all time periods, the bank's distribution of small loans to businesses with revenues of $\$ 1$ million or less was below the percentage of small businesses located in the AA and exceeded the aggregate distribution.


## Small Loans to Farms

Refer to Table T in the state of Ohio section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to farms.

Based on the data in the table and the following considerations, the distribution of the bank's originations and purchases of small loans to farms by revenue category is good. The following information was taken into consideration when determining this rating.

- Between 2017 and 2019, the bank's percentage of loans to farms with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was generally consistent with performance between 2017 and 2019. The bank's percentage of loans to farms with revenues of $\$ 1$ million or less was well-below the percentage of businesses and exceeded the aggregate distribution.


## Community Development Lending

The bank made few, if any, CD loans in the Columbus MSA.
The Lending Activity Tables, shown above, set forth the information and data used to evaluate the bank's level of CD lending. These tables include all CD loans, including multifamily loans that also qualify as CD loans.

The bank originated or purchased six CD loans totaling $\$ 9.8$ million. This represents 0.6 percent of the tier 1 capital allocated to the AA. Most of the CD loans were for affordable housing purposes, which is a critical need in this AA.

Examples of CD loans in the AA include:

- In May 2014, Chase provided a $\$ 1.1$ million loan for the permanent financing of a 66 -unit apartment complex in Whitehall, OH. The project has LIHTC financing. All the units are restricted to seniors over 55 years up to 60 percent of the AMI. Twenty of the units were covered by HAP project-based vouchers and tenants are required to pay 30 percent of their adjusted gross incomes towards rent. Residents were also assisted with credit counseling and social services.
- In December 2014, Chase originated a $\$ 29,800$ loan to a housing authority for pre-development construction costs in Hocking County, OH. The authority administers the public housing and Section 8 voucher housing programs.
- In June 2018, Chase originated a $\$ 5.9$ million loan to finance the acquisition and substantial rehabilitation of 59 LIHTC affordable units of existing properties in Columbus, OH. All units are restricted to households earning 30 percent to 50 percent of the AMI.


## Product Innovation and Flexibility

The bank makes extensive use of innovative and/or flexible lending practices in order to serve AA credit needs. A total of 5,293 loans were funded totaling $\$ 790.9$ million. Refer to the comments in the Product Innovation and Flexibility section of this performance evaluation for additional details regarding the programs.

| Loan Type | Number of <br> Loans | Dollar Amount <br> $\mathbf{( \$ 0 0 0 ’ \mathbf { s } )}$ |
| :--- | :---: | :---: |
| DreaMaker | 1,289 | 196,421 |
| Federal Housing Administration (FHA) | 1,851 | 237,883 |
| U.S. Department of Agriculture (USDA) | 617 | 82,789 |
| Veteran's Administration (VA) | 700 | 138,060 |
| Home Affordable Refinance Program (HARP) | 529 | 62,483 |
| Small Business Administration (SBA) | 307 | 73,246 |

## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall High Satisfactory Lending Test rating and did not change the initial overall conclusions based on the AA receiving the full-scope review. Based on limited-scope reviews, the bank's performance under the Lending Test in the Cleveland-Akron-Canton CSA, Lima MSA, and the OH Non-Metro AA is consistent with the bank's overall performance under the Lending Test in the full-scope area. The bank's performance under the Lending Test in the Dayton-Springfield-Sidney CSA, Mansfield MSA, Toledo MSA, WeirtonSteubenville MSA, and Youngstown-Warren-Boardman MSA is weaker than the bank's overall performance under the Lending Test in the full-scope area. Weaker performance was primarily due to weaker performance in the geographic distribution and lack of CD lending. Performance in the limitedscope AAs did not affect the overall Lending Test rating for the state of Ohio.

Refer to Tables O through T in the state of Ohio section of appendix D for the facts and data that support these conclusions.

## INVESTMENT TEST

The bank's performance under the Investment Test in the state of Ohio is rated Outstanding.

## Conclusions for Area Receiving a Full-Scope Review

Based on a full-scope review, the bank's performance in the Columbus MSA is excellent.
The bank has an excellent level of qualified CD investments and grants, often in a leadership position, particularly those that are not routinely provided by private investors. Current and prior period investments represent 10.6 percent of tier 1 capital allocated to the AA.

The bank exhibits excellent responsiveness to credit and community economic development needs identified as affordable housing, community service, economic development, and revitalization/stabilization. A majority of total investments represent current period investments. Of the dollars invested, nearly 87.7 percent supported affordable housing, 6.8 percent supported revitalization/stabilization, and 6.1 percent supported community services. All prior period investments support affordable housing. Current and prior period affordable housing investments created 8,007 lowand moderate-income units for individuals and families. In the current period, the bank provided 69 grants totaling $\$ 11.3$ million to a variety of organizations supporting community service, revitalization/stabilization, economic development, and affordable housing. In some occurrences, grants were provided annually.

The bank rarely uses innovative and/or complex investments to support CD initiatives. Three current and prior period investments are complex, as they relate to NMTC and Direct Investor LIHTC transactions. Direct Investor transactions require bank expertise and capacity in selecting projects and partners, negotiating agreements, overseeing project development and operations, and ensuring compliance. Eight current period investments are catalysts that will encourage future growth and other improvements.

Examples of CD Investments in the AA include:

- In March 2014, the bank made a $\$ 3.9$ million NMTC equity investment for rehabilitating a vacant school in Columbus, OH into a new high school. It is a college preparatory high school exclusively for students from low-income families. Financing was used for the build-out of the classrooms and administrative space and to complete structural work on the roof and windows. Upon completion, the project was ready for full capacity occupancy of 500 students. In addition, the school created 78 full-time jobs for administrators, teachers, and staff during its first five years of operation. The bank also provided six \$500,000 grants starting in 2014 through 2019.
- From 2014 through 2019, the bank provided annual grants of $\$ 500,000$ to a community college development foundation. The first five grants were part of a total $\$ 2.5$ million commitment to continue the bank's support of the foundation's Central Ohio Compact (COC). The COC was established with the goal of being the most productive education partnership in the nation, fully able to raise education attainment levels and support the region's economic growth strategies. The COC made a regional commitment to address significant gaps between workplace requirements and
current population skill sets, as well as increase the number of individuals holding a post-secondary degree or certificate. Funds were used to hire a leadership team to coordinate with various groups throughout the community to develop plans to bring replicable models to scale; create a data collection system to align career pathways, curriculum, and credentials with regional employer demands; and provide professional development for career and guidance counselors. Sixty-nine percent of those benefiting from the program had annual earnings less than 80 percent of the AMI for the area served by the program.

The sixth $\$ 500,000$ grant is part of a 5 -year, $\$ 250$ million New Skills at Work Initiative. The initiative was developed by the bank and was the largest-ever private sector initiative. The grant addressed the need for workforce development programs to increase economic stability for low- and moderate-income individuals in the Columbus, OH metropolitan area.

- From 2016 through 2019, the bank provided annual grants of $\$ 300,000$ to a hospital foundation for its Helping Families by Transforming Neighborhoods initiative, a part of their Healthy Neighborhoods, Healthy Families (HNHF) plan. HNHF is committed to making a significant, positive difference for hospital neighbors and surrounding community, including affordable housing. In response to limited availability of affordable housing tax credits, HNHF implemented a strategy to renovate existing duplexes into quality rentals for individuals and families earning 60-80 percent of AMI. There are 32 communities in the area; over 84 percent are low- and moderate-income communities. HNHF acquired and renovated 75 blighted duplexes utilizing a blend of loan financing from the hospital and the Affordable Housing Trust of Franklin County and grant dollars from the bank and the City of Columbus. These grants served as a catalyst for other community development activities supporting a local government plan for revitalization or stabilization to encourage future growth and improvements in the area.

| Qualified Investments - State of Ohio |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area (AA) | Prior Period* |  | Current Period |  | Total |  |  |  | UnfundedCommitments** |  |
|  | \# | \$(000's) | \# | \$(000's) | \# | \% of Total \# | \$(000's) | \% of <br> Total \$ | \# | \$(000's) |
| Full Review: |  |  |  |  |  |  |  |  |  |  |
| Columbus MSA | 52 | 76,168 | 142 | 112,536 | 194 | 24.0 | 188,705 | 21.8 | 0 | 0 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |
| Cleveland-Akron-Canton CSA | 85 | 150,933 | 189 | 175,118 | 274 | 33.9 | 326,051 | 37.6 | 0 | 0 |
| Dayton-Springfield-Sidney CSA | 33 | 35,712 | 47 | 59,536 | 80 | 9.9 | 95,249 | 11.0 | 0 | 0 |
| Lima-Van Wert-Celina MSA | 0 | 0 | 4 | 1,872 | 4 | 0.5 | 1,872 | 0.2 | 0 | 0 |
| Mansfield MSA | 4 | 2,680 | 2 | 1,051 | 6 | 0.7 | 3,731 | 0.4 | 0 | 0 |
| Toledo MSA | 14 | 11,988 | 18 | 25,386 | 32 | 4.0 | 37,374 | 4.3 | 0 | 0 |
| Weirton-Steubenville MSA | 2 | 63 | 0 | 0 | 2 | 0.2 | 63 | 0.0 | 0 | 0 |
| Youngstown-Warren-Boardman MSA | 10 | 8,958 | 11 | 8,425 | 21 | 2.6 | 17,383 | 2.0 | 0 | 0 |
| Ohio Non-Metro AA | 11 | 15,298 | 26 | 40,662 | 37 | 4.6 | 55,960 | 6.5 | 0 | 0 |
| Other: |  |  |  |  |  |  |  |  |  |  |
| Statewide Investments with Purpose, Mandate or Function (P/M/F) to Serve AAs | 0 | 0 | 107 | 86,180 | 107 | 13.2 | 86,180 | 9.9 | 0 | 0 |
| Statewide Investments with No Purpose, Mandate, or Function (P/M/F) to Serve AAs | 51 | 53,987 | 1 | 40 | 52 | 66.4 | 54,027 | 6.2 | 0 | 0 |

Prior Period Investments' means investments made in a previous evaluation period that are outstanding as of the examination date.
Unfunded Commitments' means legally binding investment commitments that are tracked and recorded by the institution's financial reporting system.

## Statewide Investments in the State of Ohio

Statewide investments with a $\mathrm{P} / \mathrm{M} / \mathrm{F}$ to serve AAs included investments related to affordable housing and community services. Current period investments were $\$ 85.1$ million or 87.1 percent for affordable housing and $\$ 11.1$ million or 12.9 percent for community service. Affordable housing investments created 3,358 low- and moderate-income units for individuals and families. Thirty-eight grants totaling $\$ 5.4$ million were provided to a variety of organizations, primarily agencies administering financial education services. In some occurrences, grants were provided annually. The level of investments in the broader statewide area had a positive impact on the Investment Test rating for the state of Ohio.

## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall Outstanding Investment Test rating and did not change the initial overall conclusions based on the AA receiving a full-scope review. Based on limited-scope reviews, the bank's performance under the Investment Test in the Cleveland-Akron-Canton CSA, Dayton-Springfield-Sidney CSA, Mansfield MSA, Toledo MSA, Youngstown-Warren-Boardman MSA, and Ohio Non-Metro is consistent with the bank's overall excellent performance under the Investment Test in the full-scope area. The bank's performance under the Investment Test in the Lima-Van Wert-Celina MSA and Weirton-Steubenville MSA is weaker than the bank's overall performance under the Investment Test in the full-scope area due to a low level of qualified investments.

## SERVICE TEST

The bank's performance under the Service Test in state of Ohio is rated Outstanding.

## Conclusions for Area Receiving a Full-Scope Review

Based on a full-scope review, including the data in the tables below, the bank's performance in the Columbus MSA is excellent.

## Retail Banking Services

Service delivery systems are readily accessible to geographies and individuals of different income levels in the bank's AA.

Examiners evaluated the data as outlined in the Scope section at the front of this document including bank-provided data on usage of branches adjacent to low- and moderate-income geographies by individuals residing in those geographies and on increases in the usage of alternative delivery systems.

Based on the data in the table below and performance context, the branch distribution is excellent. In low- and moderate-income geographies, the distribution is near to the percentage of the population. The bank had five branches in low-income geographies and eleven branches in moderate-income geographies. The distribution was augmented by four MUI tract branches that serve low-income tracts and 13 MUI tract branches that serve moderate-income tracts. Examiners reviewed data on the accounts held and transactions conducted at the MUI branches and confirmed they were serving the adjacent lowand moderate-income populations.

| Distribution of Branch Delivery System |  |  |  |  |  |  |  | As of December 31, 2019 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Deposits | Branches |  |  |  |  |  |  |  |  |  |
|  | $\%$ of <br> Rated <br> Area <br> Deposits in AA | \# of <br> BANK <br> Branches | \% of <br> Rated <br> Area <br> Branches <br> in AA | Location of Branches by Income of Geographies (\%) |  |  |  | Population\% of Population within EachGeography |  |  |  |
|  |  |  |  | Low | Mod | Mid | Upp | Low | Mod | Mid | Upp |
| Columbus MSA | 50.6 | 67 | 26.1 | 7.5 | 16.4 | 35.8 | 40.3 | 10.1 | 22.3 | 35.3 | 31.5 |

* May not add up to 100 percent due to geographies with unknown tract income level and rounding

Alternative delivery systems enhanced the delivery of banking services to geographies and individuals of all income levels. The OCC considered the availability and use of alternative delivery systems over the evaluation period. This included review of the bank's 212 deposit-taking ATMs, online banking, mobile banking, and telephone banking to determine the effectiveness of these systems to make retail banking services available to individuals in low- and moderate-income geographies. The bank increased the deposit-taking ATMs in low- and moderate-income geographies by 4.0 percent over the prior rating period to 17 ( 8.0 percent) deposit-taking ATMs in low-income geographies and 35 ( 16.5 percent) ATMs in moderate-income geographies. Additionally, bank-provided data on use of online, mobile, and telephone banking showed increases in the adoption of these services by low- and moderate-income individuals from the prior rating period.

| Distribution of Branch Openings/Closings |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment <br> Area | \# of Branch <br> Openings | \# of Branch <br> Closings | Net change in Location of Branches <br> (+ or - ) |  |  |  |  |
|  |  | Low | Mod | Mid | Upp |  |  |
| Columbus <br> MSA | 2 | 10 | 0 | -2 | -4 | -2 |  |

The bank's opening and closing of branches has not adversely affected the accessibility of its delivery systems, particularly in low- and moderate-income geographies and/or to low- and moderate-income individuals. The bank opened one branch and closed one branch in low-income geographies and closed two branches in moderate-income geographies. Branch closures were due to real estate issues that resulted in poor customer experiences and reduced customer usage. Despite the branch closures, branch locations remained accessible to geographies and individuals of different income levels in the bank's AA.

Services, including where appropriate, business hours, do not vary in a way that inconveniences its AA, particularly low- and moderate-income geographies and/or individuals. Generally, branches are open Monday through Friday from 9:00 am to 6:00 pm and Saturday from 9:00 am to 2:00 pm. All retail banking services are available at all branches within the low- and moderate-income geographies.

## Community Development Services

The bank was a leader in providing CD services that are responsive to AA needs.
Bank records show that employees provided their financial or job-specific expertise and/or technical assistance for 2,427 qualified CD service activities to 45 organizations since the last evaluation, logging a total of 12,196 hours. All the bank's assistance was to organizations that provide community services to low- and moderate-income individuals and families. The bank's CD services were responsive to the
community needs in the AA, particularly homeownership education. The following are examples of CD services provided:

- The bank provided financial incentives to 519 low- and moderate-income homebuyers to take homebuyer education. Successfully completing the pre-purchase homebuyer education curriculum provides low- and moderate-income customers tools and resources to become financially successful homeowners.
- Two hundred and twenty-five bank employees provided tax preparation assistance to 383 low- and moderate-income individuals across six years. The activity is provided in association with a nonprofit organization's sponsorship of a program that provides free tax filing assistance for individuals eligible for the Earned Income Tax Credit (EITC) and Child Tax Credit.
- Five hundred and fifty-five bank employees provided financial literacy training to low- and moderate-income participants of a national nonprofit whose program teaches students the basic concepts of financial literacy as it relates to everyday economics and how they apply this information into adulthood.


## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall Outstanding Service Test rating and did not significantly change the initial overall conclusions based on the AAs receiving fullscope review. Based on limited-scope reviews, the bank's performance under the Service Test in the Dayton-Springfield-Kettering CSA is consistent with the bank's overall performance under the Service Test in the full-scope area. The bank's performance under the Service Test in the Cleveland-AkronCanton CSA, Youngstown-Warren MSA, Lima MSA, Mansfield MSA, Toledo MSA, WeirtonSteubenville MSA, and OH Non-Metro AA is weaker than the bank's overall performance under the Service Test in the full-scope area due to weaker branch distribution in low- and moderate-income geographies.

## State Rating

## State of Oklahoma

CRA rating for the State of Oklahoma ${ }^{23}$ : Satisfactory
The Lending Test is rated: Low Satisfactory
The Investment Test is rated: High Satisfactory
The Service Test is rated: Outstanding
The major factors that support this rating include:

- An excellent level of lending activity.
- Overall adequate geographic distribution of home mortgage loans and small loans to businesses.
- Overall good borrower distribution of home mortgage loans and small loans to businesses.
- Few, if any CD loans which has a negative effect on the Lending Test rating.
- The extensive use of flexible products, which positively affected the rating.
- An adequate level of qualified investments, good responsiveness to credit and community economic development needs, supported by an excellent level of CD investments in the limited-scope area, and the level of investments in the broader statewide area which positively affected the rating.
- Retail service delivery systems are readily accessible to geographies and individuals of different income levels.
- Chase is a leader in providing CD services that are responsive to AA needs.


## Description of Institution's Operations in Oklahoma

The state of Oklahoma is Chase's 19th largest rating area aggregate deposits of $\$ 4.3$ billion, representing 0.3 percent of the bank's total deposits. As of December 31, 2019, the bank operated 28 branches and 72 deposit-taking ATMs within the rating area, representing 0.5 percent of total branches and 0.4 percent of total ATMs. The bank originated and purchased approximately $\$ 1.7$ billion in loans or 0.2 percent of total bank loan originations and purchases during the evaluation period in the state.

According to FDIC Deposit Market Share data, as of June 30, 2019, there were 223 banks operating 1,338 branches in the state of Oklahoma. Chase ranked sixth in deposit market share with 4.6 percent. Major competitors in the state based on deposit market share include BOKF, N.A. (13.1 percent), MidFirst Bank ( 7.3 percent), and BancFirst ( 7.3 percent).

Chase has two AAs in the state of Oklahoma and the Oklahoma City-Shawnee, OK CSA received a fullscope review. The CSA consists of only the Oklahoma City, OK MSA. The Tulsa MSA received a limited-scope review. Refer to appendix A for a complete description of the AAs.

## Description of Full-Scope AA

The following table provides a summary of the demographic that includes housing and business information for the Oklahoma City MSA. Table A indicates that the volume of OOUs is very small in low-income CTs (3.9 percent) and over 21.5 percent of families in the AA are low-income, with 11.5

[^122]percent below the poverty level. The median housing value in the Oklahoma City MSA is two times the median income, indicating a limited proportion of OOUs are affordable to low- and moderate-income borrowers. One simplistic method used to determine housing affordability assumes a maximum monthly principal and interest payment of no more than 30 percent of the applicant's income.

In the Oklahoma City MSA, assuming a 30-year mortgage with a five percent interest rate and three percent down payment, while not accounting for homeowners insurance, real estate taxes, or any additional monthly expenses, a low-income borrower making $\$ 32,254$ per year (or less than 50 percent of the FFIEC adjusted median family income in the MSA) could afford a $\$ 102,528$ mortgage loan with a payment of $\$ 968$ per month; a moderate-income borrower earning $\$ 51,606$ per year (or less than 80 percent of the FFIEC adjusted median family income in the MSA) could afford a $\$ 194,735$ mortgage loan with a payment of $\$ 1,548$ per month.

| Table A - Demographic Information of the Assessment Area Assessment Area: 416 Oklahoma City OK MSA 2017-2019 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Demographic Characteristics | \# | Low <br> \% of \# | Moderate \% of \# | Middle \% of \# | Upper <br> \% of \# | $\begin{aligned} & \text { NA* } \\ & \text { \% of \# } \end{aligned}$ |
| Geographies (Census Tracts) | 332 | 8.4 | 29.8 | 35.2 | 23.8 | 2.7 |
| Population by Geography | 1,149,287 | 7.0 | 25.2 | 37.7 | 29.9 | 0.3 |
| Housing Units by Geography | 482,612 | 6.9 | 27.3 | 37.4 | 28.0 | 0.3 |
| Owner-Occupied Units by Geography | 270,023 | 3.9 | 19.3 | 40.4 | 36.4 | 0.1 |
| Occupied Rental Units by Geography | 163,706 | 10.7 | 37.9 | 33.7 | 17.1 | 0.7 |
| Vacant Units by Geography | 48,883 | 11.3 | 36.4 | 34.0 | 17.7 | 0.6 |
| Businesses by Geography | 107,446 | 4.5 | 21.8 | 34.8 | 35.7 | 3.2 |
| Farms by Geography | 2,687 | 3.4 | 17.3 | 39.7 | 38.6 | 0.9 |
| Family Distribution by Income Level | 278,956 | 21.5 | 17.3 | 20.3 | 40.9 | 0.0 |
| Household Distribution by Income Level | 433,729 | 23.5 | 16.7 | 17.9 | 41.8 | 0.0 |
| Median Family Income MSA - 36420 Oklahoma City, OK MSA |  | \$64,058 | Median Housing Value |  |  | \$139,259 |
|  |  |  | Median Gross Rent |  |  | \$808 |
|  |  |  | Families Below Poverty Level |  |  | 11.5\% |
| Source: 2015 ACS and 2019 D\&B Data <br> Due to rounding, totals may not equal $100.0 \%$ <br> (*) The NA category consists of geographies that have not been assigned an income classification. |  |  |  |  |  |  |

## Economic Data

According to Moody's Analytics September 2019 Report, population growth in the area exceeds the U.S. average and has experienced positive net migration. The area has a diverse economy and a high concentration of prime age workers. However, a downturn in the energy industry is spilling into private services and weighing on the economy. Employment growth is below 1 percent for the first time since mid-2017. Fewer jobs in mining and in tightly linked professional services are sapping the area of valuable high-wage positions that support incomes and spending. Energy firms in Oklahoma have cut back on drilling. The area's energy-related industries are projected to lose more jobs in coming quarters, suggesting the economy will weaken before it improves. Over half of the major companies based in Oklahoma City are energy related. While oil prices have stabilized after a drop in the second quarter, concerns about the global economic outlook and robust domestic supplies are weighing on expectations
for future activity. Government accounts for a significant percentage of the employment in the area. The area is home to Tinker Airforce Base which is the largest employer in area. Other major employers include University of Oklahoma-Norman; FAA Mike Monroney Aeronautical Center; and Integris Health. Moody's indicates that single-family housing in the area is already more affordable than in any other southern metro area or division with at least one million residents. However, sales of singlefamily homes are expected to plateau soon as the economy weakens. A jump in single-family starts in the third quarter will help keep a floor under construction employment, but additional supply will hit the market the same time sales plateau, and house price appreciation will decelerate.

## Community Contacts

Examiners considered two community contacts completed during the review period with entities serving the area. The contacts were with organizations focused on the unmet infrastructure needs due to multiple natural disasters in recent years with the need to repair and replace infrastructure such as roads, bridges and drainage systems that were damaged because of these disasters. While housing is generally considered affordable, there is still a need for affordable housing, particularly for low- and very-lowincome individuals and households. Contacts also noted the need to support programs to assist first time home buyers as well as the need to create job opportunities for low-income individuals by expanding existing businesses and attracting new businesses. Other needs included affordable starter homes, affordable and accessible mortgages for low- to moderate-income families and a local hospital or medical care.

## Scope of Evaluation in Oklahoma

The Oklahoma City MSA received a full-scope review. The area accounts for 83.0 percent of the bank's deposits and 53.2 percent of the lending in Oklahoma. The other AA received a limited-scope review. Performance in limited-scope AA that affected the CRA rating is addressed within their respective tests.

## CONCLUSIONS WITH RESPECT TO PERFORMANCE TESTS IN OKLAHOMA

## LENDING TEST

The bank's performance under the Lending Test in the state of Oklahoma is rated Low Satisfactory.

## Conclusions for Areas Receiving a Full-Scope Review

Based on a full-scope review, the bank's performance in the Oklahoma City MSA is adequate. Overall, excellent lending levels, adequate geographic distribution of loans and good borrower distribution of loans.

## Lending Activity

Lending levels reflect excellent responsiveness to credit needs in the bank's AA.
Examiners considered the number and dollar amount of home mortgage, small business, small farm originated or purchased relative to Chase's capacity based on deposits, competition, and market presence. Lending activity for home mortgage and small loans to businesses received the most weight
in reaching conclusions. Respectively, home mortgage lending and small loans to businesses account for 18.5 percent and 80.8 percent of the loan volume in the state by number and 71.1 percent and 28.6 percent of loan volume by dollar. Small farm lending is not a strategic focus of the bank and received minimal weight in reaching conclusions. Farms loans represented 0.7 percent of the loan volume in the state by number 0.2 percent loan volume by dollar.

| Number of Loans* |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home <br> Mortgage | Small <br> Business | Small <br> Farm | Community <br> Development | Total | \% <br> State <br> Loans | \% State <br> Deposits |
| Oklahoma City MSA | 4,034 | 19,559 | 203 | 1 | 23,797 | 56.2 | 83.0 |
| Tulsa MSA | 2,606 | 9,454 | 61 | 0 | 12,121 | 43.8 | 17.0 |
| Total | 6,640 | 29,013 | 264 | 1 | 35,918 | 100.0 | 100.0 |

*The tables present the data for all assessment areas. The narrative below addresses performance in full-scope areas only.

| Dollar Volume of Loans* (\$000's) |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Home <br> Assessment Area | Small <br> Business | Small <br> Farm | Community <br> Development | Total | \% State <br> Loans | \%eposit State <br> Den |
| Oklahoma City MSA | 722,759 | 349,706 | 2,888 | 1,800 | $1,077,153$ | 62.7 | 83.0 |
| Tulsa MSA | 497,947 | 141,070 | 590 | 0 | 639,607 | 37.3 | 17.0 |
| Total | $1,220,706$ | 490,776 | 3,478 | 1,800 | $1,716,760$ | 100.0 | 100.0 |

*The tables present the data for all assessment areas. The narrative below addresses performance in full-scope areas only.
Chase ranked second in deposits of 72 institutions with 10.4 percent market share.
In overall home mortgage lending, Chase ranked eleventh with 2.2 percent market share. This is a very competitive market with 538 mortgage lenders. The top lenders in this market were BOKF, NA (4.8 percent), Wells Fargo Bank, NA (4.5 percent), and Cornerstone Home Lending, Inc. (4.4 percent).

Chase ranked second in small loans to businesses with 12.9 percent market share. There are 126 lenders in the MSA. The major lender in this market is American Express National Bank with 19.5 percent market share.

Chase ranked second in small loans to farms 10.7 percent market share. There are 20 lenders in the MSA. The major lender in this market is Bancfirst with 42.0 percent market share.

## Distribution of Loans by Income Level of the Geography

The bank exhibits adequate geographic distribution of loans in its AAs.

## Home Mortgage Loans

Refer to Table O in the state of Oklahoma section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of home mortgage loan originations and purchases for this evaluation is adequate. The following information was taken into consideration when determining this rating.

- Between 2017 and 2019, the proportion of loans in low-income geographies was significantly below the proportion of OOUs in those areas and below the aggregate distribution of loans. The proportion of moderate-income geographies was below the proportion of OOUs in those areas and significantly exceeded the aggregate distribution of loans.
- Performance in the low- and moderate-income geographies between 2014 and 2016 was inconsistent with the performance during the 2017-2019 period. Between 2014 and 2016, the proportion of loans in low-income geographies was significantly below the proportion of OOUs in those areas and well below the aggregate distribution of loans. The proportion of moderate-income geographies was well below the proportion of OOUs in those areas and near to the aggregate distribution of loans. The weaker performance between 2014 and 2016 did affect the 2017-2019 performance.


## Small Loans to Businesses

Refer to Table Q in the state of Oklahoma section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to businesses

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to businesses for this evaluation is adequate. The following information was taken into consideration when determining this rating.

- Between 2017-2019, the proportion of loans to small businesses in low- and moderate-income geographies was below the proportion of businesses and the aggregate distribution of loans.
- Performance in low- and moderate-income geographies during the 2014 and 2016 time periods was consistent with 2017 to 2019 period. Between 2104 and 2016, the proportion of loans to small businesses in low- and moderate-income geographies was below the proportion of businesses. The proportion of loans to small businesses in low- and moderate-income geographies was near to aggregate distribution of loans.


## Small Loans to Farms

Refer to Table $S$ in the state of Oklahoma section of appendix $D$ for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to farms.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to farms is good. The following information was taken into consideration when determining this rating.

- The limited percentage of farms in low-income geographies (3.4 percent) constrained lending opportunities; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of farms in those geographies.
- Between 2017 and 2019, the proportion of loans to small farms in low- and moderate-income geographies was significantly below both the proportion of farms in those geographies and wellbelow the aggregate distribution.
- Performance in low- and moderate-income geographies during the 2014 to 2016 period was better than the performance during 2017 to 2019 period. Between 2014 and 2016, the proportion of loans
to small farms in low- and moderate-income geographies was below the proportion of farms in those geographies and near to the aggregate distribution.


## Lending Gap Analysis

A review of home mortgage loans, small loans to business, and small loans to farms including summary reports and AA maps did not identify any unexplained conspicuous lending gaps in the bank's activities.

## Distribution of Loans by Income Level of the Borrower

The bank exhibits good distribution of loans among individuals of different income levels and business and farms of different sizes.

## Home Mortgage Loans

Refer to Table P in the state of Oklahoma section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall borrower distribution of home mortgage loan originations and purchases for this evaluation is good. The following information was taken into consideration when determining this rating.

- Between 2017 and 2019, the proportion of loans to low- and moderate-income borrowers was near to the percentage of low-and moderate-income families in the AA and exceeded the aggregate distribution of loans.
- Performance between 2014 and 2016 was consistent with the 2017-2019 period, which contributed to the overall good performance. The proportion of loans to low- and moderate-income borrowers was near to the percentage of low-and moderate-income families in the AA and exceeded the aggregate distribution of loans.


## Small Loans to Businesses

Refer to Table R in the state of Oklahoma section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to businesses.

Based on the data in the tables and the following factors, the distribution of the bank's originations and purchases of small loans to businesses by revenue category is good. The following information was taken into consideration when determining this rating.

- Between 2017 and 2019, the bank's distribution of loans to businesses with revenues of $\$ 1$ million or less was below the proportion of businesses with revenues of $\$ 1$ million or less and significantly exceeded the aggregate distribution of loans.
- Performance in the 2014 to 2016 period was consistent with the performance between 2017-2019. The bank's distribution of loans to businesses with revenues of $\$ 1$ million or less was below the proportion of businesses with revenues of $\$ 1$ million or less and significantly exceeded the aggregate distribution of loans.


## Small Loans to Farms

Refer to Table T in the state of Oklahoma section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to farms.

Based on the data in the table and the following considerations, the distribution of the bank's originations and purchases of small loans to farms by revenue category is good. The following information was taken into consideration when determining this rating.

- Between 2017 and 2019, the bank's percentage of loans to farms with revenues of $\$ 1$ million or less was near to the percentage of businesses and significantly exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was weaker than the performance between 2017 and 2019. The bank's percentage of loans to farms with revenues of $\$ 1$ million or less was well-below the percentage of businesses and below the aggregate distribution.


## Community Development Lending

The bank has made few, if any, CD loans in the Oklahoma City MSA.
The Lending Activity Tables, shown above, set forth the information and data used to evaluate the institution's level of CD lending. These tables include all CD loans, including multifamily loans that also qualify as CD loans.

The bank made one CD loan in its AA for a $\$ 1.8$ million, which represents less than one percent of the tier 1 capital allocated to the AA.

Details of the CD loan:

- In April 2015, the bank funded a $\$ 1.8$ million construction loan to build a new 11.5 -acre mental health center located in a medically underserved low-income community with a poverty rate of 37.3 percent. The mental health care provider serves the needs of adults living with severe mental illness and children living with severe emotional disturbances. Upon completion of the project, 230 jobs were retained, and 50 jobs were created.


## Product Innovation and Flexibility

The bank makes extensive use of innovative and/or flexible lending practices to serve AA credit needs. A total of 1,502 loans were funded totaling nearly $\$ 203.6$ million. Refer to the comments in the Product Innovation and Flexibility section of this performance evaluation for additional details regarding the programs.

| Loan Type | Number of <br> Loans | Dollar Amount <br> $\mathbf{( \$ 0 0 0 ' s )}$ |
| :--- | :---: | :---: |
| DreaMaker | 165 | 26,701 |
| FHA | 606 | 65,886 |
| Home Affordable Refinance Program (HARP) | 279 | 31,987 |
| Veteran's Administration (VA) | 286 | 47,258 |
| Small Business Administration (SBA) | 52 | 17,687 |
| U.S. Department of Agriculture (USDA) | 114 | 14,094 |

## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AA was factored into the state's overall Low Satisfactory Lending Test rating and did not significantly affect the initial overall conclusions based on the AA receiving fullscope review. Based on a limited-scope review, the bank's performance under the Lending Test in the Tulsa MSA is consistent with the bank's overall performance under the Lending Test in the full-scope area.

Refer to Tables O through T in the state of Oklahoma section of appendix D for the facts and data that support these conclusions.

## INVESTMENT TEST

The bank's performance under the Investment Test in Oklahoma is rated High Satisfactory. Statewide investments totaling 29.0 percent enhanced the bank's overall performance.

## Conclusions for Area Receiving a Full-scope Review

Based on a full-scope review, the bank's performance in the Oklahoma City MSA is adequate.
The bank has an adequate level of qualified CD investments and grants, particularly those that are not routinely provided by private investors. The current and prior period of qualified investments represents 3.9 percent of tier 1 capital allocated to the AA. A significant majority or 94 percent of total qualified investments are from the current period.

The bank exhibits good responsiveness to credit and community economic development needs identified in the AA, including affordable housing, community services, and revitalization/stabilization for lowand moderate-income individuals and geographies. Sixty-two percent of the bank's CD investments focused on affordable housing and 37.8 percent focused on community services, identified credit needs in the AA. Additionally, the bank provided 19 grants totaling $\$ 698,000$ to a variety of organizations that primarily supported community service needs.

The bank rarely uses innovative and/or complex investments to support CD initiatives in this AA. The bank made two current period investments consisting of NMTC projects that also serve to encourage future growth and improvement in the area. No prior period qualified investments are complex.

Examples of CD investments in the AA include:

- The bank originated a $\$ 4.0$ million LIHTC equity investment in support of a CD project that provided 160 affordable rental units to low- and moderate-income individuals and families in the AA. This investment was part of a $\$ 211.9$ million LIHTC affordable housing fund.
- The bank invested $\$ 4.3$ million in a LIHTC project that provided 57 affordable housing units to lowand moderate-income individuals and families in the AA.

| Qualified Investments -State of Oklahoma |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area (AA) | Prior Period* |  | Current Period |  | Total |  |  |  | UnfundedCommitments** |  |
|  | \# | \$(000's) | \# | \$(000's) | \# | \% of Total \# | \$(000's) | \% of <br> Total \$ | \# | \$(000's) |
| Full Review: |  |  |  |  |  |  |  |  |  |  |
| Oklahoma City MSA | 8 | 847 | 24 | 16,864 | 32 | 29.1 | 17,712 | 46.6 | 0 | 0 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |
| Tulsa MSA | 2 | 25 | 27 | 9,360 | 29 | 26.4 | 9,385 | 24.7 | 0 | 0 |
| Statewide Investments with Purpose, Mandate, or Function ( $\mathrm{P} / \mathrm{M} / \mathrm{F}$ ) to Serve AAs | 0 | 0 | 26 | 9,620 | 26 | 23.6 | 9,620 | 25.3 | 0 | 0 |
| Statewide Investments with No Purpose, Mandate, or Function (P/M/F) to Serve AAs | 22 | 1,238 | 1 | 20 | 23 | 20.9 | 1,258 | 3.3 | 0 | 0 |

Prior Period Investments' means investments made in a previous evaluation period that are outstanding as of the examination date.
Unfunded Commitments' means legally binding investment commitments that are tracked and recorded by the institution's financial reporting system.

## Statewide Investments in the State of Oklahoma

There are 49 current and prior period investments and grants with and without a purpose, mandate, or function to serve AAs in the broader statewide area. Eighty-nine percent support affordable housing and ten percent support community services while the remaining support revitalization/stabilization. These statewide investments totaling 29 percent further enhanced the bank's overall performance under the Investment Test in the state of Oklahoma.

## Conclusions for Area Receiving a Limited-Scope Review

Performance in the limited-scope AA was factored into the state's overall High Satisfactory Investment Test rating and had a positive impact on the overall Investment Test rating for the state. Based on a limited-scope review, the bank's performance under the Investment Test in the Tulsa MSA is stronger than the bank's overall performance under the Investment Test in the full-scope area. This is due to a higher volume of CD investments.

## SERVICE TEST

The bank's performance under the Service Test in state of Oklahoma is rated Outstanding.

## Conclusions for Area Receiving a Full-Scope Review

Based on a full-scope review, including the data in the tables below, the bank's performance in the Oklahoma City MSA is excellent.

## Retail Banking Services

Service delivery systems are readily accessible to geographies and individuals of different income levels in the bank's full-scope AA.

Examiners evaluated the data as outlined in the Scope section at the front of this document including bank-provided data on usage of branches adjacent to low- and moderate-income geographies by individuals residing in those geographies and on increases in the usage of alternative delivery systems.

Based on the data in the table below and performance context, the branch distribution is good. In lowand moderate-income geographies, the distribution is respectively well below and exceeds the percentage of the population. The bank had no branches in low-income geographies and five branches in moderate-income geographies. Examiners gave slightly more weight to the bank's performance in moderate-income geographies as they contain three times the population as low-income geographies. The distribution was augmented by five MUI tract branches that serve moderate-income tracts. Examiners reviewed data on the accounts held and transactions conducted at the MUI branches and confirmed they were serving the adjacent low- and moderate-income populations.

| Distribution of Branch Delivery System |  |  |  |  |  |  |  | As of December 31, 2019 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Deposits | Branches |  |  |  |  |  | Population <br> \% of Population within Each Geography |  |  |  |
| Assessment | $\%$ of Rated | \# of <br> BANK <br> Branches | \% of Rated Area Branches in $\mathbf{A A}$ | Location of Branches by Income of Geographies (\%) |  |  |  |  |  |  |  |
|  | Deposits in AA |  |  | Low | Mod | Mid | Upp | Low | Mod | Mid | Upp |
| Oklahoma City MSA | 83.0 | 18 | 66.7 | 0 | 27.8 | 27.8 | 38.9 | 7.0 | 25.2 | 37.7 | 29.9 |

* May not add up to 100 percent due to geographies with unknown tract income level and rounding

Alternative delivery systems enhanced the delivery of banking services to geographies and individuals of all income levels. The OCC considered the availability and use of alternative delivery systems over the evaluation period. This included review of the bank's 52 deposit-taking ATMs, online banking, mobile banking, and telephone banking to determine the effectiveness of these systems to make retail banking services available to individuals in low- and moderate-income geographies. The bank increased the deposit-taking ATMs in low- and moderate-income geographies by 30.7 percent over the prior rating period to 1 (1.9 percent) deposit-taking ATMs in low-income geographies and 16 (30.8 percent) ATMs in moderate-income geographies. Additionally, bank-provided data on use of online, mobile, and telephone banking showed increases in the adoption of these services by low- and moderate-income individuals from the prior rating period.

| Distribution of Branch Openings/Closings |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | \# of Branch Openings | \# of Branch Closings | Net change in Location of Branches (+ or -) |  |  |  |
|  |  |  | Low | Mod | Mid | Upp |
| Oklahoma City MSA | 1 | 4 | 0 | -2 | -1 | 0 |

The bank's opening and closing of branches has not adversely affected the accessibility of its delivery systems, particularly in low- and moderate-income geographies and/or to low- and moderate-income individuals. The bank did not open or close any branches in the low-income geographies and closed two branches in moderate-income geographies. Branch closures were due to location issues, reduced customer usage, and proximity to other Chase branches. Despite the branch closures, branch locations remained accessible to geographies and individuals of different income levels in the bank's AA.

Services, including where appropriate, business hours, do not vary in a way that inconveniences its AA, particularly low- and moderate-income geographies and/or individuals. Generally, branches are open Monday through Thursday from 9:00 am to 5:00 pm, Friday from 9:00 am to 6:00 pm, and Saturday from 9:00 am to 1:00 pm. All retail banking services are available at all branches within the low- and moderate-income geographies.

## Community Development Services

The bank was a leader in providing CD services that are responsive to AA needs.
Bank records show that employees provided their financial or job-specific expertise and/or technical assistance for 308 qualified CD service activities to ten organizations since the last evaluation, logging a total of 775 hours. All the bank's assistance was to organizations that provide community services to low- and moderate-income individuals and families. The bank's CD services were responsive to the community needs in the AA, particularly homeownership education. The following is an example of CD services provided:

- Bank employees provided 37 first-time homebuyer seminars serving 266 low- and moderate-income individuals through a partnership with an affordable housing organization.


## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall Outstanding Service Test rating and positively affected the initial overall conclusions based on the AA receiving a full-scope review. Based on a limited-scope review, the bank's performance under the Service Test in the Tulsa MSA is excellent and consistent with the bank's performance under the Service Test in the full-scope area.

## State Rating

## State of Oregon

CRA rating for the State of Oregon ${ }^{24}$ : Outstanding The Lending Test is rated: Outstanding
The Investment Test is rated: High Satisfactory
The Service Test is rated: Outstanding
The major factors that support this rating include:

- An excellent level of lending activity.
- An excellent geographic distribution of home mortgage loans and small loans to businesses.
- A good borrower distribution of home mortgage loans and small loans to businesses.
- Leadership in making CD loans, which positively affected the rating.
- The extensive use of innovative/flexible products, which positively affected the rating.
- An excellent level of qualified investments that demonstrated excellent responsiveness to credit and community economic development needs lowered by weaker performance in the limited-scope AAs.
- The occasional use of innovative and/or complex investments.
- Retail service delivery systems that are readily accessible to geographies and individuals of different income levels.
- A significant level of CD services that are responsive to AA needs.


## Description of Institution's Operations in Oregon

The state of Oregon is Chase's $24^{\text {th }}$ largest rating area based on its total deposits of $\$ 1.9$ billion, representing 0.1 percent of the bank's total deposits. As of December 31, 2019, the bank operated 46 branches and 44 deposit-taking ATMs within the rating area, representing 0.9 percent of total branches and 0.2 percent of total ATMs. These totals exclude the branch and ATMs in Portland-VancouverSalem, Oregon-Washington CSA. The bank originated and purchased approximately $\$ 2.0$ billion in loans or 0.3 percent of total bank loan originations and purchases during the evaluation period in the state.

According to FDIC Deposit Market Share Data, as of June 30, 2019, the bank-maintained $\$ 7.7$ billion in deposits in the state of Oregon, ranking $5^{\text {th }}$ with 9.6 percent deposit market share. Banking competition consists of 43 institutions operating 944 offices in the state. U.S. Bank, N.A. was $1^{\text {st }}$ in deposit market share with 20.5 percent; followed by Wells Fargo Bank, N.A. with 15.2 percent; and Bank of America with 13.2 percent.

The bank has delineated four AAs in the state of Oregon. The Medford-Grants Pass CSA (Medford CSA) accounts for 39.4 percent of the bank's deposits in the state of Oregon and received a full-scope review. The Bend-Redmond-Prineville CSA, Eugene-Springfield MSA, and the Oregon Non-Metro AA received a limited-scope reviews. The delineated AAs are described in appendix A.

## Description of Full-Scope AA

The Medford CSA consists of the Medford MSA and the Grants Pass MSA. The bank defines its AA as the entire Medford-Grants Pass CSA. According to FDIC Deposit Market Share Data, as of June 30,

[^123]2019, the bank-maintained $\$ 754.0$ million in deposits in the AA, ranking $2^{\text {nd }}$ in deposit market share with 14.8 percent.

The following table provides a summary of the demographics that includes housing and business information for the Medford CSA. Table A indicates that the percentage of low-income geographies is very low ( 1.8 percent), that the of volume of OOUs is very small in low-income census tracts ( 0.7 percent), however over 20.6 percent of families in the AA are low-income. The Medford CSA's cost of housing limits access to affordable homeownership among LMI borrowers. The median housing value in the Medford CSA is 3.3 times the averaged median income ( $\$ 49,947$ ), 5.5 times the moderateincome, and 8.8 times the low-income, indicating a large proportion of OOUs are unaffordable to most low-income and many moderate-income borrowers. One simplistic method used to determine housing affordability assumes a maximum monthly principal and interest payment of no more than 36 percent of the applicant's income.

In the Medford CSA, assuming a 30-year mortgage with a 5.0 percent interest rate, 3.0 down payment, and not accounting for homeowners insurance, real estate taxes, or any additional monthly expenses, a low-income borrower making $\$ 24,974$ per year (or less than 50 percent of the FFIEC adjusted median family income in the MSA) could afford a $\$ 67,807$ mortgage with a payment of $\$ 749$ per month; a moderate-income borrower earning $\$ 39,958$ per year (or less than 80 percent of the FFIEC adjusted median family income in the AA) could afford a $\$ 139,250$ mortgage with a payment of $\$ 1,199$ per month.

Median rents and the significant percentage of families below poverty level suggest rental housing is also unaffordable for many low-income residents.

| Table A - Demographic Information of the Assessment Area Assessment Area: $\mathbf{3 6 6}$ Medford-Grants Pass OR CSA 2017-2019 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Demographic Characteristics | \# | Low <br> \% of \# | Moderate \% of \# | Middle \% of \# | Upper <br> \% of \# | $\begin{aligned} & \text { NA* } \\ & \text { \% of \# } \end{aligned}$ |
| Geographies (Census Tracts) | 57 | 1.8 | 17.5 | 57.9 | 22.8 | 0.0 |
| Population by Geography | 291,772 | 0.7 | 15.5 | 59.5 | 24.3 | 0.0 |
| Housing Units by Geography | 129,810 | 0.7 | 15.4 | 59.5 | 24.4 | 0.0 |
| Owner-Occupied Units by Geography | 74,665 | 0.1 | 10.6 | 61.2 | 28.1 | 0.0 |
| Occupied Rental Units by Geography | 43,349 | 1.7 | 23.1 | 57.0 | 18.1 | 0.0 |
| Vacant Units by Geography | 11,796 | 0.6 | 17.9 | 57.1 | 24.4 | 0.0 |
| Businesses by Geography | 29,770 | 4.1 | 16.6 | 56.0 | 23.3 | 0.0 |
| Farms by Geography | 1,577 | 1.2 | 8.6 | 66.7 | 23.5 | 0.0 |
| Family Distribution by Income Level | 75,464 | 20.6 | 18.5 | 19.6 | 41.2 | 0.0 |
| Household Distribution by Income Level | 118,014 | 23.7 | 16.4 | 17.9 | 42.0 | 0.0 |
| Median Family Income MSA - 24420 Grants Pass, OR MSA |  | \$46,452 | Median Housing Value |  |  | \$221,933 |
| Median Family Income MSA - 32780 Medford, OR MSA |  | \$53,441 | Median Gross Rent |  |  | \$886 |
|  |  | Families Below Poverty Level | 13.7\% |
| Source: 2015 ACS and 2019 D\&B Data <br> Due to rounding, totals may not equal $100.0 \%$ <br> (*) The NA category consists of geographies that have not been assigned an income classification. |  |  |  |  |  |  |

## Economic Data

According to Moody's Analytics November 2019 Report, the Medford area has strong and improving migration trends; solid labor force growth; relatively low business costs; and a high share of jobs in new companies. However, the area has few high-tech jobs; low incomes; heavy exposure to cyclical retail and manufacturing; exposure to weak agriculture sector; and is distant from major airports and seaports. Leisure/hospitality, retail and construction have all shed jobs and healthcare growth has slowed considerably. On the bright side, a flatlining labor force and the lowest unemployment rate in recorded history are boosting average hourly earnings. Tourism is an important part of the area economy as the area has an array of wineries, outdoor activities, and an annual Shakespeare festival, which draws more than 100,000 visitors every year. The area's large and fast-growing population, particularly the population of seniors, will ensure that healthcare leads near-term job creation. Major employment industries in the area include education and health services; leisure and hospitality; and retail trade. Major employers include Asante Health System; Lithla Motors; Harry \& David Operations Corp; and Rogue Valley Medical Center. Almost 1 in 4 residents in the area is age 65 or older and the cohort is expanding briskly. Unlike in most areas with a senior-heavy population, Medford's working-age cohort is growing several times faster than the U.S. average, and educational attainment is only slightly below average, which bodes well for labor supply. Relatively strong multifamily construction has propelled growth in residential starts in 2019, compensating for some of the weakness in the single-family market.

Within the Grants Pass portion of the AA, Moody's Analytics July 2019 Report indicates that the latecycle expansion has cooled. The metro area has been unable to bounce back from a slowdown that took hold at the end of 2018 due in large part to a tight labor market. At 5 percent, the unemployment rate is down at least 1 percentage point from the lows reached at the height of its few expansions. Job creation has slowed along with labor force growth, and payroll employment is rising a touch more slowly. Despite business costs that are among the nation's lowest and favorable migration patterns; the area has an aging population; low labor force participation; above-average employment volatility; and a large retiree population past peak expenditure years. Manufacturing is holding up reasonably well, but downstream industries such as wholesale trade employ fewer workers than at any time since the early 2000s. A large and fast-growing population of seniors will ensure that healthcare and social assistance play an outsize role in the area's economy in the years to come. Although the area has not experienced as much of a spurt in population growth as in the rest of Oregon, the metro area is adding residents faster than the nation. Also, with a median age of just less than 48 years, Grants Pass has the 16th oldest population in the nation. One in three residents are over the age of 60 , more than 50 percent higher than the U.S. average. Major employment industries in the area include education and health services; retail trade; and leisure and hospitality. Major employers in the area include Three Rivers Community Hospital; Rogue Community College; Master Brand Cabinet Co.; and Walmart. The area's housing market also has slowed considerably with sales and starts edging lower over the past two years. Singlefamily price appreciation has slowed significantly. Multifamily building, however, is a key area of strength.

## Community Contacts

Three community contacts completed during the examination period were reviewed to gain an understanding of the needs in the community. Contacts were completed with organizations focused on economic development and community services. In addition to completed community contacts, a community needs assessment completed for the area by a consortium of nonprofit organizations was also reviewed. Contacts noted that Jackson and Josephine counties lag the larger metropolitan areas (Eugene, Salem, and Portland), but are ahead of the more rural areas. Medford especially continues to
see steady population growth. There is a housing shortage in both counties. Identified community needs include:

- Affordable Housing
- Living wage employment
- Higher educational attainment
- Nutrition and healthcare assistance
- Community outreach to educate low-income residents on available services
- Access to capital for new/developing small businesses
- Supportive services for seniors and individuals with disabilities
- Mental health care services
- Substance abuse counseling
- Access to a more efficient transportation system for rural residents without a vehicle
- Bi-lingual outreach to increase opportunity to those in limited English-speaking households


## Scope of Evaluation in Oregon

The rating for the state of Oregon is based on an evaluation of the bank's performance in all AAs as listed in appendix A. The Medford CSA accounts for 39.4 percent of the bank's deposits in the state of Oregon and received a full-scope review. The remaining three AAs in the state of Oregon received limited-scope reviews. Performance in limited-scope AAs and its effect on the CRA rating are discussed at the end of each test.

## CONCLUSIONS WITH RESPECT TO PERFORMANCE TESTS IN OREGON

## LENDING TEST

The bank's performance under the Lending Test in the state of Oregon is rated Outstanding.
Performance in AAs receiving limited-scope reviews was factored together with performance from AAs receiving full-scope reviews to determine the state's overall Outstanding Lending Test rating. Limitedscope conclusions did not significantly affect the initial overall conclusions based on the AAs receiving full-scope review.

## Conclusions for Area Receiving a Full-Scope Review

Based on a full-scope review, the bank's performance in the Medford CSA is excellent. Overall excellent lending levels, excellent geographic distribution of loans, and a high level of CD lending offset weaker but good borrower distribution. Product innovation/flexibility was also considered favorably when determining the rating.

## Lending Activity

Lending levels reflect excellent responsiveness to AA credit needs.
Examiners considered the number and amount of home mortgage, small business, and small farm loans originated or purchased relative to Chase's capacity based on deposits, competition, and market presence. Lending activity for home mortgage and small loans to businesses received the most weight
in reaching conclusions. Respectively, home mortgage lending and small loans to businesses account for 29.8 percent and 67.8 percent of the loan volume in the state by number and 86.4 and 10.2 percent of loan volume by dollar. Small farm lending is not a strategic focus of the bank and received minimal weight in reaching conclusions. Farm loans represented 2.2 percent of the loan volume in the state by number and 0.03 percent loan volume by dollar.

| Number of Loans* |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area |  | Home <br> Mortgage | Small <br> Business | Small <br> Farm | Community <br> Development | Total | \% <br> State <br> Loans |
| \% State <br> Deposits |  |  |  |  |  |  |  |
| Medford-Grants Pass CSA | 1,610 | 4,259 | 152 | 4 | 6,025 | 28.1 | 39.4 |
| Bend-Redmond-Prineville <br> MSA | 1,840 | 3,825 | 68 | 0 | 5,733 | 26.8 | 21.9 |
| Eugene-Springfield MSA | 1,655 | 4,224 | 92 | 12 | 5,983 | 27.9 | 20.4 |
| OR Non-Metro AA | 1,295 | 2,222 | 161 | 8 | 3,686 | 17.2 | 18.3 |
| Total | 6,400 | 14,530 | 473 | 24 | 21,427 | 100.0 | 100.0 |

*The tables present the data for all assessment areas. The narrative below addresses performance in full-scope areas only.
Dollar Volume of Loans* ('000's)

| Assessment Area | Home <br> Mortgage | Small <br> Business | Small <br> Farm | Community <br> Development | Total <br> State* <br> Loans | \% State <br> Deposits |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Medford-Grants Pass CSA | 362,115 | 61,084 | 1,703 | 16,416 | 441,318 | 26.2 | 39.4 |
| Bend-Redmond-Prineville <br> MSA | 576,579 | 55,429 | 680 | 0 | 632,688 | 37.6 | 21.9 |
| Eugene-Springfield MSA | 543,332 | 58,240 | 1,221 | 25,735 | 628,528 | 33.3 | 20.4 |
| OR Non-Metro AA | 241,836 | 28,611 | 1,920 | 18,362 | 290,729 | 2.9 | 18.3 |
| Total | $1,723,862$ | 203,364 | 5,524 | 60,513 | $1,993,263$ | 100.0 | 100.0 |

*The tables present the data for all assessment areas. The narrative below addresses performance in full-scope areas only.
Chase ranked second in deposits out of 12 institutions with 13.6 percent market share.
In overall home mortgage lending, Chase ranked ninth out of 303 lenders with a 2.9 percent market share. Other lenders in the market include Rogue ( 8.7 percent), Guild Mortgage Co. ( 7.3 percent), and UMPQUA Bank ( 6.6 percent).

In small loans to businesses, Chase ranked first out of 72 lenders with 15.9 percent market share. Other major lenders are U.S. Bank, N.A. (13.8 percent), Citibank, N.A. (12.6 percent), and American Express National Bank (11.6 percent).

In small loans to farms, Chase ranked second out of 12 lenders with a 24.0 percent market share. The other major lenders and respective market shares are U.S. Bank, N.A. (33.5), Wells Fargo Bank, N.A. (11.7 percent), and Washington Federal ( 9.5 percent).

## Distribution of Loans by Income Level of the Geography

The bank exhibits excellent geographic distribution of loans in its AA.

## Home Mortgage Loans

Refer to Table O in the state of Oregon section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of home mortgage loan originations and purchases for this evaluation is excellent. The following information was taken into consideration when determining this rating.

- Examiners considered the limited proportion of low-income geographies and low proportion of housing units in low-income geographies, particularly OOUs ( 0.1 percent), which constrained lending opportunities. Greater significance was placed on performance in moderate-income geographies.
- The high level of competition in the AA was also considered and examiners placed greater significance on performance compared to the aggregate of lenders.
- Between 2017 and 2019, the bank made no loans in low-income geographies. In moderate-income areas the proportion of loans exceeded both the percentage of owner-occupied units and aggregate distribution of loans.
- During 2014 through 2016, the bank made no loans in low-income geographies. In moderateincome areas the proportion of loans was near to the percentage of owner-occupied units and exceeded the aggregate distribution of loans.


## Small Loans to Businesses

Refer to Table Q in the state of Oregon section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to businesses.

Based on the data in the table and the following considerations, the distribution of the bank's originations and purchases of small loans to businesses by revenue category is good. The following information was taken into consideration when determining this rating.

- Examiners considered the small proportion of businesses in low-income geographies (4.1 percent) and competition between 72 lenders constrained lending opportunities to existing businesses.
- Performance against the aggregate distribution of lenders was given additional consideration as it reflects the difficulties all lenders are experiencing due to the economic constraints discussed above under the Description of the Full-Scope AA. The economic data particularly indicates the high cost of doing business and limited labor force as challenges for businesses.
- Between 2017 and 2019, the proportion of small loans to businesses in both low-and moderateincome geographies was below the proportion of businesses and near to the aggregate distribution.
- During 2014 to 2016, the proportion of small loans to businesses in both low- and moderate-income geographies was below the proportion of businesses and exceeded the aggregate distribution.


## Small Loans to Farms

Refer to Table $S$ in the state of Oregon section of appendix $D$ for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to farms.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to farms is poor. The following information was taken into consideration when determining this rating.

- Examiners considered the limited number of farms in low-income geographies, (1.2 percent) and the fact that farm lending is not a focus of the bank was also considered.
- Between 2017 and 2019, the proportions of loans to small farms in low-income geographies was excellent and below the aggregate distribution. The proportion of loans to small farms in moderateincome geographies was well below both the proportion of farms in those geographies and the aggregate distribution of all lenders.
- During 2014 to 2016, the bank made no loans to small farms in low-or-moderate-income geographies.


## Lending Gap Analysis

A review of home mortgage loans, small loans to business, and small loans to farms including summary reports and AA maps did not identify any unexplained conspicuous lending gaps in the bank's activities.

## Distribution of Loans by Income Level of the Borrower

The bank exhibits a good distribution of loans among individuals of different income levels and business and farms of different sizes, given the product lines offered by the institution.

## Home Mortgage Loans

Refer to Table $P$ in the state of Oregon section of appendix $D$ for the facts and data used to evaluate the borrower distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall borrower distribution of home mortgage loan originations and purchases for this evaluation is good. The following information was taken into consideration when determining this rating.

- Greater significance was placed on performance against the aggregate distribution as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of the Full-Scope AA.
- Examiners particularly considered housing affordability challenges for low- and moderate-income borrowers.
- Between 2017 and 2019, the proportion of loans to low-income borrowers was well below the percentage of low-income families and below the aggregate distribution of lenders. The proportion of loans to moderate-income borrowers exceeded the proportion of moderate-income families and the aggregate distribution.
- During 2014 to 2016, the proportion of loans to low-income borrowers was well below the percentage of low-income families and exceeded the aggregate distribution of lenders. The proportion of moderate-income loans was below the proportion of moderate-income families and near to the aggregate distribution.


## Small Loans to Businesses

Refer to Table R in the state of Oregon section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to businesses.

Based on the data in the tables and the following factors, the distribution of the bank's originations and purchases of small loans to businesses by revenue category is good. The following information was taken into consideration when determining this rating.

- Greater significance was placed on performance against the aggregate distribution of lenders as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of the Full-Scope AA.
- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 and 2019. The bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.


## Small Loans to Farms

Refer to Table T in the state of Oregon section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to farms.

Based on the data in the table and the following considerations, the distribution of the bank's originations and purchases of small loans to farms by revenue category is adequate. The following information was taken into consideration when determining this rating.

- Greater significance was placed on performance against the aggregate distribution of lenders as it reflects the difficulties all lenders are experiencing due to the economic constraints discussed above under the Description of the Full-Scope AA.
- The fact that farm lending is not a focus of the bank was considered.
- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below to the percentage of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was well below the percentage of businesses and below the aggregate distribution.


## Community Development Lending

The institution is a leader in making CD loans.
The Lending Activity Tables, shown above, set forth the information and data used to evaluate the institution's level of CD lending. These tables include all CD loans, including multifamily loans that also qualify as $C D$ loans.

The bank made four CD loans in its AA for a total of $\$ 16.4$ million, which represents 16.9 percent of the tier 1 capital allocated to the AA.

Examples of CD loans in the AA include:

- In January 2014, the bank made a loan for $\$ 177,000$ to provide 50 units of affordable housing to low- and moderate-income borrowers as identified by the National Low-Income Housing Coalition.
- In November 2014, the bank made a $\$ 6.1$ million loan to re-open the only operating sawmill in the county which provides jobs to 64 people. The mill is located in a middle-income census tract in a community that is classified as highly distressed due to its poverty rate of 31.7 percent and an unemployment rate of 15.6 percent.
- In May 2015, the bank made a $\$ 5.3$ million loan to enhance educational opportunities to low- and moderate-income students.


## Product Innovation and Flexibility

The bank makes extensive use of innovative and/or flexible lending practices to serve AA credit needs. A total of 390 loans were funded totaling nearly $\$ 71.9$ million. Refer to the comments in the Product Innovation and Flexibility section of this performance evaluation for additional details regarding the programs.

| Loan Type | Number of <br> Loans | Dollar Amount <br> $\mathbf{( \$ 0 0 0 ' s )}$ |
| :--- | :---: | :---: |
| DreaMaker | 32 | 5,915 |
| FHA | 34 | 6,058 |
| HARP | 107 | 15,232 |
| VA | 55 | 12,760 |
| SBA | 12 | 5,768 |
| USDA | 150 | 26,143 |

## Conclusions for areas Receiving a Limited-Scope Review

Performance in the limited-scope AAs was factored into the state's overall Outstanding Lending Test rating and did not significantly affect the initial overall conclusions based on the AAs receiving fullscope review. Based on limited-scope reviews, the bank's performance under the Lending Test in the Eugene-Springfield MSA and the OR Non-Metro AA is consistent with the bank's overall performance under the Lending Test in the full-scope area. The bank's performance under the Lending Test in the Bend-Redmond-Prineville CSA is weaker than the bank's overall performance under the Lending Test in the full-scope area. Weaker performance is primarily due to the lack of CD lending.

Refer to Tables O through T in the state of Oregon section of appendix D for the facts and data that support these conclusions.

## INVESTMENT TEST

The bank's performance under the Investment Test in the state of Oregon is rated High Satisfactory. An excellent level of qualified investments that demonstrated excellent responsiveness to credit and community economic development needs was lowered by weaker performance in the limited-scope AAs.

## Conclusions for Area Receiving a Full-Scope Review

Based on a full-scope review, the bank's performance in the Medford CSA is excellent.
The bank has an excellent level of qualified CD investments and grants, particularly those that are not routinely provided by private investors. The current and prior period investments dollar volume represents 19.4 percent of tier 1 capital allocated to the AA. A significant majority or 99.6 percent of total investments represent current period investments.

The bank exhibits excellent responsiveness to credit and community economic development needs identified in the AA, including supporting affordable housing and community services for LMI individuals, and revitalization/stabilization. Fifty-three percent of the bank's CD investments focus on affordable housing, while 47.1 percent focus on revitalizations/stabilizations and consisted of two NMTC serving as catalysts for future growth and development. Both are identified credit needs in the AA. The bank did not give any grants within the current period. Three prior period CD investments address affordable housing through LIHTC transactions.

The bank makes occasional use of innovative and/or complex investments to support CD initiatives in this AA. Complex investments represent 47.0 percent of total investments in the AA. These investments consist of NMTCs and serve as catalysts for future growth and other improvements.

Examples of community development investments in the AA include:

- The bank invested $\$ 1.5$ million in a LIHTC project, which contributed to the creation of 207 affordable housing units for low- and moderate-income individuals and families in the AA.
- The bank originated a $\$ 5.1$ million NMTC investment for the redevelopment of a 92 -year-old Southern Oregon lumberyard owned by a small neighborhood business. This investment allowed the business to reopen and upgrade its Small Log Mill (SLM). The upgrade and restart of the SLM brought back 64 employees out of the 85 that were laid off in 2013, spurring much needed economic stimulus throughout the region, and re-established the only operating sawmill in the county. This area lies within a moderate-income community, defined by high economic distress (poverty rate of 31.67 percent and an unemployment rate of 15.6 percent) due to the downturn of the historical timber resource-based economy.

| Qualified Investments -State of Oregon |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area (AA) | Prior Period* |  | Current Period |  | Total |  |  |  | $\begin{gathered} \text { Unfunded } \\ \text { Commitments** } \end{gathered}$ |  |
|  | \# | \$(000's) | \# | \$(000's) | \# | \% of <br> Total \# | \$(000's) | \% of <br> Total \$ | \# | \$(000's) |
| Full Review: |  |  |  |  |  |  |  |  |  |  |
| Medford-Grants Pass CSA | 3 | 67 | 6 | 18,753 | 9 | 15.0 | 18,820 | 28.4 | 0 | 0 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |
| Bend-Redmond-Prineville $\mathrm{CSA}$ | 4 | 783 | 0 | 0 | 4 | 6.8 | 783 | 1.2 | 0 | 0 |
| Eugene-Springfield MSA | 9 | 1,370 | 4 | 33,893 | 13 | 21.6 | 35,263 | 53.1 | 0 | 0 |
| OR Non- Metro AA | 10 | 2,284 | 4 | 6,377 | 14 | 23.3 | 8,661 | 13.0 | 0 | 0 |
| Statewide Investments with Purpose, Mandate, or Function (P/M/F) to Serve AAs | 0 | 0 | 17 | 1,895 | 17 | 28.3 | 1,895 | 2.9 | 0 | 0 |


| Statewide Investments with |  |  |  |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No Purpose, Mandate, or |  |  |  |  |  |  |  |  |  |  |
| Function (P/M/F) to Serve |  |  |  |  |  |  |  |  |  |  |
| AAs | 3 | 915 | 0 | 0 | 3 | 5.0 | 915 | 1.4 | 0 | 0 |

* Prior Period Investments' means investments made in a previous evaluation period that are outstanding as of the examination date.
** Unfunded Commitments' means legally binding investment commitments that are tracked and recorded by the institution's financial reporting system.


## Statewide Investment in the State of Oregon

The bank has qualified investments throughout the state of Oregon whose $\mathrm{P} / \mathrm{M} / \mathrm{F}$ include serving the AAs. They consist of LIHTC investments and many grants to organizations responding to the need for providing financial education, financial management and credit building skills to low- and moderateincome individuals and families. Investments with no P/M/F to serve AAs consist of three LIHTC investments that helped create 108 low- and moderate-income housing units. Investments with and without a $\mathrm{P} / \mathrm{M} / \mathrm{F}$ to serve AAs represent 4.3 percent of total state qualified investments. The investments all address an identified community development need. These investment in the broader statewide area further support the bank's overall good performance under the Investment Test in state of Oregon.

## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall High Satisfactory Investment Test rating which did significantly change the initial overall conclusions based on the AA receiving fullscope review. Based on limited-scope reviews, the bank's performance under the Investment Test in the Eugene-Springfield MSA and the OR Non-Metro AA is consistent with bank's overall excellent performance under the Investment Test in the full-scope area. The bank's performance under the Investment Test in the Bend-Redmond-Prineville CSA is weaker than the bank's overall excellent performance under the Investment Test in the full-scope area due to a lower volume of CD investments.

## SERVICE TEST

The bank's performance under the Service Test in state of Oregon is rated Outstanding.

## Conclusions for Area Receiving a Full-Scope Review

Based on a full-scope review, including the data in the tables below, the bank's performance in the Medford CSA is excellent.

## Retail Banking Services

Service delivery systems are readily accessible to geographies and individuals of different income levels in the bank's AA.

Examiners evaluated the data as outlined in the Scope section at the front of this document including bank-provided data on usage of branches adjacent to low- and moderate-income geographies by individuals residing in those geographies and on increases in the usage of alternative delivery systems.

Based on the data in the table below and performance context, the branch distribution is excellent. In low- and moderate-income geographies, the distribution exceeds the population. The bank had one branch in a low-income geography and three branches in moderate-income geographies.

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| Distribution of Branch Delivery System |  |  |  |  |  |  |  | As of December 31, 2019 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Deposits | Branches |  |  |  |  |  | Population <br> \% of Population within Each <br> Geography |  |  |  |
|  | \% of <br> Rated <br> Area <br> Deposits in AA | \# of <br> BANK <br> Branches | $\%$ of <br> Rated <br> Area <br> Branches <br> in AA | Location of Branches by Income of Geographies (\%) |  |  |  |  |  |  |  |
|  |  |  |  | Low | Mod | Mid | Upp | Low | Mod | Mid | Upp |
| MedfordGrants Pass CSA | 39.4 | 11 | 36.7 | 9.1 | 27.3 | 54.5 | 9.1 | 0.7 | 15.5 | 59.5 | 24.3 |

* May not add up to 100 percent due to geographies with unknown tract income level and rounding

Alternative delivery systems enhanced the delivery of banking services to geographies and individuals of all income levels. The OCC considered the availability and use of alternative delivery systems over the evaluation period. This included review of the bank's 17 deposit-taking ATMs, online banking, mobile banking, and telephone banking to determine the effectiveness of these systems to make retail banking services available to individuals in low- and moderate-income geographies. The bank increased the deposit-taking ATMs in low- and moderate-income geographies by 60.0 percent over the prior rating period to two ( 11.8 percent) deposit-taking ATMs in low-income geographies and six ( 35.3 percent) ATMs in moderate-income geographies. Additionally, bank-provided data on use of online, mobile, and telephone banking showed increases in the adoption of these services by low- and moderate-income individuals from the prior rating period.

| Distribution of Branch Openings/Closings |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | \# of Branch <br> Openings | \# of Branch <br> Closings | Net change in Location of Branches <br> (+ or -$)$ |  |  |  |
|  |  |  | Mod | Mid | Upp |  |
| Medford-Grants <br> Pass CSA | 0 | 1 | 0 | 0 | -1 | 0 |

The bank's opening and closing of branches has not affected the accessibility of its delivery systems, particularly in low- and moderate-income geographies and/or to low- and moderate-income individuals. The bank did not open or close any branches in low- and moderate-income geographies.

Services, including where appropriate, business hours, do not vary in a way that inconveniences its AA, particularly low- and moderate-income geographies and/or individuals. Generally, branches are open Monday through Friday from 9:00 am to 6:00 pm and Saturday from 9:00 am to 1:00 pm. All retail banking services are available at all branches within the low- and moderate-income geographies.

## Community Development Services

The bank provided a significant level of CD services that are responsive to AA needs.
Bank records show that employees provided technical assistance and/or job-specific expertise for 31 CD service activities to 3 organizations for a total of 100 qualified hours of service within the AA. A majority of the bank's assistance was to organizations that provide community services to low- and moderate-income individuals and families. The activities were responsive to AA needs, particularly affordable housing, and financial literacy. The following are examples of CD services provided in the AA:

- The bank provided financial incentives to 76 low- and moderate-income homebuyers to take homebuyer education from third-party organizations.
- A bank employee provided financial literacy training to low- and moderate-income participants of a national nonprofit. The purpose of this training was to equip nonprofit staff with tools and resources to make them more effective. The bank provided innovative trainings on topics such as financial education for the senior population focused on the rising issues of financial fraud and abuse and trainings on innovative financial tools and resources.


## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall Outstanding Service Test rating and did not significantly change the initial overall conclusions based on the AAs receiving fullscope review. Based on limited-scope reviews, the bank's performance under the Service Test in the Bend-Prineville MSA and OR Non-Metro AA is consistent with the bank's overall excellent performance under the Service Test in the full-scope area. The bank's performance under the Service Test in the Eugene-Springfield MSA is weaker than the bank's overall performance under the Service Test in the full-scope area due to weaker branch distribution in low- and moderate-income geographies.

## State Rating

## State of Texas

CRA rating for the State of Texas ${ }^{25}$ : Satisfactory
The Lending Test is rated: High Satisfactory
The Investment Test is rated: High Satisfactory
The Service Test is rated: High Satisfactory
The major factors that support this rating include:

- Excellent level of lending activity.
- Adequate geographic distribution of home mortgage loans and small loans to businesses.
- Good borrower distribution of home mortgage loans and small loans to businesses.
- A poor level of CD loans, which negatively affected the rating.
- The extensive use of innovative/flexible products, which positively affected the rating.
- A good level of investments that displayed excellent responsiveness to credit and community economic development needs.
- The significant use of innovative and/or complex qualified investments.
- Broader statewide investments, which positively affected the rating.
- Retail service delivery systems that are accessible to geographies and individuals of different income levels.
- A significant level of CD services that were responsive to AA needs.


## Description of Institution's Operations in Texas

The state of Texas is Chase's second largest rating area based on aggregate deposits of $\$ 191.9$ billion representing 18.3 percent of the bank's total deposits. As of December 31, 2019, the bank operated 541 branches and 1,777 deposit-taking ATMs within the rating area, representing 10.9 percent of total branches and 24.2 percent of total ATMs. The bank originated and purchased approximately $\$ 61.7$ billion in loans or 8.8 percent of total bank loan originations and purchases during the evaluation period in the state

According to FDIC Deposit Market Share Data, as of June 30, 2019, there were 510 banks operating 6,399 branches $s$ in the state. Chase ranked first in deposit market share with 21.9 percent. Major competitors in the state based on deposit market share include Bank of America, N.A. (14.7 percent), USAA Federal Savings (8.7 percent), and Wells Fargo Bank, N.A.(8.1 percent).

Chase delineated 21 AAs in the state of Texas. Refer to appendix A for a complete description of the AAs. The Austin-Round Rock-Georgetown, TX MSA (Austin MSA), Dallas-Fort Worth, TX CSA (Dallas CSA), and Houston-The Woodlands-Sugar Land, TX MSA (Houston MSA), which combined account for 96.2 percent of the deposits and 82.9 percent of lending in the state, received full-scope reviews. The Abilene MSA, Amarillo MSA, Beaumont-Port Arthur MSA, Brownsville-Harlingen MSA, College Station-Bryan MSA, El Paso MSA, Killeen-Temple MSA, Laredo MSA, Longview MSA, Lubbock MSA, McAllen-Edinburg-Mission MSA, Midland-Odessa CSA, San Antonio-New

[^124]Braunfels MSA, Tyler MSA, Waco MSA, Wichita Falls MSA, and Texas Non-MSA received limitedscope reviews. Refer to appendix A for a complete description of each AA.

## Description of Full-Scope AAs

## Austin MSA

According to FDIC Deposit Market Share Data as of June 30, 2019, the bank-maintained deposits of $\$ 110$ billion in the area, ranking it $1^{\text {st }}$ in deposit market share with 44.1 percent. Banking competition consists of 95 financial institutions operating 1,416 offices in the AA. Major banking competitors include Wells Fargo Bank, N.A. with 9.8 percent market share; Bank of America, N.A. with 9.5 percent market share; and BBVA USA with 5.69 percent market share. As of December 31, 2019, the bank operated 186 branches and 681 deposit-taking ATMs in the AA, representing 3.7 percent of total bank branches and 4.1 percent of total bank ATMs.

The following table provides a summary of the demographics that includes housing and business information for the Austin MSA. Table A indicates that the volume of OOUs is small in low-income census tracts ( 3.8 percent) and over 22.5 percent of families in the AA are low-income with 9.5 percent below the poverty level. The Austin MSA cost of housing also limits access to affordable homeownership, particularly among low-income borrowers. The median housing value in the Austin MSA $(\$ 233,705)$ is approximately three times the MSA's median income, almost four times moderateincome, and up to six times low-income, indicating a limited proportion of OOUs are affordable to lowincome borrowers. One simplistic method used to determine housing affordability assumes a maximum monthly principal and interest payment of no more than 30 percent of the applicant's income.

In the Austin MSA, assuming a 30-year mortgage with a five percent interest rate and three percent down payment, while not accounting for homeowners insurance, real estate taxes, or any additional monthly expenses, a low-income borrower making $\$ 39,499$ per year (or less than 50 percent of the FFIEC adjusted median family income in the MSA) could afford a $\$ 115,663$ mortgage loan with a payment of $\$ 1,185$ per month; a moderate-income borrower earning $\$ 63,198$ per year (or less than 80 percent of the FFIEC adjusted median family income in the AA) could afford a $\$ 257,781$ mortgage loan with a payment of $\$ 1,896$, per month.

Median rents and the percentage of families below poverty level suggest rental housing is also unaffordable for some low-income residents.

| Table A - Demographic Information of the Assessment Area Assessment Area: Austin-Round Rock-Georgetown TX MSA 2017-2019 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Demographic Characteristics | \# | Low <br> \% of \# | Moderate \% of \# | Middle \% of \# | Upper \% of \# | NA* <br> \% of \# |
| Geographies (Census Tracts) | 350 | 10.6 | 22.3 | 36.6 | 28.9 | 1.7 |
| Population by Geography | 1,889,094 | 10.1 | 22.3 | 37.3 | 29.2 | 1.1 |
| Housing Units by Geography | 747,159 | 10.1 | 20.6 | 38.2 | 30.1 | 0.9 |
| Owner-Occupied Units by Geography | 399,483 | 3.8 | 18.1 | 40.3 | 37.6 | 0.2 |
| Occupied Rental Units by Geography | 289,795 | 18.4 | 23.8 | 35.5 | 20.5 | 1.7 |
| Vacant Units by Geography | 57,881 | 12.0 | 22.1 | 37.9 | 26.6 | 1.5 |
| Businesses by Geography | 204,774 | 6.7 | 14.0 | 33.9 | 44.2 | 1.2 |

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| Farms by Geography | 4,339 | 4.7 | 17.8 | 40.2 | 37.0 | 0.3 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Family Distribution by Income Level | 428,451 | 22.5 | 16.9 | 19.8 | 40.8 | 0.0 |
| Household Distribution by Income Level | 689,278 | 23.6 | 16.6 | 18.0 | 41.7 | 0.0 |
| Median Family Income MSA - 12420 <br> Austin-Round Rock-Georgetown, TX MSA | $\$ 78,997$ | Median Housing Value | $\$ 233,705$ |  |  |  |
|  |  | Median Gross Rent | $\$ 1,067$ |  |  |  |
|  | Families Below Poverty Level | $9.5 \%$ |  |  |  |  |

Source: 2015 ACS and 2019 D\&B Data
Due to rounding, totals may not equal $100.0 \%$
$\left(^{*}\right)$ The NA category consists of geographies that have not been assigned an income classification.

## Economic Data

According to Moody's Analytics January 2020 report, the Austin-Round Rock-Georgetown area is advancing steadily, with job growth about a percentage point faster than the national average on a year-over-year basis. High tech is the primary driver of growth. In November, Apple announced that it had broken ground on its new campus. The development of the 133 -acre site will cost $\$ 1$ billion, employing hundreds of construction workers. Completion is expected in 2022, and the facility could house up to 9,000 additional employees. This would potentially bring the local employee total to 15,000 , making the company the largest private employer in the metro area. Other technology focused companies have also been expanding in the area, including Google, Dell, Facebook, and Oracle. The area has strong population growth and a well-educated labor force. Major employment industries include professional and business services; leisure and hospitality; and education and health services. Major employers in the area include University of Texas-Austin; Dell; and Seton Healthcare Network.

Moody's indicates that home sales rose nearly 20 percent in 2019, defying previous expectations of a slowdown. Further, house prices increased 4.7 percent, faster than the national average. These results have stimulated development and as a result, new permits for both single- and multifamily are nearly back to their previous peaks. The strong labor market and in-migration of professionals taking high paying jobs in IT will keep housing demand strong.

## Community Contacts

Three community contacts completed during the examination period with organizations serving the area were reviewed to ascertain credit and community development needs. Contacts were completed with organizations focused on affordable housing; services for low-income individuals; and community revitalization. Contacts noted that the Austin area economy is booming. The area, which had previously been known as a "music capital" has seen an influx of high-tech businesses, which has brought a lot of wealth to the area. Contacts noted that land values in Austin are high, which makes it more challenging to develop affordable housing. Community needs identified include:

- Affordable housing for low- and moderate-income individuals and households
- Financial education for the unbanked and underbanked
- Program related investments to help non-profit developers create affordable housing


## Dallas CSA

According to FDIC Deposit Market Share Data as of June 30, 2019, the bank-maintained deposits of $\$ 110$ billion in the area, ranking it $1^{\text {st }}$ in deposit market share with 44.1 percent. Banking competition consists of 95 financial institutions operating 1,416 offices in the AA. Major banking competitors include Wells Fargo Bank, N.A. with 9.8 percent market share; Bank of America, N.A. with 9.5 percent market share; and BBVA USA with 5.69 percent market share. As of December 31, 2019, the bank operated 186 branches and 681 deposit-taking ATMs in the AA, representing 3.7 percent of total bank branches and 4.1 percent of total bank ATMs.

Table A below provides a summary of the demographics that includes housing and business information for the Dallas CSA. The table indicates that the volume of OOUs is small in low-income census tracts ( 5.0 percent) and over 23.3 percent of families in the AA are low-income with 11.4 percent below the poverty level. The Dallas CSA cost of housing also limits access to affordable homeownership, particularly among low-income borrowers. The median housing value in the Dallas CSA $(\$ 174,539)$ ranges from two to three times the CSA's median income, almost four times moderate-income, and up to almost six times low-income, indicating a limited proportion of OOUs are affordable to low- income borrowers. One simplistic method used to determine housing affordability assumes a maximum monthly principal and interest payment of no more than 30 percent of the applicant's income.

In the Dallas CSA, assuming a 30 -year mortgage with a five percent interest rate and three percent down payment, while not accounting for homeowners insurance, real estate taxes, or any additional monthly expenses, a low-income borrower making $\$ 30,437$ per year (or less than 50 percent of the FFIEC adjusted median family income in the CSA) could afford a $\$ 79,609$ mortgage loan with a payment of $\$ 913$ per month; a moderate-income borrower earning $\$ 48,698$ per year (or less than 80 percent of the FFIEC adjusted median family income in the AA) could afford a $\$ 152,194$ mortgage loan with a payment of $\$ 1,461$ per month.

Median rents and the percentage of families below poverty level suggest rental housing is also unaffordable for some low-income residents.

| Table A - Demographic Information of the Assessment Area Assessment Area: 206 Dallas-Fort Worth TX CSA 2017-2019 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Demographic Characteristics | \# | Low \% of \# | Moderate \% of \# | Middle \% of \# | Upper \% of \# | $\begin{aligned} & \text { NA* } \\ & \text { \% of \# } \end{aligned}$ |
| Geographies (Census Tracts) | 1,327 | 12.7 | 25.8 | 28.7 | 32.3 | 0.5 |
| Population by Geography | 6,833,178 | 10.7 | 24.9 | 30.4 | 33.8 | 0.1 |
| Housing Units by Geography | 2,614,182 | 11.1 | 23.9 | 31.0 | 33.8 | 0.2 |
| Owner-Occupied Units by Geography | 1,444,988 | 5.0 | 19.3 | 32.3 | 43.3 | 0.1 |
| Occupied Rental Units by Geography | 964,171 | 18.6 | 29.9 | 29.5 | 21.7 | 0.3 |
| Vacant Units by Geography | 205,023 | 19.0 | 27.8 | 29.0 | 23.9 | 0.3 |
| Businesses by Geography | 675,727 | 6.8 | 18.6 | 27.6 | 46.4 | 0.6 |
| Farms by Geography | 12,925 | 4.7 | 16.5 | 33.5 | 45.0 | 0.4 |
| Family Distribution by Income Level | 1,670,898 | 23.3 | 16.5 | 18.2 | 41.9 | 0.0 |
| Household Distribution by Income Level | 2,409,159 | 23.9 | 16.5 | 17.7 | 41.9 | 0.0 |
| Median Family Income MSA - 19124 Dallas-Plano-Irving, TX |  | \$71,149 | Median Housing Value |  |  | \$174,539 |

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| Median Family Income MSA - 23104 Fort <br> Worth-Arlington-Grapevine, TX | $\$ 69,339$ | Median Gross Rent | $\$ 976$ |
| :--- | ---: | :--- | :---: |
| Median Family Income MSA - 43300 <br> Sherman-Denison, TX MSA | $\$ 60,873$ | Families Below Poverty Level | $11.4 \%$ |

## Economic Data

According to Moody's Analytics February 2020 report, the Dallas-Plano-Irving area is one of the largest metro areas in the country and has been the best performing in terms of job gains over the past year. The pace of job gains has tripled the national average. Core professional services, financial services, and construction are leading job gains with construction up at a double-digit rate in 2019. These are especially well-paying industries, and consequently growth in the number of high-wage jobs has also been triple the U.S. rate. The unemployment rate has declined to a 20 -year low 3.1 percent, even as the labor force has risen strongly. Over the past year, payrolls in professional services have risen 5.5 percent. The source of many of the new entrants in the labor force has been in-migration of workers taking new jobs amid corporate expansions and relocations. Major employers in the area include Walmart; AT \&T; Baylor Scott \& White Health; and Bank of America, N.A. In the housing market, new construction has rebounded since mid-2019. Past above-average home price increases have reduced affordability in the single-family housing market; however, recent price increases have been no faster than the national average.

The Fort Worth-Arlington area has a lower cost of doing business and more housing affordability compared to Dallas. According to Moody's Analytics February 2020 report, the Fort Worth-Arlington area is advancing at a pace slightly above the national average in terms of job growth. The performance of each major industry approximately matches its national counterpart with a few exceptions. Specifically, financial services have grown at twice the national rate over the past year, but well-paying professional services have been declining since mid-2018. As a result, growth rates of both high-wage jobs and average hourly earnings have been below the national average. The unemployment rate has remained a very low 3.2 percent and labor force growth has been above average. Major employers include American Airlines; Lockheed Martin; and Texas Health Resources. Housing market indicators are improving. In late 2018 and the first part of 2019, new permits for single-family homes declined about 20 percent, but they have since rebounded by 15 percent. Apartment building is rebounding as well.

## Community Contacts

Three community contacts completed during the examination period with organizations serving the area were reviewed to ascertain credit and community development needs. Contacts were completed with organizations focused on affordable housing; services and programs for low-income individuals; and economic development. Contacts noted that the area economy is good with stable job growth and low unemployment. Because the economy is doing so well affordable housing access is becoming more of an issue. There are some parts of the area where low-income residents struggle with lack of food access (food deserts); are unbanked or underbanked; and do not have access to reliable transportation allowing them to access better paying jobs. Contacts identified several needs in the area including:

- Access to affordable housing, including single-family dwellings for purchase and affordable rental housing
- Support for workforce development and job training programs
- Financial education and self-sufficiency training


## Houston MSA

According to FDIC Deposit Market Share Data as of June 30, 2019, the bank-maintained deposits of $\$ 110$ billion in the area, ranking it $1^{\text {st }}$ in deposit market share with 44.1 percent. Banking competition consists of 95 financial institutions operating 1,416 offices in the AA. Major banking competitors include Wells Fargo, Bank, N.A. with 9.8 percent market share; Bank of America, N.A. with 9.5 percent market share; and BBVA USA with 5.69 percent market share. As of December 31, 2019, the bank operated 186 branches and 681 deposit-taking ATMs in the AA, representing 3.7 percent of total bank branches and 4.1 percent of total bank ATMs.

Table A below provides a summary of the demographics that includes housing and business information for the Houston MSA. The table indicates that the volume of OOUs is small in low-income census tracts ( 5.2 percent) and over 24.4 percent of families in the AA are low-income with 12.8 percent below the poverty level. The Houston MSA cost of housing also limits access to affordable homeownership, particularly among low-income borrowers. The median housing value in the Houston MSA $(\$ 172,974)$ is approximately 2.5 times the MSA's median income, over three times es moderate-income, and up to five times low-income, indicating a limited proportion of OOUs are affordable to low- and moderateincome borrowers. One simplistic method used to determine housing affordability assumes a maximum monthly principal and interest payment of no more than 30 percent of the applicant's income.

In the Houston MSA, assuming a 30-year mortgage with a five percent interest rate and three percent down payment, while not accounting for homeowners insurance, real estate taxes, or any additional monthly expenses, a low-income borrower making $\$ 34,686$ per year (or less than 50 percent of the FFIEC adjusted median family income in the MSA) could afford a $\$ 114,139$ mortgage loan with a payment of $\$ 1,041$ per month; a moderate-income borrower earning $\$ 55,498$ per year (or less than 80 percent of the FFIEC adjusted median family income in the AA) could afford a $\$ 213,325$ mortgage loan with a payment of $\$ 1,665$ per month.

Median rents and the percentage of families below poverty level suggest rental housing is also unaffordable for some low-income residents.

| Table A - Demographic Information of the Assessment Area |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area: 288 Houston-The Woodlands TX MSA 2017-2019 |  |  |  |  |  |  |  |

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| Farms by Geography | 9,029 | 5.2 | 16.6 | 31.1 | 47.0 | 0.1 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Family Distribution by Income Level | $1,530,226$ | 24.4 | 16.1 | 17.1 | 42.4 | 0.0 |
| Household Distribution by Income Level | $2,168,642$ | 24.9 | 15.9 | 16.8 | 42.4 | 0.0 |
| Median Family Income MSA - 26420 <br> Houston-The Woodlands-Sugar Land, <br> TX MSA$\$ \$ 69,373$ | Median Housing Value | $\$ 172,974$ |  |  |  |  |
|  |  |  |  |  |  |  |
| Source: 2015 ACS and 2019 D\&B Data <br> Due to rounding, totals may not equal $100.0 \%$ <br> (*) The NA category consists of geographies that have not been assigned an income classification. | $\$ 972$ |  |  |  |  |  |

## Economic Data

According to Moody's Analytics February 2020 Report, the Houston MSA advanced twice as fast as the national average in terms of job growth over the past year. All major industries outperformed their national counterparts, with professional services, construction and distribution leading the way. Because these are well-paying industries, growth in high-wage jobs was twice the national average. However, manufacturing has been weak in recent months, with the local Purchasing Manager's Index signaling contraction in November and December. The area is a leader in oil and gas technologies which supports technical and professional service jobs in these industries. The area also has significant trade and export links given its location along the Texas Gulf Coast. The unemployment rate has begun to rise a bit over the past several months from a low of 3.4 percent in September to 3.7 percent in December. However, the labor force is still growing. Major employment sectors in the area include professional and business services, education and health services and government. Major employers include Memorial Hermann Health System; The University of Texas Health Science Center; and Schlumberger LTD (an oil services company). Housing indicators are improving, and above-average population growth is anticipated.

## Community Contacts

Five community contacts completed during the examination period with organizations and entities serving the community were reviewed to ascertain community credit needs. The organizations contacted focus on activities such as affordable housing, small business assistance and funding, community services, and community and economic development. Contacts noted that the area had been significantly impacted by recent natural disasters such as Hurricanes Irma and Harvey in 2017 and that recovery from these disasters has been more problematic for minority households in the area's lowincome neighborhoods. The potential for people to be victimized by predatory lenders and non-licensed or unqualified contractors is higher due to the demand for rebuilding, cost of rebuilding, and payment ability. Those on limited incomes are less prepared than those with disposable incomes or savings. Financial education is needed, along with small dollar loans to assist low-income residents. Other needs identified by the contacts include:

- Technical assistance for small businesses to help them be better prepared to deal with natural disasters
- Financing, including down payment assistance for low- and moderate-income borrowers to purchase homes
- Affordable rental housing for low- and very low-income households
- Funding support for area non-profits
- Foreclosure assistance
- Financing for small businesses, including micro-loans


## Scope of Evaluation in Texas

Examiners applied the methodology described under the Ratings section at the front of this document. The Austin MSA, Dallas CSA and Houston MSA, Dallas CSA received full-scope reviews. The AAs combined account for 96.2 percent of the deposits and 82.9 percent of the lending in the state. The performance in the Houston MSA and Dallas CSA, received greater weight based on their volume of deposits and lending. The remaining AAs in the state of Texas received a limited-scope review. Performance in limited-scope AAs and its effect on the CRA rating is discussed at the end of each test.

## CONCLUSIONS WITH RESPECT TO PERFORMANCE TESTS IN TEXAS

## LENDING TEST

The bank's performance under the Lending Test in the state of Texas is rated High Satisfactory.
Performance in AAs receiving limited-scope reviews was factored together with performance from AAs receiving full-scope reviews to determine the state's overall High Satisfactory Lending Test rating. Limited-scope conclusions did not significantly affect the initial overall conclusions based on the AAs receiving full-scope review.

Home mortgage and small loans to businesses received the most weight in reaching conclusions. Respectively, home mortgage lending and small loans to businesses account for 28.3 percent and 71.1 percent of the loan volume in the state by number and 81.4 and 15.3 percent of loan volume by dollar. Small farm lending is not a strategic focus of the bank and received the least weight in reaching conclusions; however, examiners also considered the importance of the bank's farm lending to the AA. Farm loans represented 0.5 percent of the loan volume in the state by number and 0.1 percent loan volume by dollar.

## Conclusions for Areas Receiving a Full-Scope Review

Based on full-scope reviews, the bank's performance in the Houston MSA, Dallas CSA and Austin MSA is good. The conclusion reflects overall excellent lending levels, good borrower distribution of loans, and adequate geographic distribution of loans. Product innovation and flexibility was considered favorably while the overall low level of CD lending was given negative consideration.

## Lending Activity

Lending levels reflect an excellent responsiveness to the credit needs in the bank's AAs. Examiners considered the number and amount of home mortgage, small business, and small farm loans originated or purchased relative to Chase's capacity based on deposits, competition, and market presence.

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| Number of Loans* |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home Mortgage | Small Business | Small <br> Farm | Community Development | Total | \% State Loans | \% State <br> Deposits |
| Houston-The WoodlandsSugar Land MSA | 58,623 | 174,912 | 997 | 18 | 234,550 | 35.2 | 42.8 |
| Dallas-Fort Worth CSA | 72,915 | 155,651 | 1,008 | 29 | 229,603 | 34.5 | 50.4 |
| Austin-Round <br> Rock- <br> Georgetown <br> MSA | 26,024 | 61,692 | 430 | 30 | 88,176 | 13.2 | 3.0 |
| San AntonioNew Braunfels MSA | 14,200 | 29,963 | 222 | 5 | 44,390 | 6.7 | 1.1 |
| El Paso MSA | 2,377 | 8,340 | 25 | 4 | 10,746 | 1.6 | 0.6 |
| McAllen-EdinburgMission MSA | 1,446 | 6,806 | 89 | 10 | 8,351 | 1.3 | 0.3 |
| Beaumont-Port Arthur MSA | 1,128 | 2,819 | 32 | 0 | 3,979 | 0.6 | 0.2 |
| Brownsville- <br> Harlingen MSA | 870 | 2,910 | 47 | 1 | 3,828 | 0.6 | 0.2 |
| $\begin{aligned} & \text { Midland-Odessa } \\ & \text { CSA } \end{aligned}$ | 1,998 | 5,632 | 62 | 1 | 7,693 | 1.2 | 0.3 |
| Tyler MSA | 836 | 2,328 | 43 | 0 | 3,207 | 0.5 | 0.1 |
| College StationBryan MSA | 1,420 | 3,101 | 37 | 0 | 4,558 | 0.7 | 0.2 |
| Longview MSA | 571 | 1,752 | 24 | 0 | 2,347 | 0.4 | 0.2 |
| $\begin{aligned} & \text { Wichita Falls } \\ & \text { MSA } \end{aligned}$ | 382 | 1,111 | 14 | 2 | 1,509 | 0.2 | 0.1 |
| Waco MSA | 1,131 | 2,615 | 49 | 2 | 3,797 | 0.6 | 0.1 |
| Amarillo MSA | 565 | 2,978 | 115 | 0 | 3,658 | 0.5 | 0.1 |
| Killeen-Temple MSA | 1,260 | 2,346 | 39 | 3 | 3,648 | 0.5 | 0.1 |
| Abilene MSA | 535 | 936 | 12 | 2 | 1,485 | 0.2 | 0.1 |
| Laredo MSA | 572 | 2,151 | 17 | 1 | 2,741 | 0.4 | 0.1 |
| Lubbock MSA | 861 | 2,774 | 160 | 2 | 3,797 | 0.6 | 0.0 |
| Texas Non-MSA Total (Brenham, Corsicana, Marshall, Levelland, and Fredericksburg) | 1,114 | 3,022 | 179 | 2 | 4,317 | 0.7 | 0.3 |
| Total | 188,828 | 473,839 | 3601 | 112 | 666,380 | 100 | 100 |

*Due to rounding, totals may not equal $100.0 \%$. The tables present the data for all assessment areas. The narrative below addresses performance in fullscope areas only.

| Dollar Volume of Loans* (in \$000s) |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home <br> Mortgage | Small <br> Business | Small <br> Farm | Community <br> Development | \% <br> Total | State <br> Loans | Deposits |
| Houston-The Woodlands- <br> Sugar Land MSA | $15,602,086$ | $3,420,452$ | 13,334 | 106,380 | $19,142,252$ | 31.0 | 42.8 |
| Dallas-Fort Worth CSA | $20,134,392$ | $3,336,335$ | 14,493 | 765,213 | $24,250,433$ | 39.3 | 50.4 |
| Austin-Round Rock- <br> Georgetown MSA | $8,482,615$ | $1,135,305$ | 5,011 | 737,070 | $10,360,001$ | 16.8 | 3.0 |
| San Antonio-New <br> Braunfels MSA | $3,055,501$ | 510,218 | 4,310 | 34,649 | $3,604,678$ | 5.8 | 1.1 |
| El Paso MSA | 323,268 | 191,095 | 344 | 71,346 | 586,053 | 0.9 | 0.6 |
| McAllen-Edinburg- <br> Mission MSA | 200,628 | 162,510 | 966 | 104,178 | 486,282 | 0.8 | 0.3 |
| Beaumont-Port Arthur <br> MSA | 177,991 | 60,918 | 233 | 0 | 239,142 | 0.4 | 0.2 |
| Brownsville-Harlingen <br> MSA | 133,784 | 58,881 | 502 | 18,246 | 211,413 | 0.3 | 0.2 |
| Midland-Odessa CSA | 551,706 | 93,716 | 547 | 24,798 | 670,767 | 1.1 | 0.3 |
| Tyler MSA |  |  |  |  |  |  |  |
| College Station-Bryan <br> MSA | 310,286 | 52,855 | 349 | 0 | 363,490 | 0.6 | 0.2 |
| Longview MSA | 173,974 | 48,170 | 419 | 0 | 222,563 | 0.4 | 0.1 |
| Wichita Falls MSA | 85,047 | 47,744 | 251 | 0 | 133,042 | 0.2 | 0.2 |
| Waco MSA | 44,567 | 41,881 | 170 | 1,239 | 87,857 | 0.1 | 0.1 |
| Amarillo MSA | 189,963 | 50,169 | 407 | 13,509 | 254,048 | 0.4 | 0.1 |
| Killeen-Temple MSA | 188,995 | 34,794 | 434 | 16,870 | 241,093 | 0.4 | 0.1 |
| Abilene MSA | 88,017 | 12,048 | 162 | 16,648 | 16,648 | 0.0 | 0.1 |
| Laredo MSA | 79,808 | 47,785 | 284 | 13,511 | 141,388 | 0.2 | 0.1 |
| Lubbock MSA | 161,846 | 34,192 | 1,551 | 14,115 | 211,704 | 0.3 | 0.0 |
| Texas Non-MSA Total <br> (Brenham, Corsicana, <br> Marshall, Levelland, and <br> Fredericksburg) | 212,935 | 53,096 | 2,238 | 15,135 | 283,135 | 0.5 | 0.3 |
| Total | $50,290,730$ | $9,445,985$ | 47,629 | $1,952,907$ | $61,737,251$ | 100 | 100 |

*Due to rounding, totals may not equal $100.0 \%$. The tables present the data for all assessment areas. The narrative below addresses performance in fullscope areas only.

## Houston MSA

Chase dominated the deposit market and ranked first out of 95 institutions with 44.1 percent market share.

In overall home mortgage lending, Chase ranked second with 6.3 percent market share placing it in the top 1 percent of lenders. This is a highly competitive market with 1,011 mortgage lenders. No lender dominated the mortgage market. The other leading lenders and market share are Wells Fargo Bank, N.A. ( 8.5 percent), Quicken Loans (3.8 percent), and Bank of America, N.A. (3.7 percent).

In small loans to businesses, Chase ranked first with 22.6 percent market share out of 235 lenders. American Express National Bank was second in the market with 20.6 percent market share.

Chase ranked first in small loans to farms with 26.3 percent market share. There were 35 lenders in the MSA. Other major lenders and market share are Prosperity Bank (19.1), Wells Fargo Bank, N.A. (16.0 percent) and John Deere Financial, F.S.B. (9.3 percent).

## Dallas CSA

Chase ranked second in deposits out of 164 institutions with 21.8 percent market share.
In overall home mortgage lending, Chase ranked second with 6.4 percent market share placing it in the top 1 percent of lenders. This is a highly competitive market with 1,101 mortgage lenders. No lender dominated the mortgage market. The other leading lenders and market share are Wells Fargo Bank, N.A. ( 9.6 percent), Bank of America, N.A. ( 3.8 percent), and Quicken Loans (3.3 percent).

In small loans to businesses, Chase ranked first with 20.2 percent market share out of 259 lenders. American Express National Bank was second in the market with 19 percent market share.

Chase ranked first in small loans to farms with 19.4 percent market share. There were 57 lenders in the MSA. Other major lenders and market share are Wells Fargo Bank, N.A. (15.1 percent) First Financial Bank, N.A. (7.7), and John Deere Financial, F.S.B. (7.7 percent).

## Austin MSA

Chase ranked second in deposits out of 67 institutions with 17.9 percent market share.
In overall home mortgage lending, Chase ranked second with 5.1 percent market share placing it in the top 1 percent of lenders. This is a highly competitive market with 823 mortgage lenders. No lender dominated the mortgage market. The other leading lenders and market share are Wells Fargo Bank, N.A. (9.8 percent), University Federal Credit Union (3.1 percent), and Quicken Loans (2.6 percent).

In small loans to businesses, Chase ranked first with 25 percent market share out of 185 lenders. American Express National Bank was second in the market with 19.1 percent market share.

Chase ranked first in small loans to farms with 29.5 percent market share. There were 27 lenders in the MSA. Other major lenders and market share are BancorpSouth ( 16.6 percent), Wells Fargo Bank, N.A. (13.4 percent), and John Deere Financial, F.S.B. (9.91 percent).

## Distribution of Loans by Income Level of the Geography

The bank exhibits adequate geographic distribution of loans in its AAs.

## Home Mortgage Loans

Refer to Table O in the state of Texas section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of home mortgage loan originations and purchases is adequate. The following information was taken into consideration when determining this rating.

## Houston MSA

- The limited proportion of housing units in low-income geographies, particularly OOUs ( 5.2 percent), constrained lending opportunities; therefore, performance in moderate-income geographies was given more consideration due to the higher percentage of OOUs in those geographies.
- The high level of competition in the AA (1,011 home mortgage lenders) was also considered and examiners placed greater significance on performance compared to the aggregate of lenders.
- Between 2017 and 2019, the proportion of loans in low- and moderate-income geographies was well below the percentage of OOUs and respectively exceeded and was near to the aggregate distribution of loans by all lenders.
- Performance in low- and moderate-income geographies during the 2014 to 2016 period was weaker than performance during the 2017 to 2019 period. The proportion of loans in low- and moderateincome geographies was well below the percentage of OOUs and respectively near to and below the aggregate distribution of loans by all lenders.


## Dallas CSA

- The limited proportion of housing units in low-income geographies, particularly OOUs ( 5.0 percent), constrained lending opportunities; therefore, performance in moderate-income geographies was given more consideration due to the higher percentage of OOUs in those geographies.
- The high level of competition in the AA (1,011 home mortgage lenders) was also considered and examiners placed greater significance on performance when compared to the aggregate of lenders.
- Between 2017 and 2019, the proportion of loans in low- and moderate-income geographies was well below the percentage of OOUs and respectively was below and near to the aggregate distribution of loans by all lenders.
- Performance in low- and moderate-income geographies during the 2014 to 2016 period was weaker than performance during the 2017 to 2019 period. The proportion of loans in low- and moderateincome geographies was well below the percentage of OOUs and below the aggregate distribution of loans by all lenders.


## Austin MSA

- The limited proportion of housing units in low-income geographies, particularly OOUs ( 3.8 percent), constrained lending opportunities; therefore, performance in moderate-income geographies was given more consideration due to the higher percentage of OOUs in those geographies.
- The high level of competition in the AA (823 home mortgage lenders) was also considered and examiners placed greater significance on performance when compared to the aggregate of lenders.
- Between 2017 and 2019, the proportion of loans in low-income geographies was near to the percentage of OOUs and the aggregate distribution of loans by all lenders. In moderate-income geographies, the proportion of loans was well below percentage of OOUs and below the aggregate distribution of loans by all lenders.
- Performance in low- and moderate-income geographies during the 2014 to 2016 period was generally consistent with the performance during the 2017 to 2019 period. The proportion of loans in low- and moderate-income geographies was below the percentage of OOUs and respectively near to and below the aggregate distribution of loans by all lenders.


## Small Loans to Businesses

Refer to Table Q in the state of Texas section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to businesses.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to businesses for this evaluation is adequate. The following information was taken into consideration when determining this conclusion.

## Houston MSA

- The smaller proportion of businesses in low-income geographies ( 9.4 percent) and competition between 235 lenders constrained lending opportunities to existing businesses. Therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of businesses in those geographies.
- Between 2017 and 2019, the proportion of small loans to businesses in low- and moderate-income geographies was below both the proportion of businesses and the aggregate distribution.
- During 2014 to 2016, the bank's proportion of small loans to businesses in low- and moderateincome geographies was stronger. Performance in low- and moderate-income geographies was below the proportion of businesses and near to the aggregate distribution.


## Dallas CSA

- The smaller proportion of businesses in low-income geographies ( 6.8 percent) and competition between 259 lenders constrained lending opportunities to existing businesses. Therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of businesses in those geographies.
- Between 2017 and 2019, the proportion of small loans to businesses in low- and moderate-income geographies was below both the proportion of businesses and the aggregate distribution.
- During 2014 to 2016, the bank's proportion of small loans to businesses in low- and moderateincome geographies was consistent with performance from 2017 to 2019. Performance in low- and moderate-income geographies was below the proportion of businesses and the aggregate distribution.


## Austin MSA

- Between 2017 and 2019, the proportion of small loans to businesses in low- income geographies exceeded both the proportion of businesses and the aggregate distribution. The proportion of small loans to businesses in moderate- income geographies was below the proportion of businesses and near to the aggregate distribution.
- During 2014 to 2016, the bank's proportion of small loans to businesses in low- and moderateincome geographies was slightly weaker than the aggregate performance in moderate-income tracts during 2017 to 2019 and otherwise consistent. The proportion of small loans to businesses in lowincome geographies exceeded both the proportion of businesses and the aggregate distribution, while the proportion of small loans to businesses in moderate- income geographies was below the proportion of businesses and the aggregate distribution.


## Small Loans to Farms

Refer to Table $S$ in the state of Texas section of appendix $D$ for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to farms.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to farms is adequate. The following information was taken into consideration when determining this rating.

## Houston MSA

- The limited percentage of farms in low-income geographies ( 5.2 percent), level of competition in the AA ( 35 lenders) and the fact that farm lending is not a focus of the bank was considered and examiners placed greater significance on performance compared to the aggregate of lenders.
- Between 2017 and 2019, the proportion of loans to small farms in low- income geographies were well below the proportion of farms in those geographies and exceeded the aggregate distribution. The proportion of loans to small farms in moderate-income geographies was well below both the proportion of farms in those geographies and the aggregate distribution.
- Performance in low- and moderate-income geographies during the 2014 to 2016 period was generally consistent with performance during the 2017 to 2019 period. the proportion of loans to small farms in low- income geographies was below the proportion of farms in those geographies and exceeded the aggregate distribution. The proportion of loans to small farms in moderate-income geographies was well below both the proportion of farms in those geographies and the aggregate distribution


## Dallas CSA

- The limited percentage of farms in low-income geographies (4.7 percent), level of competition in the AA ( 57 lenders) and the fact that farm lending is not a focus of the bank was considered and examiners placed greater significance on performance compared to the aggregate of lenders.
- Between 2017 and 2019, the proportion of loans to small farms in low- and moderate-income geographies was well below both the proportion of farms in those geographies and exceeded the aggregate distribution.
- Performance in low- and moderate-income geographies during the 2014 to 2016 period was stronger than performance during the 2017 to 2019 period. The proportion of loans to small farms in lowincome geographies exceeded the proportion of farms in those geographies and the aggregate distribution. The proportion of loans to small farms in moderate-income geographies was below the proportion of farms in those geographies and near to the aggregate distribution


## Austin MSA

- The limited percentage of farms in low-income geographies (4.7 percent), level of competition in the AA (27 lenders) and the fact that farm lending is not a focus of the bank was considered and examiners placed greater significance on performance compared to the aggregate of lenders.
- Between 2017 and 2019, the proportion of loans to small farms in low- income geographies were near to the proportion of farms in those geographies and exceeded the aggregate distribution. The proportion of loans to small farms in moderate-income geographies was near to the proportion of farms in those geographies and well below the aggregate distribution.
- Performance in low- and moderate-income geographies during the 2014 to 2016 period was weaker than performance during the 2017 to 2019 period. The proportion of loans to small farms in lowincome geographies was well below the proportion of farms in those geographies and exceeded the aggregate distribution. The proportion of loans to small farms in moderate-income geographies was well below both the proportion of farms in those geographies and the aggregate distribution


## Lending Gap Analysis

A review of home mortgage loans, small loans to business, and small loans to farms including summary reports and AA maps did not identify any unexplained conspicuous lending gaps in the bank's activities.

## Distribution of Loans by Income Level of the Borrower

The bank exhibits a good distribution of loans among individuals of different income levels and business of different sizes.

## Home Mortgage Loans

Refer to Table P in the state of Texas section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall borrower distribution of home mortgage loan originations and purchases for this evaluation is good. The following information was taken into consideration when determining this rating.

## Houston MSA

- Greater significance was placed on performance against the aggregate distribution as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of the Full-Scope AA.
- Examiners particularly considered housing affordability challenges for low- and moderate-income borrowers.
- Between 2017 and 2019, the proportion of loans to low-income borrowers was well below the percentage of low-income families and near to the aggregate distribution of lenders. The proportion of moderate-income loans was near to both the proportion of moderate-income families and the aggregate distribution.
- During 2014 to 2016 the bank's performance was similar to performance between 2017 to 2019 . The proportion of loans to low-income borrowers was well below the percentage of low-income families and exceeded the aggregate distribution of lenders. The proportion of moderate-income loans was below both the proportion of moderate-income families and the aggregate distribution.


## Dallas CSA

- Greater significance was placed on performance against the aggregate distribution as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of the Full-Scope AA.
- Examiners considered housing affordability challenges, particularly for low-income borrowers.
- Between 2017 and 2019, the proportion of loans to low-income borrowers was well below the percentage of low-income families and near to the aggregate distribution of lenders. The proportion of moderate-income loans was near to the proportion of moderate-income families and exceeded the aggregate distribution.
- During 2014 to 2016 the bank's performance was weaker than performance between 2017 to 2019. The proportion of loans to low-income borrowers was well below the percentage of low-income families and exceeded the aggregate distribution of lenders. The proportion of moderate-income loans was below both the proportion of moderate-income families and the aggregate distribution.


## Austin MSA

- Greater significance was placed on performance against the aggregate distribution as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of the Full-Scope AA.
- Examiners particularly considered housing affordability challenges, particularly for low- income borrowers.
- Between 2017 and 2019, the proportion of loans to low-income borrowers was well below the percentage of low-income families and below the aggregate distribution of lenders. The proportion of moderate-income loans was below both the proportion of moderate-income families and the aggregate distribution.
- During 2014 to 2016 the bank's performance was slightly stronger than performance between 2017 to 2019. The proportion of loans to low-income borrowers was well below the percentage of lowincome families and exceeded the aggregate distribution of lenders. The proportion of moderateincome loans was below both the proportion of moderate-income families and the aggregate distribution.


## Small Loans to Businesses

Refer to Table R in the state of Texas section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to businesses.

Based on the data in the tables and the following factors, the distribution of the bank's originations and purchases of small loans to businesses by revenue category is good. The following information was taken into consideration when determining this rating.

## Houston MSA

- Slightly greater significance was placed on performance against the aggregate distribution of lenders as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of the Full-Scope AA.
- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 and 2019. The bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.


## Dallas CSA

- Slightly greater significance was placed on performance against the aggregate distribution of lenders as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of the Full-Scope AA.
- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 and 2019. The bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.


## Austin MSA

- Slightly greater significance was placed on performance against the aggregate distribution of lenders as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of the Full-Scope AA.
- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 and 2019. The bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.


## Small Loans to Farms

Refer to Table T in the state of Texas section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to farms.

Based on the data in the table and the following considerations, the distribution of the bank's originations and purchases of small loans to farms by revenue category is good. The following information was taken into consideration when determining this rating.

## Houston MSA

- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 and 2019. The bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.


## Dallas CSA

- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 and 2019. The bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.


## Austin MSA

- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 and 2019. The bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.


## Community Development Lending

The bank made a low level of CD loans which was considered negatively when determining the Lending Test rating for the state of Texas. The respective excellent and adequate levels of CD lending in Dallas and Austin was offset by poor to very poor levels in the larger Houston. MSA

The Lending Activity Tables, shown above, set forth the information and data used to evaluate the bank's level of CD lending. These tables include all CD loans, including multifamily loans that also qualify as CD loans.

## Houston MSA

The bank has made few, if any, CD loans in the Houston-The Woodlands- Sugar Land, TX MSA. There were 18 CD loans made for a total of $\$ 106.4$ million. This represents 0.8 percent of the tier 1 capital allocated to the AA. Most of the CD loans were for community services, which is a critical need in this AA.

Examples of CD loans in the AA include:

- In July 2015, Chase originated a $\$ 40$ million loan to Houston Independent School District for a TaxExempt Direct Purchase Bond, used to refund existing Series 2005 Limited Tax Bonds, lower the overall debt service requirements of the district, and paid costs of issuing the bonds. According to the National Center for Education Statistics (NCES), 80 percent of the district student population is eligible for the Federal Free or Reduced Lunch program.
- In May 2019, Chase originated a $\$ 32$ million term loan to Goose Creek Consolidated Independent School District, located in Harris County, TX for a Series 2019 Maintenance Tax Note. The proceeds will be used to renovate and upgrade pipes, valves, insulation, turf, and exterior lighting in the District. According to the NCES, the majority of the student population is eligible for the Federal Free or Reduced Lunch program.


## Dallas CSA

The bank has made an adequate level of CD lending in the Dallas-Fort Worth, TX-OK CSA. The bank originated eight CD loans totaling $\$ 342.8$ million. This represents 4.6 percent of the tier 1 capital allocated to the AA. Most of the CD loans were for community services which is a critical need in this AA.

Examples of CD loans in the AA include:

- The bank provided a $\$ 322$ million loan to Dallas Independent School District. Funds were used for the purposes of constructing, improving, renovating, and equipping school buildings of the District. Funds were also used to acquire real property, purchase school buses, construct and equip bus maintenance and operating facilities for the District, and refinancing, renewing, or refunding Notes and Loans. According to the NCES, 88 percent of the student population is eligible for the Federal Free or Reduced Lunch program.
- The bank's New Markets Tax Credit Group originated a $\$ 11.7$ million construction loan to finance the new construction of a 44,000 square foot medical care facility to primarily serve low-income residents in South Dallas.


## Austin MSA

The bank is a leader in making CD loans in the Austin-Round Rock, TX MSA. The bank made 30 CD loans totaling $\$ 737.1$ million. This represents 74.5 percent of the tier 1 capital allocated to the AA. Most of the CD loans were for revitalization/stabilization, which is a critical need in this AA.

Examples of CD loans in the AA include:

- The bank originated a $\$ 166.2$ million construction loan to finance the acquisition and development of a 625,590 square foot retail property to be located in Austin, TX in a moderate-income census tract. The lifestyle center represents the retail component of a mixed-use project, which will provide
a wide variety of opportunities and enhancement to current and future residents of the moderateincome geography.
- The bank originated a $\$ 70$ million term loan to refinance the development of a 3-story office building located on the southeast side of Northwest Austin. The project will revitalize this commercial/industrial area into a mixed-use neighborhood


## Product Innovation and Flexibility

The bank makes extensive use of innovative and/or flexible lending practices in order to serve AA credit needs. Refer to the comments in the Product Innovation and Flexibility section of this performance evaluation for additional details regarding the programs.

## Houston MSA

As shown in the table below, a total of 11,335 loans were funded totaling $\$ 1.8$ billion.

| Loan Type | Number of <br> Loans | Dollar Amount <br> $\mathbf{( \$ 0 0 0 ’ s )}$ |
| :--- | :---: | :---: |
| DreaMaker | 2,173 | 433,622 |
| FHA | 4,805 | 618,392 |
| USDA | 718 | 106,923 |
| VA | 1,025 | 230,053 |
| HARP | 1,931 | 224,361 |
| SBA | 683 | 242,547 |

Dallas CSA
As shown in the table below, a total of 11,909 loans were funded totaling $\$ 1.9$ billion.

| Loan Type | Number of <br> Loans | Dollar Amount <br> $\mathbf{( \$ 0 0 0 ' s )}$ |
| :--- | :---: | :---: |
| DreaMaker | 2,447 | 493,101 |
| FHA | 4,429 | 553,006 |
| USDA | 1,161 | 172,234 |
| VA | 1,141 | 268,094 |
| HARP | 1,867 | 234,814 |
| SBA | 864 | 277,813 |

## Austin MSA

As shown in the table below, a total of 4,001 loans were funded totaling $\$ 835$ million.

| Loan Type | Number of <br> Loans | Dollar Amount <br> $\mathbf{( \$ 0 0 0 ' s )}$ |
| :--- | :---: | :---: |
| DreaMaker | 1,192 | 320,899 |
| FHA | 841 | 122,761 |
| USDA | 914 | 144,006 |
| VA | 328 | 88,068 |
| HARP | 463 | 63,494 |
| SBA | 263 | 95,811 |

## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall High Satisfactory Lending Test rating and did not significantly affect the initial overall conclusions based on the AAs receiving full-scope review. Based on limited-scope reviews, the bank's performance under the Lending Test in the Abilene MSA, Amarillo MSA, Brownsville-Harlingen MSA, El Paso MSA, Killeen-Temple MSA, Laredo MSA, McAllen-Edinburg-Mission MSA, Midland-Odessa CSA, San Antonio-New Braunfels MSA, Waco MSA, Wichita Falls MSA, and Texas Non-MSA is consistent with the bank's overall good performance under the Lending Test in the full-scope areas. The performance under the Lending Test in the Beaumont-Port Arthur MSA, College Station-Bryan MSA, Tyler MSA, Longview MSA, and Lubbock MSA is weaker than the bank's overall performance under the Lending Test in the full-scope areas. Performance is weaker due to weaker proportional performance overall.

Refer to Tables O through T in the state of Texas section of appendix D for the facts and data that support these conclusions.

## INVESTMENT TEST

The bank's performance under the Investment Test in the state of Texas is rated High Satisfactory.

## Conclusions for Areas Receiving Full-Scope Reviews

Based on full-scope reviews, the bank's performance in the Houston MSA and the Dallas CSA is good and is excellent in the Austin MSA.

## Houston MSA

The bank has an adequate level of qualified CD investments and grants, although rarely in a leadership position, particularly those that are not routinely provided by private investors. Current and prior period investments are 2.9 percent of tier 1 capital allocated to the AA. A significant majority or 81.2 percent of total investments represent current period investments.

The bank exhibits excellent responsiveness to the needs identified in this AA including community service, affordable housing, and revitalization/stabilization for low- and moderate-income individuals and geographies. Seventy percent of current period investments focused on community service while 29.1 percent related to affordable housing. Current and prior period investments created or retained 14,328 low- and moderate-income housing units for individuals and families. The bank provided 118 grants totaling $\$ 12.7$ million to a variety of organizations that support community service, revitalization/stabilization, and affordable housing needs. In some occurrences, grants were provided in multiple years.

The bank makes significant use of innovative and/or complex investments to support CD initiatives. The bank made 29 current and prior period complex CD investments totaling $\$ 172.8$ million ( 42 percent) of total investments. Complex investments were related to affordable housing and community services through Direct Investor LIHTC and NMTC programs. LIHTC investments require bank expertise and capacity in selecting projects and partners, negotiating agreements, overseeing project development and operations, and ensuring compliance. Twenty-two ( 5.5 percent) of current period investments were catalysts for future growth and other improvements.

Examples of CD investments in the AA include:

- The bank made a $\$ 14.5$ million single investment and Direct Investor LIHTC transaction with an organization to provide 110 rental units to low- and moderate-income seniors 55 and over in the AA. The bank does not use a syndicator but employs a multi-disciplined approach that focuses on the long-term nature of the investment. The bank performs all the functions a syndicator would perform through in-house expertise. The bank conducts the underwriting, pricing, and due diligence prior to originating the investment. After origination, it monitors construction quality, lease-up and performance of the property through stabilization. The bank manages the asset for the entire fifteenyear hold period, ensuring compliance with the LIHTC program and conducting annual on-site inspections.
- The bank made a $\$ 2.2$ million NMTC investment with a community organization that reaches approximately 2,000 at-risk children annually through their mentoring program in this AA. In 2015 the organization was forced to vacate its home due to safety concerns, and in 2017 was still operating out of donated temporary space that was not ideally suited to meet the needs of the AA's at-risk youth. The purpose of the bank's investment was to help fill the gap, so the building project can be completed on time without significantly curtailing services provided by the community organization.
- The bank made a $\$ 14.4$ million single investment and Direct Investor LIHTC transaction to provide 102 rental units to low- and moderate-income individuals and families in the AA. The bank does not use a syndicator but employs a multi-disciplined approach that focuses on the long-term nature of the investment. The bank performs all the functions a syndicator would perform through in-house expertise. The bank conducts the underwriting, pricing, and due diligence prior to originating the investment. After origination it monitors construction quality, lease-up and performance of the property through stabilization. The bank will manage the asset for the entire fifteen- year hold period, ensuring compliance with the LIHTC program and conducting annual on-site inspections.
- The bank made eight investments totaling $\$ 38.9$ million in municipal bonds used to finance the construction or rehabilitation of affordable rental housing. The proceeds may also be used to help low- and moderate-income individuals and families purchase a home. This investment was in response to the needs of local agencies seeking investors for affordable housing programs in this AA.
- The bank provided four grants totaling $\$ 435$ thousand to a non-profit community development organization that aligns with a government economic revitalization or stabilization plan. Part of this funding was in response to the need to preserve and improve unsubsidized rental housing in a neighborhood where 435,000 low-income households spend over 30 percent of their income on housing and/or living in substandard conditions.
- The bank provided a $\$ 300$ thousand grant to an organization that serves economically disadvantaged families that need multiple supportive services to become financially resilient. The knowledge, support, and practices provided can empower these low- and moderate-income families and increase their financial capability.


## Dallas CSA

The bank has an adequate level of qualified CD investments and grants, although rarely in a leadership position, particularly those that are not routinely provided by private investors. Current and prior period investments are 2.1 percent of tier 1 capital allocated to the AA. A large majority ( 84.2 percent) of total investments represent current period investments.

The bank exhibits excellent responsiveness to the needs identified in this AA including affordable housing, community services, and revitalize/stabilize for low- and moderate-income individuals and geographies. Current period investments were mainly 85.2 percent affordable housing, 10.5 percent community service, and 4.1 percent revitalization/Stabilization. Current and prior period investments created or retained 11,220 low- and moderate-income housing units for individuals and families. In the current period the bank provided 128 grants totaling $\$ 17.7$ million to a variety of organizations that support community service, revitalization/stabilization, and affordable housing needs. In some occurrences, grants were provided in multiple years.

The bank makes extensive use of innovative and/or complex investments to support CD initiatives. The bank made 22 complex investments totaling $\$ 211.7$ million or 70.9 percent of current period investments. Complex investments were related to affordable housing and community services through Direct Investor LIHTC and NMTC programs. Thirteen investments or 86.8 percent of the dollar volume were Direct Investor LIHTC transactions; seven were related to NMTCs. Direct Investor LIHTC investments require bank expertise and capacity in selecting projects and partners, negotiating agreements, overseeing project development and operations, and ensuring compliance. Fourteen (10.4 percent) of current period investments were catalysts for future growth and other improvements.

Examples of CD investments in the AA include:

- The bank made a $\$ 12.4$ million single investment and Direct Investor LIHTC transaction with an organization to provide 65 rental units to low- and moderate-income individuals and families in the AA. The bank does not use a syndicator but employs a multi-disciplined approach that focuses on the long-term nature of the investment. The bank performs all the functions a syndicator would perform through in-house expertise. The bank conducts the underwriting, pricing, and due diligence prior to originating the investment. After origination it monitors construction quality, lease-up and performance of the property through stabilization. The bank manages the asset for the entire fifteenyear hold period, ensuring compliance with the LIHTC program and conducting annual on-site inspections.
- The bank made two LIHTC investments totaling $\$ 8.7$ million to provide 193 rental units to low- and moderate-income individuals and families in the AA. The bank invested in this multi-investor fund primarily to diversify and meet affordable housing needs in these areas that are difficult to penetrate directly because regional multi-investor fund syndicators exercise significant control over these markets.
- The bank provided $\$ 7.4$ million in NMTC financing to support the development of healthy food options, the expansion of vital community services, and the growth of employment opportunities in the most disinvested parts of Dallas, with the expansion of a new facility. Chase partnered with other CDEs that provide allocation to a project by providing the final component of allocation necessary to ensure the project's success.
- The bank provided two grants totaling $\$ 357$ thousand to a non-profit organization that empowers creativity and helps build social and emotional well-being for 151,000 youth in this AA by bringing arts and cultural performances into classrooms. Many students from participating schools come from low- and moderate-income families and are eligible for Federal Free or Reduced lunch programs.


## Austin MSA

The bank's performance in the Austin-Round Rock-Georgetown MSA is excellent. The bank has an excellent level of qualified CD investments and grants, occasionally in a leadership position, particularly those that are not routinely provided by private investors. Current and prior period investments are 8.4 percent of tier 1 capital allocated to the AA. A large majority ( 81.1 percent) of total investments represent current period investments.

The bank exhibits excellent responsiveness to the needs identified in this AA including affordable housing, community services, and revitalize/stabilize for low- and moderate-income individuals and geographies. CD investments included 88.4 percent affordable housing and 11.6 percent community service. Current and prior period investments created or retained 4,985 low- and moderate-income housing units for individuals and families. The bank provided 38 grants totaling $\$ 2.3$ million to a variety of organizations that support community service and affordable housing. In some occurrences, grants were provided in multiple years.

The bank makes extensive use of innovative and/or complex investments to support CD initiatives. The bank made six complex investments totaling $\$ 57.1$ million or 81.9 percent of current period investments; four were related to Direct Investor fund LIHTCs. Direct Investor LIHTC investments require bank expertise and capacity in selecting projects and partners, negotiating agreements, overseeing project development and operations, and ensuring compliance. Two current period investments were catalysts for future growth and other improvements.

Examples of CD investments in the AA include:

- The bank made an $\$ 11.7$ million single investment and Direct Investor LIHTC transaction to provide 60 rental units to low- and moderate-income individuals and families in the AA. The bank does not use a syndicator but employs a multi-disciplined approach that focuses on the long-term nature of the investment. The bank performs all the functions a syndicator would perform through in-house expertise. The bank conducts the underwriting, pricing, and due diligence prior to originating the investment. After origination, it monitors construction quality, lease-up and performance of the property through stabilization. The bank will manage the asset for the entire fifteen-year hold period, ensuring compliance with the LIHTC program and conducting annual on-site inspections.
- The bank provided a $\$ 14.1$ million single investor LIHTC investment to fund an affordable housing project to provide 122 rental units to low- and moderate-income individuals and families in this AA The bank does not use a syndicator but employs a multi-disciplined approach that focuses on the long-term nature of the investment. The bank performs all the functions a syndicator would perform through in-house expertise. The bank conducts the underwriting, pricing, and due diligence prior to originating the investment. After origination, it monitors construction quality, lease-up and performance of the property through stabilization. The bank manages the asset for the entire fifteenyear hold period, ensuring compliance with the LIHTC program and conducting annual on-site inspections.
- The bank partnered with a non-profit food bank organization to provide $\$ 6.2$ million in NMTC financing. The organization will provide much needed services to low- and moderate-income communities to help create healthy neighborhoods. Funding provided by the bank is considered a gap filler, which ensures that projects receive enough of a subsidy to be viable.

| Qualified Investments - State of Texas |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Prior Period* |  | Current Period |  | Total |  |  |  | $\begin{gathered} \text { Unfunded } \\ \text { Commitments** } \end{gathered}$ |  |
| Assessment Area (AA) | \# | \$(000's) | \# | \$(000's) | \# | \% of <br> Total <br> \# | \$(000's) | \% of <br> Total \$ | \# | \$(000's) |
| Full Review: |  |  |  |  |  |  |  |  |  |  |
| Houston-The Woodlands-Sugar Land MSA | 70 | 77,200 | 160 | 334,353 | 230 | 28.3 | 411,553 | 26.7 | 0 | 0 |
| Dallas-Fort Worth CSA | 49 | 56,239 | 157 | 298,780 | 206 | 25.4 | 355,019 | 23.0 | 0 | 0 |
| Austin-Round Rock-Georgetown MSA | 24 | 15,681 | 49 | 67,430 | 73 | 9.0 | 83,110 | 5.4 | 0 | 0 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |
| Abilene MSA | 3 | 270 | 1 | 8,050 | 4 | 0.5 | 8,319 | 0.5 | 0 | 0 |
| Amarillo MSA | 2 | 667 | 1 | 11,889 | 3 | 0.4 | 12,556 | 0.8 | 0 | 0 |
| Beaumont-Port Arthur MSA | 8 | 6,934 | 3 | 13,973 | 11 | 1.4 | 20,907 | 1.4 | 0 | 0 |
| Brownsville-Harlingen MSA | 20 | 6,898 | 9 | 73,453 | 29 | 3.6 | 80,351 | 5.2 | 0 | 0 |
| College Station-Bryan MSA | 1 | 3,418 | 3 | 33,117 | 4 | 0.5 | 36,535 | 2.4 | 0 | 0 |
| El Paso MSA | 16 | 7,640 | 31 | 105,096 | 47 | 5.8 | 112,736 | 7.3 | 0 | 0 |
| Killeen-Temple MSA | 2 | 446 | 1 | 11,979 | 3 | 0.4 | 12,425 | 0.8 | 0 | 0 |
| Laredo MSA | 0 | 0 | 1 | 11,682 | 1 | 0.1 | 11,682 | 0.8 | 0 | 0 |
| Longview MSA | 1 | 5 | 0 | 0 | 1 | 0.1 | 5 | 0.0 | 0 | 0 |
| Lubbock MSA | 2 | 7,102 | 3 | 38,298 | 5 | 0.6 | 45,400 | 2.9 | 0 | 0 |
| McAllen-Edinburg-Mission MSA | 11 | 289 | 13 | 107,058 | 24 | 3.0 | 107,347 | 7.0 | 0 | 0 |
| Midland-Odessa CSA | 3 | 5,169 | 2 | 12,015 | 5 | 0.6 | 17,185 | 1.1 | 0 | 0 |
| San Antonio-New Braunfels MSA | 24 | 14,224 | 45 | 100,370 | 69 | 8.5 | 114,594 | 7.4 | 0 | 0 |
| Tyler MSA | 1 | 623 | 0 | 0 | 1 | 0.1 | 623 | 0.0 | 0 | 0 |
| Waco MSA | 1 | 70 | 1 | 13,370 | 2 | 0.2 | 13,440 | 0.9 | 0 | 0 |
| Wichita Falls MSA | 2 | 201 | 2 | 1,504 | 4 | 0.5 | 1,705 | 0.1 | 0 | 0 |
| TX Non-MSA Total (Brenham, Corsicana, Marshall, Levelland, and Fredericksburg) | 4 | 191 | 1 | 482 | 5 | 0.6 | 674 | 0.1 | 0 | 0 |
| Statewide Investments with Purpose, Mandate, or Function (P/M/F) to Serve AAs | 0 | 0 |  | 85,182 | 49 | 6.0 | 85,182 | 5.5 | 0 | 0 |
| Statewide Investments with No Purpose, Mandate, or Function (P/M/F) to Serve AAs | 35 | 11,159 | 1 | 26 | 36 | 4.4 | 11,185 | 0.7 | 0 | 0 |

** Unfunded Commitments' means legally binding investment commitments that are tracked and recorded by the institution's financial reporting system.

## Statewide Investments in State of Texas

Statewide Investments with a $\mathrm{P} / \mathrm{M} / \mathrm{F}$ included investments related to affordable housing, community services, and revitalization/stabilization. Nineteen investments totaling $\$ 59$ million were made for affordable housing. Twenty-nine grants totaling $\$ 22.2$ million were provided to a variety of organizations, primarily agencies administering financial education services. Occasionally, grants were made annually. The level of investments had a positive impact on the Investment Test rating for the state of Texas.

## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall High Satisfactory Investment Test rating and did not significantly affect the initial overall conclusions based on the AAs receiving full-scope review. Based on limited-scope reviews, the bank's performance under the Investment Test in the Wichita Falls MSA is consistent with the bank's overall good performance under the Investment Test in the full-scope areas. The bank's performance under the Investment Test in the Abilene MSA, Amarillo MSA, Beaumont-Port Arthur MSA, Brownsville-Harlingen MSA, College Station-Bryan MSA, El Paso MSA, Killeen-Temple MSA, Laredo MSA, Lubbock MSA, McAllen-Edinburg-Mission MSA, Midland-Odessa CSA, San-Antonio-New Braunfels MSA, and Waco MSA is stronger than the bank's overall performance in the full-scope areas due to a higher level of qualified investments in relation to allocated tier 1 capital. The bank's performance in the Longview MSA, Tyler MSA, and Texas Non-MSA is weaker than the bank's overall good performance under the Investment Test in the full-scope areas due to the low level of qualified investments in relation to allocated tier 1 capital.

## SERVICE TEST

The bank's performance under the Service Test in state of Texas is rated High Satisfactory.

## Conclusions for Areas Receiving Full-Scope Reviews

Based on a full-scope review, including the data in the tables below, the bank's performance in the Dallas CSA is excellent and in the Houston MSA is good. The bank's performance in the Austin MSA is adequate. More weight was given to performance in the Dallas CSA and Houston MSA due to the bank's larger deposit and branch presence.

## Retail Banking Services

Service delivery systems are accessible to geographies and individuals of different income levels in the bank's AAs.

Examiners evaluated the data as outlined in the Scope section at the front of this document including bank-provided data on usage of branches adjacent to low- and moderate-income geographies by individuals residing in those geographies and on increases in the usage of alternative delivery systems.

## Houston MSA

Based on the data in the table below and performance context, the branch distribution is good. In lowand moderate-income geographies, the distribution is near to the percentage of the population. The bank had 15 branches in low-income geographies and 37 branches in moderate-income geographies. The distribution was augmented by two MUI tract branches that serve low-income tracts and 28 MUI tract branches that serve moderate-income tracts. Examiners reviewed data on the accounts held and transactions conducted at the MUI branches and confirmed they were serving the adjacent low- and moderate-income populations.

## Dallas CSA

Based on the data in the table below and performance context, the branch distribution is excellent. In low- and moderate-income geographies, the distribution is below and is near to the percentage of the population. The bank had 13 branches in low-income geographies and 47 branches in moderate-income geographies. The distribution was augmented by six MUI tract branches that serve low-income tracts and 32 MUI tract branches that serve moderate-income tracts. Examiners reviewed data on the accounts held and transactions conducted at the MUI branches and confirmed they were serving the adjacent lowand moderate-income populations.

## Austin MSA

Based on the data in the table below and performance context, the branch distribution is adequate. In low- and moderate-income geographies, the distribution is near to and well below the percentage of the population. The bank had four branches in low-income geographies and three branches in moderateincome geographies. The distribution was augmented by five MUI tract branches that serve moderateincome tracts. Examiners reviewed data on the accounts held and transactions conducted at the MUI branches and confirmed they were serving the adjacent low- and moderate-income populations.

| Distribution of Branch Delivery System |  |  |  |  |  |  |  | As of December 31, 2019 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Deposits | Branches |  |  |  |  |  |  |  |  |  |
|  | \% of <br> Rated <br> Area <br> Deposits in AA | \# of <br> BANK <br> Branches | \% of <br> Rated <br> Area <br> Branches in $\mathbf{A A}$ | Location of Branches by Income of Geographies (\%) |  |  |  | \% of Population within Each Geography |  |  |  |
|  |  |  |  | Low | Mod | Mid | Upp | Low | Mod | Mid | Upp |
| Houston-The Woodlands CSA | 42.8 | 185 | 34.2 | 8.1 | 20.0 | 17.8 | 54.1 | 11.6 | 25.9 | 27.9 | 34.2 |
| Dallas-Fort Worth CSA | 50.4 | 211 | 39.0 | 6.2 | 22.3 | 23.7 | 46.9 | 10.7 | 24.9 | 30.4 | 33.8 |
| Austin-Round <br> Rock-Georgetown MSA | 3.0 | 52 | 9.6 | 7.7 | 5.8 | 38.5 | 48.1 | 10.1 | 22.3 | 37.3 | 29.2 |

* May not add up to 100 percent due to geographies with unknown tract income level and rounding


## Houston MSA

Alternative delivery systems enhanced the delivery of banking services to geographies and individuals of all income levels. The OCC considered the availability and use of alternative delivery systems over the evaluation period. This included review of the bank's 681 deposit-taking ATMs, online banking, mobile banking, and telephone banking to determine the effectiveness of these systems to make retail banking services available to individuals in low- and moderate-income geographies. The bank increased the deposit-taking ATMs in low- and moderate-income geographies by 54.3 percent over the prior rating
period to 83 (12.2 percent) deposit-taking ATMs in low-income geographies and 164 (24.1 percent) ATMs in moderate-income geographies. Additionally, bank-provided data on use of online, mobile, and telephone banking showed increases in the adoption of these services by low- and moderate-income individuals from the prior rating period.

## Dallas CSA

Alternative delivery systems enhanced the delivery of banking services to geographies and individuals of all income levels. The OCC considered the availability and use of alternative delivery systems over the evaluation period. This included review of the bank's 680 deposit-taking ATMs, online banking, mobile banking, and telephone banking to determine the effectiveness of these systems to make retail banking services available to individuals in low- and moderate-income geographies. The bank increased the deposit-taking ATMs in low- and moderate-income geographies by 63.1 percent over the prior rating period to 47 ( 6.9 percent) deposit-taking ATMs in low-income geographies and 188 ( 27.6 percent) ATMs in moderate-income geographies. Additionally, bank-provided data on use of online, mobile, and telephone banking showed increases in the adoption of these services by low- and moderate-income individuals from the prior rating period.

## Austin MSA

Alternative delivery systems did not significantly enhance the delivery of banking services to geographies and individuals of all income levels. The OCC considered the availability and use of alternative delivery systems over the evaluation period. This included review of the bank's 121 deposittaking ATMs, online banking, mobile banking, and telephone banking to determine the effectiveness of these systems to make retail banking services available to individuals in low- and moderate-income geographies. The number of deposit-taking ATMs in low- and moderate-income geographies decreased by 26.7 percent from the prior rating period to 19 ( 15.7 percent) deposit-taking ATMs in low-income geographies and seven ( 5.8 percent) ATMs in moderate-income geographies. Additionally, bankprovided data on use of online, mobile, and telephone banking showed increases in the adoption of these services by low- and moderate-income individuals from the prior rating period.

| Distribution of Branch Openings/Closings |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | \# of <br> Branch <br> Openings | \# of <br> Branch <br> Closings | Net change in Location of Branches <br> (+or -) |  |  |  |
|  | Low | Mod | Mid | Upp |  |  |
| Houston-The Woodlands <br> CSA | 12 | 44 | -8 | -7 | -11 | -6 |
| Dallas-Fort Worth CSA | 11 | 44 | -3 | -6 | -14 | -8 |
| Austin-Round Rock- <br> Georgetown MSA | 3 | 16 | -1 | 0 | -8 | -6 |

## Houston MSA

The bank's opening and closing of branches has generally not adversely affected the accessibility of its delivery systems, particularly in low- and moderate-income geographies and/or to low- and moderateincome individuals. The bank did not open any branches in the low- and moderate-income geographies
and closed eight branches in low-income and seven branches in moderate-income geographies. Branch closure rationale included reduced customer usage, unprofitability, branch consolidations, safety issues, and proximity to other Chase branches. Despite the branch closures, branch locations remained accessible to geographies and individuals of different income levels in the bank's AA.

Services, including where appropriate, business hours, do not vary in a way that inconveniences its AA, particularly low- and moderate-income geographies and/or individuals. Generally, branches are open Monday through Friday from 9:00 am to 6:00 pm and Saturday from 9:00 am to 4:00 pm. All retail banking services are available at all branches within the low- and moderate-income geographies.

## Dallas CSA

The bank's opening and closing of branches has generally not adversely affected the accessibility of its delivery systems, particularly in low- and moderate-income geographies and/or to low- and moderateincome individuals. The bank did not open any branches in the low- and moderate-income geographies and closed three branches in low-income and six branches in moderate-income geographies. Branch closure rationale included reduced customer usage, unprofitability, branch consolidations, and proximity to other Chase branches. Despite the branch closures, branch locations remained accessible to geographies and individuals of different income levels in the bank's AA.

Services, including where appropriate, business hours, do not vary in a way that inconveniences its AA, particularly low- and moderate-income geographies and/or individuals. Generally, branches are open Monday through Friday from 9:00 am to 6:00 pm and Saturday from 9:00 am to 4:00 pm. All retail banking services are available at all branches within the low- and moderate-income geographies.

## Austin MSA

The bank's opening and closing of branches has generally not adversely affected the accessibility of its delivery systems, particularly in low- and moderate-income geographies and/or to low- and moderateincome individuals. The bank did not open any branches in the low- and moderate-income geographies and closed one branch in a low-income geography. The branch closure was due to its proximity to another Chase branch. Despite the branch closure, branch locations generally remained accessible to geographies and individuals of different income levels in the bank's AA.

Services, including where appropriate, business hours, do not vary in a way that inconveniences its AA, particularly low- and moderate-income geographies and/or individuals. Generally, branches are open Monday through Friday from 9:00 am to 6:00 pm and Saturday from 9:00 am to 2:00 pm. All retail banking services are available at all branches within the low- and moderate-income geographies.

## Community Development Services

The bank provided a significant level of CD services in the Houston MSA and Dallas CSA, and an adequate level of CD services in the Austin MSA. The provided services were responsive to the needs of the full-scope AAs.

## Houston MSA

Bank employees provided their financial or job-specific expertise and/or technical assistance for 2,609 qualified CD activities to 58 organizations for a total of 9,450 hours during the evaluation period. Most
of the bank's assistance went to organizations that provide services to low- and moderate-income individuals and families. These services were responsive to the needs for financial literacy and affordable housing. The following are examples of CD services provided in this AA:

- Bank employees provided 247 financial literacy workshops for low- and moderate-income customers through partnership with a nonprofit organization benefitting 4836 low- and moderateincome individuals.
- Bank employees held four affordable homeownership seminars serving 155 low- and moderateincome individuals one on one with the basics of obtaining a mortgage.


## Dallas CSA

Bank employees provided their financial or job-specific expertise and/or technical assistance for 1,884 qualified CD activities to 47 organizations for a total of 8,619 hours during the evaluation period. Most of the bank's assistance went to organizations that provide services to low- and moderate-income individuals and families. These services were responsive to the needs for affordable housing and technical assistance. The following are examples of CD services provided in this AA:

- Bank employees provided 779 pre-purchase homebuyer education seminars for low- and moderateincome customers. The educational curriculum is provided by a HUD-approved nonprofit housing counseling agency. The seminar is offered either in person or through webinar.
- Bank employees provided 2,318 hours and 505 technical assistance services for not-for-profits that serve low- and moderate-income individuals and communities.


## Austin MSA

Bank employees provided their financial or job-specific expertise and/or technical assistance for 499 qualified CD activities to 14 organizations for a total of 2,120 hours during the evaluation period. Most of the bank's assistance went to organizations that provide services to low- and moderate-income individuals and families. These services were responsive to the needs affordable housing and financial education. The following are examples of CD services provided in this AA:

- Bank employees provided 61 homebuyer education seminars benefiting 265 low- and moderateincome customers.
- Bank employees provided more than 1148 hours of first-time homebuyer educational service to lowand moderate-income customers as a voluntary option during the homebuying process from thirdparty organizations.


## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall High Satisfactory Service Test rating and had a marginally negative affect on the initial overall conclusions based on the AAs receiving full-scope review. Based on limited-scope reviews, the bank's performance under the Service Test in the Abilene MSA, Brownsville-Harlingen MSA, El Paso MSA, and TX Non-Metro AAs is stronger than the bank's overall performance under the Service Test in the full-scope areas due to
stronger branch distribution in low- and moderate-income geographies. The bank's performance under the Service Test in the Amarillo MSA, Beaumont-Port Arthur MSA, College Station-Bryan MSA, Killeen-Temple MSA, Laredo MSA, Longview MSA, Lubbock MSA, McAllen-Edinburg-Mission MSA, Midland MSA, Odessa MSA, San Antonio-New Braunfels MSA, Tyler MSA, Waco MSA, and Wichita Falls MSA is weaker than the bank's overall performance under the Service Test in the fullscope area due to weaker branch distribution in low- and moderate-income geographies.

## State Rating

## State of Utah

CRA rating for the State of Utah ${ }^{\mathbf{2 6} \text { : Outstanding }}$
The Lending Test is rated: Outstanding
The Investment Test is rated: High Satisfactory
The Service Test is rated: Outstanding
The major factors that support this rating include:

- An excellent level of lending activity.
- An excellent geographic distribution of home mortgage loans and small loans to businesses.
- A good borrower distribution of home mortgage loans and small loans to businesses.
- A relatively high level of CD loans, which positively affected the rating.
- The extensive use of innovative/flexible products, which positively affected the rating.
- A good level of qualified investments that demonstrated excellent responsiveness to community economic development needs.
- The extensive use of complex investments.
- Retail service delivery systems that are readily available to geographies and individuals of different income levels.
- Leadership in providing CD services that are responsive to AA needs.


## Description of Institution's Operations in Utah

The state of Utah is Chase's 13th rating area based on its total deposits of $\$ 13.3$ billion, representing 1.0 percent of the bank's total deposits. As of December 31, 2019, the bank operated 49 branches and 92 deposit-taking ATMs within the rating area, representing 0.9 percent of total branches and 0.5 percent of total ATMs. The bank has delineated four AAs in the state of Utah. The bank originated and purchased approximately $\$ 7.6$ billion in loans or 1.1 percent of total bank loan originations and purchases during the evaluation period in the state.

According to FDIC Deposit Market Share Data as of June 30, 2019, there were 51 banks operating 512 branches in the state of Utah. The bank maintained 49 offices with deposits of $\$ 13.2$ billion, ranking it 9th in deposit market share in the state with 2.3 percent. Major competitors in the state include Ally Bank with 20.5 percent market share. Morgan Stanley with 19.6 percent market share, and American Express National Bank with 12.58 percent market share.

The bank delineated four AAs in the state of Utah. The Salt Lake City-Provo-Orem, UT CSA (Salt Lake City CSA), which accounts for 95.1 percent of deposits in the state of Utah, received a full-scope review. The St. George MSA, Logan MSA, and UT Non-Metro AA received limited-scope reviews. The delineated AAs are described in appendix A.

The Salt Lake City CSA consists of the Salt Lake City MSA, Provo-Orem MSA and Ogden-Clearfield MSA. The bank defines the AA as the entire Salt Lake City MSA, Utah County in the Provo-Orem MSA, and Davis and Weber counties in the Ogden-Clearfield MSA.

The following table provides a summary of the demographics that includes housing and business information for the Salt Lake City CSA. Table A indicates that the volume of OOUs is small in lowincome census tracts ( 1.3 percent) and over 21.7 percent of families in the AA are low-income. The Salt Lake City CSA's higher cost of housing also limits access to affordable homeownership among LMI borrowers. The median housing value in the Salt Lake City CSA is 3.3 times the averaged median income, 4.1 times the moderate-income, and 6.6 times the low-income, indicating a large proportion of OOUs are unaffordable to most low-income and many moderate-income borrowers. One simplistic method used to determine housing affordability assumes a maximum monthly principal and interest payment of no more than 36 percent of the applicant's income.

In the Salt Lake City CSA, assuming a 30-year mortgage with a 5.0 percent interest rate, 3.0 down payment, and not accounting for homeowners insurance, real estate taxes, or any additional monthly expenses, a low-income borrower making $\$ 35,140$ per year (or less than 50 percent of the FFIEC adjusted median family income in the MSA) could afford a $\$ 116,256$ mortgage with a payment of $\$ 1,054$ per month; a moderate-income borrower earning $\$ 56,224$ per year (or less than 80 percent of the FFIEC adjusted median family income in the AA) could afford a $\$ 216,757$ mortgage with a payment of $\$ 1,687$ per month.

Median rents and the significant percentage of families below poverty level suggest rental housing is also unaffordable for many low-income residents.

Table A - Demographic Information of the Assessment Area
Assessment Area: 482 Salt Lake City-Provo-Orem UT CSA 2017-2019

| Demographic Characteristics | $\#$ | Low <br> $\mathbf{\%} \mathbf{o f} \#$ | Moderate <br> $\mathbf{\%}$ of $\#$ | Middle <br> $\mathbf{\%} \mathbf{o f} \#$ | $\mathbf{U p p e r}$ <br> $\mathbf{\%} \mathbf{o f} \#$ | $\mathbf{N A *}$ <br> $\mathbf{\%} \mathbf{o f} \#$ |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Geographies (Census Tracts) | 455 | 5.1 | 21.1 | 42.9 | 29.9 | 1.1 |
| Population by Geography | $2,253,864$ | 3.8 | 19.8 | 46.0 | 29.9 | 0.4 |
| Housing Units by Geography | 737,834 | 3.9 | 22.1 | 45.4 | 28.2 | 0.4 |
| Owner-Occupied Units by Geography | 479,565 | 1.3 | 15.7 | 48.5 | 34.3 | 0.2 |
| Occupied Rental Units by Geography | 217,469 | 9.5 | 35.3 | 39.7 | 14.8 | 0.7 |
| Vacant Units by Geography | 40,800 | 5.0 | 27.6 | 39.2 | 28.2 | 0.1 |
| Businesses by Geography | 212,169 | 3.9 | 17.7 | 42.5 | 35.5 | 0.5 |
| Farms by Geography | 3,899 | 2.4 | 15.0 | 46.8 | 35.6 | 0.2 |
| Family Distribution by Income Level | 523,009 | 19.0 | 18.1 | 22.7 | 40.1 | 0.0 |
| Household Distribution by Income Level | 697,034 | 21.7 | 16.8 | 21.1 | 40.4 | 0.0 |
| Median Family Income MSA <br> Ogden-Clearfield, UT MSA |  | $\$ 71,742$ | Median Housing Value |  | $\$ 230,725$ |  |
| Median Family Income MSA <br> Provo-Orem, UT MSA |  | $\$ 67,248$ | Median Gross Rent |  | $\$ 937$ |  |
| Median Family Income MSA <br> Salt Lake City, UT MSA |  |  |  |  | $8.9 \%$ |  |

## Economic Data

According to the Moody's Analytics November 2019 report, Salt Lake City has a strong economy and a strong quality of life. Strengths include sturdy house price appreciation, lots of high-wage jobs in tech and other knowledge-based industries, below-average business costs, business-friendly climate, welleducated workforce, and a high concentration of prime-age adults. However, it is limited in the availability of office space and exposure to federal fiscal policy. Since the Great Recession the state has maintained balanced budgets by avoiding an overhaul of its tax and spending policies, while expanding services and employment. An educated workforce has been key to fueling growth in knowledge-based industries. The metro area's population growth was more than double the country's in 2018 and will continue to impress as robust job additions and reasonable costs relative to the rest of the West attract residents from elsewhere. More educated workers with high wages will power gains in retail and leisure spending while spurring faster household formation, which in turn benefits the housing market.

Economic drivers include finance, high tech, and state capital. Major employment sectors include professional and business services. government. education and health services and retail trade. In addition to federal, state, and local government, major employers in the University of Utah, Intermountain Health Care Inc., Walmart, Delta Airlines and Smith's Food \& Drug.

## Community Contacts

Two community contacts completed during the examination period were reviewed to gain an understanding of the needs in the community. Contacts were completed with organizations focused on affordable housing, community services and economic development. Contacts noted there is a housing shortage in Salt Lake County, specifically in multi-family housing and affordable housing. Middle and upper-income Utahans are faring better that low- and moderate-income constituents after the great recession. Low-income populations have not benefitted from the economic recovery in the same way as affluent populations. The technology industry is causing rents to increase and become unaffordable to low-income populations. There is a growing homeless population as social service programs dwindle, and the resources available to assist the homeless continue to disappear. Student loan debt is impacting housing affordability and exacerbated by increased rental prices adding to the homeless situation. Predatory lending is a challenge. Nonprofit program and infrastructure support, such as IT and marketing are critical. Some nonprofits had to cease operations due to lack of funding and support. Other needs mentioned for the area include:

- Workforce housing
- Small dollar loans
- Need more micro-loans for small business
- Affordable rental housing
- Technical assistance for small businesses
- Community services for the large refugee population
- Support for financial education
- First time homebuyer counseling
- Down payment assistance


## Scope of Evaluation in Utah

The rating for the state of Utah is based on an evaluation of the bank's performance in all AAs as listed in appendix A. The Salt Lake City CSA accounts for 95.1 percent of deposits in the state of Utah and received a full-scope review. The remaining three AAs in the state of Utah received limited-scope reviews. Performance in limited-scope AAs and its effect on the CRA rating are discussed at the end of each test.

## CONCLUSIONS WITH RESPECT TO PERFORMANCE TESTS IN UTAH

## LENDING TEST

The bank's performance under the Lending Test in the state of Utah is rated Outstanding.
Performance in AAs receiving limited-scope reviews was factored together with performance from AAs receiving full-scope reviews to determine the state's overall Outstanding Lending Test rating. Limitedscope conclusions did not significantly affect the initial overall conclusions based on the AAs receiving full-scope review.

## Conclusions for Areas Receiving a Full-Scope Review

Based on a full-scope review, the bank's performance in the Salt Lake City CSA is excellent. Overall excellent lending levels, excellent geographic distribution of loans, offset weaker but good borrower distribution. A relatively high level of CD lending and product innovation and flexibility was considered favorably when determining the rating.

## Lending Activity

Lending levels reflect excellent responsiveness to AA credit needs.
Examiners considered the number and amount of home mortgage, small business, and small farm loans originated or purchased relative to Chase's capacity based on deposits, competition, and market presence. Lending activity for home mortgage and small loans to businesses received the most weight in reaching conclusions. Respectively, home mortgage lending and small loans to businesses account for 31.8 percent and 67.7 percent of the loan volume in the state by number and 83.8 and 14.2 percent of loan volume by dollar. Small farm lending is not a strategic focus of the bank and received minimal
weight in reaching conclusions. Farm loans represented 0.43 percent of the loan volume in the state by number and 0.05 percent loan volume by dollar.

| Number of Loans* |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home <br> Mortgage | Small <br> Business | Small <br> Farm | Community <br> Development | Total | \% State <br> Loans | \% State <br> Deposits |
| Salt Lake City- <br> Provo-Orem CSA | 18,456 | 39,592 | 191 | 16 | 58,255 | 84.7 | 95.1 |
| Logan MSA | 713 | 1,714 | 52 | 0 | 2,479 | 3.6 | 0.7 |
| St. George MSA | 1,335 | 2,861 | 28 | 0 | 4,224 | 6.1 | 1.4 |
| UT Non-Metro AA | 1,422 | 2,411 | 25 | 0 | 3,858 | 5.6 | 2.9 |
| Total | 21,926 | 46,578 | 296 | 16 | 68,816 | 100 | 100 |

*Due to rounding, totals may not equal $100.0 \%$. The tables present the data for all assessment areas. The narrative below addresses performance in fullscope areas only.

| Dollar Volume of Loans* (in \$000s) |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home <br> Mortgage | Small <br> Business | Small <br> Farm | Community <br> Development | Total | \% State <br> Loans | \% State <br> Deposits |
| Salt Lake City- <br> Provo-Orem CSA | $4,925,658$ | 952,464 | 2,655 | 145,262 | $6,026,039$ | 79.7 | 95.1 |
| Logan MSA | 134,347 | 31,384 | 581 | 0 | 166,312 | 2.2 | 0.7 |
| St. George MSA | 342,650 | 41,463 | 280 | 0 | 384,393 | 5.1 | 1.4 |
| UT Non-Metro AA | 936,038 | 50,357 | 277 | 0 | 986,672 | 13.0 | 2.9 |
| Total | $6,338,693$ | $1,075,668$ | 3,793 | 145,262 | $7,563,416$ | 100.0 | 100 |

*Due to rounding, totals may not equal $100.0 \%$. The tables present the data for all assessment areas. The narrative below addresses performance in fullscope areas only.

Chase ranked 59th in deposits with 0.3 percent market share.
In overall home mortgage lending, Chase ranked seventh out of 438 lenders with a 3.1 percent market share. Other lenders in the market include America First (9.3 percent), Wells Fargo Bank, N.A. (7.1 percent), and Mountain America (5.8 percent).

In small loans to businesses, Chase ranked second out of 138 lenders with 17.7 percent market share. Other major lenders are American Express National Bank (26.6 percent), Citibank, N.A. (10.0 percent), and Wells Fargo Bank, N.A. (9.9 percent),

In small loans to farms, Chase ranked first out of 18 lenders with a 29.6 percent market share. The other major lenders and respective market shares are Wells Fargo Bank, N.A. ( 22.8 percent), Zions Bank, N.A. (12.2 percent), and People's InterMountain Bank, N.A. (8.5 percent).

## Distribution of Loans by Income Level of the Geography

The bank exhibits excellent geographic distribution of loans in its AA.

## Home Mortgage Loans

Refer to Table O in the state of Utah section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of home mortgage loan originations and purchases for this evaluation is excellent. The following information was taken into consideration when determining this rating.

- Examiners considered the limited proportion of housing units in low-income geographies, particularly OOUs (1.3 percent), which constrained lending opportunities.
- The high level of competition in the AA was also considered and examiners placed greater significance on performance compared to the aggregate of lenders.
- Between 2017 and 2019, the proportion of loans in low-income areas exceeded the percentage of owner-occupied units and aggregate distribution of loans. In moderate-income areas the proportion of loans was near to the percentage of owner-occupied units and aggregate distribution of loans.
- During 2014 through 2016, performance in low-income geographies exceeded the percentage of owner-occupied units and aggregate distribution of loans, while performance in moderate-income geographies was below the percentage of owner-occupied units and the aggregate distribution of loans.


## Small Loans to Businesses

Refer to Table Q in the state of Utah section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to businesses.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to businesses for this evaluation is good. The following information was taken into consideration when determining this rating.

- Examiners considered the small proportion of businesses in low-income geographies (3.9 percent) and competition between 438 lenders constrained lending opportunities to existing businesses.
- Performance against the aggregate distribution of lenders was given additional consideration as it reflects the difficulties all lenders are experiencing due to the economic constraints discussed above under the Description of the Full-Scope AA. The economic data particularly indicates the high cost of doing business and limited labor force as challenges for businesses.
- Between 2017 and 2019, the proportion of small loans to businesses in low-income geographies exceeded both the proportion of businesses and the aggregate distribution, while the proportion of small loans to businesses in moderate-income geographies was below both the proportion of businesses and the aggregate distribution.
- During 2014 to 2016, the proportion of small loans to businesses in low-income geographies exceeded both the proportion of businesses and the aggregate distribution, while the proportion of small loans to businesses in moderate-income geographies was near to both the proportion of businesses and the aggregate distribution.


## Small Loans to Farms

Refer to Table S in the state of Utah section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to farms.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to farms is adequate. The following information was taken into consideration when determining this rating.

- The limited number of farms in low-income geographies, (2.4 percent), constrained lending opportunities; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher number of farms in those geographies.
- The fact that farm lending is not a focus of the bank was also considered.
- Between 2017 and 2019, the bank made no loans to small farms in low-income geographies. The proportion of loans to small farms in moderate-income geographies was well below both the proportion of farms in those geographies and the aggregate distribution of all lenders.
- During 2014 to 2016, the bank made no loans to small farms in low-income geographies. The proportion of loans to small farms in moderate-income geographies exceeded both the proportion of farms in those geographies and the aggregate distribution for the respective geographies.


## Lending Gap Analysis

A review of home mortgage loans, small loans to business, and small loans to farms including summary reports and AA maps did not identify any unexplained conspicuous lending gaps in the bank's activities.

## Distribution of Loans by Income Level of the Borrower

The bank exhibits a good distribution of loans among individuals of different income levels and business of different sizes.

## Home Mortgage Loans

Refer to Table P in the state of Utah section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall borrower distribution of home mortgage loan originations and purchases for this evaluation is good. The following information was taken into consideration when determining this rating.

- Greater significance was placed on performance against the aggregate distribution as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of this Full-Scope AA.
- Examiners particularly considered housing affordability challenges for low- and moderate-income borrowers.
- Between 2017 and 2019, the proportion of loans to low-income borrowers was well below the percentage of low-income families and near to the aggregate distribution of lenders. The proportion of moderate-income loans exceeded the proportion of moderate-income families and the aggregate distribution.
- During 2014 to 2016 the bank's performance was generally consistent with performance between 2017 to 2019. The proportion of loans to low-income borrowers was well below the percentage of low-income families and exceeded the aggregate distribution of lenders. The proportion of moderate-income loans exceeded the proportion of moderate-income families and was below the aggregate distribution.


## Small Loans to Businesses

Refer to Table R in the state of Utah section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to businesses.

Based on the data in the tables and the following factors, the distribution of the bank's originations and purchases of small loans to businesses by revenue category is good. The following information was taken into consideration when determining this rating.

- Greater significance was placed on performance against the aggregate distribution of lenders as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of the Full-Scope AA.
- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 and 2019. The bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.


## Small Loans to Farms

Refer to Table T in the state of Utah section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to farms.

Based on the data in the table and the following considerations, the distribution of the bank's originations and purchases of small loans to farms by revenue category is good. The following information was taken into consideration when determining this rating.

- Greater significance was placed on performance against the aggregate distribution of lenders as it reflects the difficulties all lenders are experiencing due to the economic constraints discussed above under the Description of the Full-Scope AA.
- The fact that farm lending is not a focus of the bank was considered.
- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was near to the percentage of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less below the percentage of businesses and exceeded the aggregate distribution.


## Community Development Lending

The bank has made a relatively high level of CD loans.
The Lending Activity Tables, shown above, set forth the information and data used to evaluate the bank's level of CD lending. These tables include all CD loans, including multifamily loans that also qualify as CD loans.

The bank made 16 CD loans totaling $\$ 145.3$ million. This represents 8.9 percent of the tier 1 capital allocated to the AA. Most of the CD loans ( 73 percent) were for affordable housing purposes, which is a critical need in this AA.

Examples of CD loans in the AA include:

- The bank originated a $\$ 15.3$ million construction loan for the acquisition and development of affordable housing in a moderate-income census tract in Salt Lake City. The project is Phase I of a four phase development and will contain 118 units of housing. Eighty-four units in the project are affordable to families with incomes of 50 percent or less of the moderate-income and 34 units will be market rate. Of the 118 units, 10 units are set aside for veterans, five units will be set aside for previously homeless individuals, nine units are designed for occupancy by handicapped individuals, and two units are set aside for large families. The project has also entered a memorandum of understanding with the local Public Housing Authority to accept qualified Section 8 tenants.
- The bank originated a $\$ 16.1$ million construction loan for affordable housing in Salt Lake City. Located in a moderate-income census tract, the project will comprise 126 units of affordable housing and 37 units at market rates. This financing funds Phase 2 of a 4 Phase project. Of the 126 units, 11 are set aside for veterans and five units will be set aside for previously homeless individuals. The project has also entered a memorandum of understanding with the local Public Housing Authority to accept qualified Section 8 tenants.
- The bank originated a $\$ 12.0$ million construction loan to purchase bonds for the construction of affordable housing in Salt Lake City. The project is located in a moderate-income census tract and is comprised of 134 units. The development will have 120 units restricted for low- and moderateincome individuals, with 10 units set aside for veterans, 13 units set aside for large families, and seven units that are Type A Wheelchair Accessible Units. The project has also entered a memorandum of understanding with the local Public Housing Authority to accept qualified Section 8 tenants.


## Product Innovation and Flexibility

The bank makes extensive use of innovative and/or flexible lending practices in order to serve AA credit needs. A total of 4,535 loans were funded totaling $\$ 1$ billion. Refer to the comments in the Product

Innovation and Flexibility section of this performance evaluation for additional details regarding the programs.

| Loan Type | Number of <br> Loans | Dollar Amount <br> $\mathbf{( \$ 0 0 0 ' s )}$ |
| :--- | :---: | :---: |
| DreaMaker | 896 | 216,493 |
| FHA | 998 | 193,829 |
| HARP | 1,187 | 220,434 |
| VA | 511 | 139,578 |
| SBA | 592 | 88,169 |
| USDA | 351 | 176,793 |

## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall Outstanding Lending Test rating and did not significantly affect the initial overall conclusions based on the AAs receiving fullscope review. Based on limited-scope reviews, the bank's performance under the Lending Test in the St. George MSA, Logan MSA, and UT Non-Metro AA is weaker than the bank's overall performance under the Lending Test in the full-scope area. Performance is weaker primarily due to weaker geographic and borrower income distributions and the lack of CD lending. The limited-scope AAs represent less than five percent of the state's deposits.

Refer to Tables O through T in the state of Utah section of appendix D for the facts and data that support these conclusions.

## INVESTMENT TEST

The bank's performance under the Investment Test in state of Utah is rated High Satisfactory.

## Conclusions for Area Receiving a Full-Scope Review

Based on a full-scope review, the bank's performance in the Salt Lake City CSA is good.

The bank has a good level of qualified CD investments and grants, but not in a leadership position, particularly those that are not routinely provided by private investors. The current and prior period investments dollar volume represents 4.0 percent of tier 1 capital allocated to the AA. A significant majority or 90 percent are current period investments

The bank exhibits excellent responsiveness to credit and community economic development needs identified in the AA, including affordable housing, community services, and revitalization/stabilization for low- and moderate-income individuals and geographies. Eight CD investments total $\$ 57.9$ million with 83.5 percent, 11.4 percent, and 5.15 percent focusing on affordable housing, community services, and revitalization/stabilization. Eleven grants total $\$ 515,000$ with 53.4 percent supporting community services, 29.1 percent supporting economic development, 9.7 percent affordable housing, and 7.8 percent revitalization/stabilization.

The bank makes significant use of complex investments to support CD initiatives. Six complex current period CD investments and grants totaling $\$ 27.1$ million or 46 percent of total current period investments consist primarily of single investor fund/Direct Investor LIHTC and NMTC transactions.

Seven prior period CD investments totaling $\$ 6.3$ million or 97 percent of prior period investments consist of single investor fund/Direct Investor LIHTC transactions. Four CD investments and grants serve as catalyst investments that encourage future growth, improvements, or community revitalization/stabilization.

Examples of community development investments in the AA include:

- The bank originated a $\$ 3.3$ million NMTC equity investment for the facility to serve patients seeking cancer treatment services and support in Salt Lake City. This investment serves the needs of adult patients seeking cancer treatment services. The facility has 42 patient suites to serve 800 adult patients annually at no cost along with access to other cancer support services for patients requiring lifesaving, medically prescribed treatment and financial resources, legal aid, food assistance, and clinical trials. The facility is comprehensive resource for heavily burdened patients in an increasingly complex healthcare delivery system.
- The bank invested $\$ 30.0$ million in Freddie Mac Multifamily ML Certificates Series ML-05 Bonds. Proceeds of the bonds were used for the acquisition of two multifamily housing properties located in Salt Lake County. The properties consisted of a total of 408 units, of which 400 are affordable to those earning less than 80 percent AMI.
- The bank originated a $\$ 10.8$ million LIHTC investment. The property consists of 105 one- and twobedroom units for seniors at a variety of income levels with the majority ranging from 25 percent AMI to 50 percent AMI. Services were provided at no charge to the tenants and were facilitated by Utah Independent Living Center, Department of Veterans Affairs, or the Road Home.

| Qualified Investments - State of Utah |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area (AA) | Prior Period* |  | Current Period |  | Total |  |  |  | UnfundedCommitments*$*$ |  |
|  | \# | \$(000's) | \# | \$(000's) | \# | \% of <br> Total <br> \# | \$(000's) | \% of Total \$ | \# | \$(000's) |
| Full Review: |  |  |  |  |  |  |  |  |  |  |
| Salt Lake City-Provo-Orem CSA | 16 | 6,537 | 19 | 58,513 | 35 | 89.7 | 65,051 | 99.46 | 0 | 0 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |
| Logan MSA | 2 | 20 | 1 | 16 | 3 | 7.7 | 36 | 0.05 | 0 | 0 |
| St. George MSA | 0 | 0 | 0 | 0 | 0 | 0.00 | 0 | 0.00 | 0 | 0 |
| UT Non-Metro AA | 0 | 0 | 1 | 319 | 1 | 2.6 | 319 | 0.49 | 0 | 0 |

* Prior Period Investments' means investments made in a previous evaluation period that are outstanding as of the examination date.
** Unfunded Commitments' means legally binding investment commitments that are tracked and recorded by the institution's financial reporting system.


## Statewide Investments in the State of Utah

The bank has 19 current and prior period CD investments and grants with and without a purpose, mandate, or function to serve AAs in the broader statewide area. Fifty percent supports affordable housing and 50 percent supports community services. These statewide investments further support the bank's overall good performance under the Investment Test in the state of Utah.

## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall High Satisfactory Investment Test rating and did not significantly change the initial overall conclusions based on the AAs receiving full-scope review. Based on limited-scope reviews, the bank's performance under the Investment Test in the Logan MSA, St. George MSA, and UT Non-Metro AA is weaker the bank's overall performance under the Investment Test in the full-scope area. Performance is weaker due to a lower level of investments in each of the three AAs in relations to tier one capital.

## SERVICE TEST

The bank's performance under the Service Test in state of Utah is rated Outstanding.

## Conclusions for Area Receiving a Full-Scope Review

Based on a full-scope review, the bank's performance in the Salt Lake City CSA is excellent.

## Retail Banking Services

Service delivery systems are readily accessible to geographies and individuals of different income levels in the bank's AA. Based on the data in the table below, the branch distribution in low- and moderateincome geographies exceeds the percentage of the population in these respective geographies.

| Distribution of Branch Delivery System |  |  |  |  |  |  |  | As of December 31, 2019 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} \text { Assessment } \\ \text { Area } \end{gathered}$ | Deposits | Branches |  |  |  |  |  | Population |  |  |  |
|  | \% of Rated | \# of <br> BANK <br> Branches | \% of <br> Rated <br> Area <br> Branches <br> in $\mathbf{A A}$ | Location of Branches by Income of Geographies (\%) |  |  |  | \% of Population within Each Geography |  |  |  |
|  | Deposits in AA |  |  | Low | Mod | Mid | Upp | Low | Mod | Mid | Upp |
| Salt Lake City-ProvoOrem CSA | 95.1 | 40 | 81.6 | 10.0 | 30.0 | 32.5 | 27.5 | 3.8 | 20.2 | 46.1 | 29.5 |

* May not add up to 100 percent due to geographies with unknown tract income level and rounding

Alternative delivery systems enhanced the delivery of banking services to geographies and individuals of all income levels. The OCC considered the availability and use of alternative delivery systems over the evaluation period. This included review of the bank's 78 deposit-taking ATMs, online banking, mobile banking, and telephone banking to determine the effectiveness of these systems to make retail banking services available to individuals in low- and moderate-income geographies. The bank increased the deposit-taking ATMs in low- and moderate-income geographies by 61.9 percent over the prior rating period to seven ( 9.0 percent) deposit-taking ATMs in low-income geographies and 27 ( 34.6 percent) ATMs in moderate-income geographies. Additionally, bank-provided data on use of online, mobile, and telephone banking showed increases in the adoption of these services by low- and moderate-income individuals from the prior rating period.

| Distribution of Branch Openings/Closings |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | \# of Branch Openings | \# of Branch Closings | Net change in Location of Branches (+ or -) |  |  |  |
|  |  |  | Low | Mod | Mid | Upp |
| Salt Lake City-Provo-Orem CSA | 2 | 14 | 0 | -2 | -8 | -2 |

The bank's opening and closing of branches has not adversely affected the accessibility of its delivery systems, particularly in low- and moderate-income geographies and/or to low- and moderate-income individuals. The bank did not open or close any branches in the low-income geographies and closed two branches in moderate-income geographies. Branch closures were due to poor location and reduced customer usage. Despite the branch closures, branch locations remained accessible to geographies and individuals of different income levels in the bank's AA.

Services, including where appropriate, business hours, do not vary in a way that inconveniences, its AA, particularly moderate-income geographies and/or individuals. Generally, branches are open Monday through Friday from 9:00 am to 6:00 pm and Saturday from 9:00 am to 2:00 pm. All retail banking services are available at all branches within the low- and moderate-income geographies.

## Community Development Services

The bank was a leader in providing CD services that are responsive to AA needs.
Bank records show that employees provided their financial or job-specific expertise and/or technical assistance for 477 qualified CD service activities to 27 organizations since the last evaluation, logging a total of 1,612 hours. All the bank's assistance was to organizations that provide community services to low- and moderate-income individuals and families. The bank's community development services were very responsive to the community needs in the AA, particularly affordable housing. The following are examples of CD services provided:

- The bank provided financial incentives to 112 low- and moderate-income homebuyers to take homebuyer education from third-party organizations.
- Five bank employees provided financial literacy seminar/webinar training to low- and moderateincome participants by providing the material and options for residents to reach the goal of homeownership. To date these seminars has helped more than 4000 families in over 125 Utah communities become homeowners.


## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall Outstanding Service Test rating and did not significantly change the initial overall conclusions based on the AA receiving a fullscope review. Based on limited-scope reviews, the bank's performance under the Service Test in the UT Non-Metro AA is consistent with the bank's overall performance under the Service Test in the fullscope area. The bank's performance in the Logan MSA and St. George MSA is weaker than the bank's overall performance in the full-scope area due to weaker branch distribution in low- and moderateincome geographies.

## State Rating

## State of Washington

CRA rating for the State of Washington ${ }^{27}$ : Outstanding
The Lending Test is rated: Outstanding
The Investment Test is rated: Outstanding
The Service Test is rated: Outstanding
The major factors that support this rating include:

- A good level of lending activity.
- Good geographic distribution of home mortgage loans and small loans to businesses.
- Good borrower distribution of home mortgage loans and small loans to businesses.
- Leadership in making CD loans in the Seattle-Tacoma CSA, which had a significantly positive affect on the rating.
- The extensive use of innovative/flexible products, which positively affected the rating.
- An excellent level of qualified CD investments that displayed excellent responsiveness to credit and community economic development needs.
- The extensive use of innovative and/or complex qualified investments.
- Retail service delivery systems that are accessible to geographies and individuals of different income levels.
- A significant level of CD services that were responsive to AA needs.


## Description of Institution's Operations in Washington

The state of Washington is Chase's 8th largest rating area based on aggregate deposits of $\$ 32.4$ billion, representing 2.5 percent of the bank's total deposits. As of December 31, 2019, the bank operated 182 branches and 320 deposit-taking ATMs within the rating area, representing 3.7 percent of total branches and 1.9 percent of total ATMs. The bank originated and purchased approximately $\$ 26.4$ billion in loans or 3.8 percent of total bank loan originations and purchases during the evaluation period in the state.

According to FDIC Deposit Market Share Data, as of June 30, 2019, there were 77 banks operating 1,670 branches in the state of Washington. Chase ranks $3^{\text {rd }}$ in deposit market share with 11.6 percent. Major competitors in the state based on deposit market share include Bank of America, N.A. (20.8 percent), Wells Fargo Bank, N.A. (11.6 percent), and U.S. Bank, N.A. (9.9 percent).

The bank delineated seven AAs in the state of Washington. The Seattle-Tacoma CSA (Seattle CSA) and the Spokane-Spokane Valley MSA (Spokane MSA), which combined account for 95.2 percent of the deposits and 88.0 percent of lending, received full-scope reviews. The Bellingham MSA, Kennewick-Richland-Walla Walla CSA, Wenatchee MSA, Yakima MSA, and WA Non-Metro AA received limited-scope reviews. Refer to appendix A for a complete description of each AA.

## Seattle CSA

The bank defines its AA as the entire Seattle CSA. According to FDIC Deposit Market Share Data as of June 30, 2019, the bank-maintained $\$ 15.5$ billion in deposits in the AA, ranking $3^{\text {rd }}$ in deposit market share with 12.4 percent. As of December 31, 2019, the bank operated 159 branches and 294 deposittaking ATMs in the area, accounting for 3.2 percent of bank branches and 1.8 percent of bank deposittaking ATMs.

The following table provides a summary of the demographics that includes housing and business information for the Seattle CSA. Table A indicates that the volume of OOUs is small in low-income census tracts ( 2.2 percent) and over 20.8 percent of families in the AA are low-income. The Seattle CSA's high cost of housing also limits access to affordable homeownership among LMI borrowers. The median housing value across the Seattle CSA ranges from four to six times the median income, over five times the moderate-income, and more than seven times the low-income, indicating a limited proportion of OOUs are affordable to low- and moderate-income borrowers. One simplistic method used to determine housing affordability assumes a maximum monthly principal and interest payment of no more than 30 percent of the applicant's income.

In the Seattle CSA, assuming a 30-year mortgage with a five percent interest rate, three percent down payment, homeowners insurance, real estate taxes, and not accounting for any additional monthly expenses, a low-income borrower making $\$ 37,210$ per year (or less than 50 percent of the FFIEC adjusted median family income in the CSA) could afford a $\$ 126,094$ mortgage with a payment of $\$ 1,116$ per month; a moderate-income borrower earning $\$ 59,536$ per year (or less than 80 percent of the FFIEC adjusted median family income in the AA) could afford a $\$ 232,545$ mortgage with a payment of $\$ 1,786$ per month.

Median rents and the percentage of families below poverty level suggest rental housing is also unaffordable for many low-income residents.

| Table A - Demographic Information of the Assessment Area |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area: 500 Seattle-Tacoma WA CSA 2017-2019 |  |  |  |  |  |  |
| Demographic Characteristics | $\#$ | Low <br> \% of \# | Moderate <br> \% of \# | Middle <br> \% of \# | Upper <br> \% of \# | NA* <br> \% of \# |
| Geographies (Census Tracts) | 912 | 4.7 | 21.6 | 45.3 | 27.3 | 1.1 |
| Population by Geography | $4,467,503$ | 4.8 | 21.8 | 45.6 | 27.6 | 0.2 |
| Housing Units by Geography | $1,876,128$ | 4.7 | 21.3 | 45.7 | 28.2 | 0.1 |
| Owner-Occupied Units by <br> Geography | $1,059,645$ | 2.2 | 16.7 | 48.5 | 32.6 | 0.0 |
| Occupied Rental Units by <br> Geography | 670,235 | 8.6 | 28.5 | 41.0 | 21.7 | 0.3 |
| Vacant Units by Geography | 146,248 | 4.9 | 21.3 | 46.9 | 26.8 | 0.1 |
| Businesses by Geography | 354,032 | 5.1 | 19.2 | 41.5 | 33.9 | 0.3 |
| Farms by Geography | 9,015 | 2.9 | 16.4 | 49.2 | 31.5 | 0.1 |
| Family Distribution by Income | $1,099,746$ | 20.8 | 17.7 | 21.1 | 40.4 | 0.0 |
| Level |  |  |  |  |  |  |


| Household Distribution by Income <br> Level | $1,729,880$ | 23.4 | 16.2 | 18.5 | 41.9 |
| :--- | :---: | :---: | :---: | :---: | :---: |

Source: 2015 ACS and 2019 D\&B Data
Due to rounding, totals may not equal $100.0 \%$
(*) The NA category consists of geographies that have not been assigned an income classification. $_{\text {a }}$.

## Economic Data

According to Moody's Analytics November 2019 Report, the Seattle area economy is strong. The area has a highly trained and well-educated workforce; a relatively high per capita income; and is a global center for cloud computing and software development. Job and labor force gains have accelerated over the past year, and residential and commercial construction is firming after a hiccup late last year. Technology is a major economic driver with companies such as Amazon and Microsoft continuing their expansion in the area. Amazon's workforce has grown by almost 25 percent in the 2 years since the completion of its South Lake Union campus. Google has also opened new offices in the area which will increase the competition for top technology talent. Boeing, which is the largest employer in the area, has experienced some troubles related to safety issues with its 737 Max Jet. Other major employers in the area include Amazon, Microsoft, and the University of Washington. Housing affordability is an issue in the area, and although house price appreciation is no longer outpacing incomes, two years of double-digit gains have eroded potential buyers' purchasing power. Declining affordability and slower growth in mid-paying jobs pose a risk to the outlook for homebuilding. Although housing affordability is about even with the national average, broad measures of affordability belie a skewed income distribution that has grown more so with the shift in Seattle's industrial base from manufacturing to information technology.

## Community Contacts

Six community contacts completed during the examination period were reviewed to gain an understanding of the needs in the community. Contacts were completed with organizations focused on affordable housing, economic development, and community services. Contacts noted that there is a severe affordable housing shortage in the area. Low- and moderate-income residents are being pushed further away from Seattle into communities that do not provide access to the transportation, employment, or services they need. Residents with Section 8 (Housing Choice) vouchers have difficulty finding landlords willing to rent to them; while residents with disabilities are paying so much for rent, they cannot afford needed assistance devices like hearing aids. Many neighborhoods have either already
gentrified or are gentrifying and for every affordable housing project that comes online, there are hundreds of individuals and households on the waiting list. Property taxes are rising in the area, which is bringing financial pressure to senior and low-and moderate-income homeowners. The Hispanic population is growing in the more rural parts of the AA. The disparity between rural and urban communities within the AA is growing in terms of costs, access to affordable housing stock, and access to services. Contacts identified a number of needs in the area including:

- Affordable housing for low- and moderate-income residents
- Home modifications for aging baby boomers
- Greater access to banking services in the rural portions of the AA
- Greater broadband access in rural communities
- Financial education and counseling, particularly for youth, and second chance checking accounts
- Home evictions and property taxes are rising
- Micro-loans for small businesses
- Debt financing for affordable housing developers
- Funding support for CDFIs and Nonprofits
- Rural broadband

Contacts noted that there are multiple opportunities available in the area for banks serving the community including general community development support; small business lending and technical assistance; asset development; and providing low-cost financial services.

## Spokane MSA

The bank defines its AA as the entire Spokane MSA. According to FDIC Deposit Market Share Data as of June 30, 2019, the bank maintained nearly $\$ 740.0$ million in deposits in the AA, ranking $5^{\text {th }}$ in deposit market share with 8.1 percent. As of December 31, 2019, the bank operated 12 branches and 17 deposittaking ATMs in the AA, representing 0.2 percent of total bank branches and 0.1 percent of total bank ATMs.

The following table provides a summary of the demographics that includes housing and business information for the Spokane MSA. Table A indicates that the volume of OOUs is small in low-income census tracts ( 0.1 percent) and over 24.4 percent of families in the AA are low-income. The Spokane MSA's cost of housing also limits access to affordable homeownership among low-income borrowers. The median housing value in the Spokane MSA is three times the median income, over five times the moderate-income, and more than seven times the low-income, indicating a limited proportion of OOUs are affordable to low- and moderate-income borrowers. One simplistic method used to determine housing affordability assumes a maximum monthly principal and interest payment of no more than 30 percent of the applicant's income.

In the Spokane MSA, assuming a 30-year mortgage with a five percent interest rate, three percent down payment, homeowners insurance, real estate taxes, and not accounting for any additional monthly expenses, a low-income borrower making $\$ 31,032$ per year (or less than 50 percent of the FFIEC adjusted median family income in the CSA) could afford a $\$ 147,921$ mortgage with a payment of $\$ 931$ per month; a moderate-income borrower earning $\$ 49,651$ per year (or less than 80 percent of the FFIEC adjusted median family income in the AA) could afford a $\$ 236,639$ mortgage with a payment of $\$ 1,489$ per month.

Median rents and the percentage of families below poverty level suggest rental housing is also unaffordable for many low-income residents.

| Table A - Demographic Information of the Assessment Area <br> Assessment Area: 518 Spokane-Spokane Valley WA MSA 2017-2019 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Demographic Characteristics | \# | Low <br> \% of \# | Moderate \% of \# | Middle \% of \# | Upper \% of \# | $\begin{aligned} & \text { NA* } \\ & \% \text { of } \# \end{aligned}$ |
| Geographies (Census Tracts) | 117 | 0.9 | 29.1 | 47.9 | 21.4 | 0.9 |
| Population by Geography | 524,380 | 0.6 | 27.0 | 45.2 | 26.4 | 0.8 |
| Housing Units by Geography | 226,646 | 0.5 | 28.4 | 44.9 | 24.9 | 1.2 |
| Owner-Occupied Units by Geography | 132,361 | 0.1 | 20.7 | 47.5 | 31.4 | 0.3 |
| Occupied Rental Units by Geography | 74,789 | 1.3 | 39.8 | 41.0 | 15.3 | 2.6 |
| Vacant Units by Geography | 19,496 | 0.5 | 37.1 | 42.6 | 17.7 | 2.1 |
| Businesses by Geography | 36,887 | 2.9 | 32.3 | 39.8 | 24.1 | 0.9 |
| Farms by Geography | 1,633 | 0.6 | 18.7 | 49.3 | 31.4 | 0.0 |
| Family Distribution by Income Level | 132,039 | 20.7 | 17.1 | 22.1 | 40.1 | 0.0 |
| Household Distribution by Income Level | 207,150 | 24.4 | 16.5 | 17.3 | 41.8 | 0.0 |
| Median Family Income MSA - 44060 Spokane-Spokane Valley, WA MSA |  | \$62,064 | Median Housing Value |  |  | \$189,335 |
|  |  |  | Median Gross Rent |  |  | \$779 |
|  |  |  | Families Below Poverty Level |  |  | 10.5\% |
| Source: 2015 ACS and 2019 D\&B Data <br> Due to rounding, totals may not equal $100.0 \%$ <br> (*) The NA category consists of geographies that have not been assigned an income classification. |  |  |  |  |  |  |

## Economic Data

According to Moody's Analytics November 2019 Report, the Spokane area economy is stable. The area's strengths include stability from a large healthcare industry; a large student population that supports consumer industries; low cost of doing business; positive net-migration; and high industrial diversity. Healthcare will remain a key driver of job growth in the medium term and will add more than a quarter of all net new jobs over the next decade. Demand for medical care will be driven by an aging population. The area is home to Fairchild Airforce Base, which is the largest employer in the area and where recent expansion has led to an increase in construction hiring. The expansion of the Fairchild Air Force Base will support a broad array of industries in Spokane through 2021. Department of Defense expenditures in the area rose dramatically over fiscal 2019, which saw more than $\$ 100.0$ million spent on various construction services and supplies for new buildings and renovations at Fairchild AFB. The new federal spending will be spread between on-base facilities and off-base single-family housing for the 1,000 new airmen and family members who are arriving now. The unemployment rate in the area has risen, but only because the labor force is growing. In addition to Fairchild Airforce Base, other major employers in the area include Providence Healthcare - Eastern Washington; Northern Quest Resort Casino; and URM Stores. In addition, the area is the location of several colleges and universities including Eastern Washington University: Community Colleges of Spokane and Gonzaga University. Housing affordability has ticked up on the back of solid income growth.

## Community Contacts

Community contacts completed during the examination period were reviewed to gain an understanding of the needs in the community. Contacts were completed with organizations focused on affordable housing, economic development, and community services. Contacts noted that high poverty rates as well as high levels of unemployment and under employment were a concern, particularly in some neighborhoods in the northeast section of Spokane. This area also is lacking in available services to assist low-income individuals. The area has a growing refugee population that needs services and support. Contacts noted that the homeless population is growing and there is a need for services to assist this group. Vacant and abandoned properties are still a problem, particularly in the northeast part of the city. Other identified needs include:

- Focus on homeownership for low- and moderate-income individuals
- Micro-loans for entrepreneurs
- Workforce development training to provide greater access to living wage jobs
- Unrestricted grant dollars for nonprofit organizations
- Long term investments in financial literacy programs

Contacts indicated that opportunities are available for banks to support the needs in the community including general community development; affordable housing; workforce development; small business development; and asset development.

## Scope of Evaluation in Washington

The Seattle CSA and Spokane MSA received full-scope reviews. The Seattle CSA and Spokane MSA combined account for 95.2 percent of the bank's deposits and 88.0 percent of lending in the state. More weight was placed on performance in the Seattle CSA based on the bank's higher level of deposits and lending. The remaining AAs in the state of Washington received a limited-scope reviews. Performance in limited-scope AAs and its effect on the CRA rating are discussed at the end of each test.

## CONCLUSIONS WITH RESPECT TO PERFORMANCE TESTS IN WASHINGTON

## LENDING TEST

The bank's performance under the Lending Test in Washington is rated Outstanding.
Performance in AAs receiving limited-scope reviews was factored together with performance from AAs receiving full-scope reviews to determine the state's overall Outstanding Lending Test rating. Limitedscope conclusions did not significantly affect the initial overall conclusions based on the AAs receiving full-scope review.

## Conclusions for Areas Receiving Full-Scope Reviews

Based on full-scope reviews, the bank's performance in the Seattle CSA and the Spokane MSA is excellent. Strong CD lending had a significantly positive effect on the overall good lending levels and good geographic and borrower distribution of loans. Product innovation and flexibility was considered favorably.

## Lending Activity

Lending levels reflect a good responsiveness to the credit needs in the bank's AAs.
Examiners considered the number and amount of home mortgage, small business, and small farm loans originated or purchased relative to Chase's capacity based on deposits, competition, and market presence. Lending activity for home mortgage and small loans to businesses received the most weight in reaching conclusions. Respectively, home mortgage lending and small loans to businesses account for 39.7 percent and 59.3 percent of the loan volume in the state by number and 90.0 and 5.5 percent of loan volume by dollar. Small farm lending is not a strategic focus of the bank and received minimal weight in reaching conclusions. Farm loans represented 0.8 percent of the loan volume in the state by number and 0.05 percent loan volume by dollar.
Lending levels reflect good responsiveness to AA credit needs.

| Number of Loans* |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home Mortgage | Small Business | Small <br> Farm | Community Development | Total | \% State <br> Loans | \% State <br> Deposits |
| Seattle-Tacoma CSA | 46,506 | 69,100 | 407 | 190 | 116,203 | 81.7 | 92.9 |
| Spokane-Spokane <br> Valley MSA | 2,983 | 5,796 | 119 | 1 | 8,899 | 6.3 | 2.3 |
| Bellingham MSA | 1,720 | 2,544 | 70 | 2 | 4,336 | 3.0 | 1.0 |
| Kennewick-Richland- <br> Walla Walla CSA | 1,679 | 2,401 | 121 | 0 | 4,201 | 3.0 | 1.0 |
| Wenatchee MSA | 806 | 771 | 42 | 0 | 1,619 | 1.1 | 0.4 |
| Yakima MSA | 925 | 1,141 | 99 | 0 | 2,165 | 1.5 | 0.7 |
| WA Non-Metro AA | 1,979 | 2,604 | 215 | 2 | 4,800 | 3.4 | 1.6 |
| Total | 56,598 | 84,357 | 1,073 | 195 | 142,223 | 100.0 | 100.0 |

*Due to rounding, totals may not equal $100.0 \%$. The tables present the data for all assessment areas. The narrative below addresses performance in fullscope areas only.

| Dollar Volume of Loans* ('000's) |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home Mortgage | Small Business | Small <br> Farm | Community Development | Total | \% State <br> Loans | \% State <br> Deposits |
| Seattle-Tacoma CSA | 21,556,709 | 1,224,767 | 4,619 | 1,109,493 | 23,895,587 | 90.3 | 92.9 |
| Spokane-Spokane Valley MSA | 572,286 | 89,760 | 1,092 | 10,000 | 673,138 | 2.6 | 2.3 |
| Bellingham MSA | 541,239 | 41,012 | 789 | 3,820 | 586,860 | 2.3 | 1.0 |
| Kennewick-Richland-Walla Walla CSA | 325,498 | 46,729 | 1,608 | 0 | 373,835 | 1.4 | 1.0 |
| Wenatchee MSA | 225,204 | 11,390 | 466 | 0 | 237,060 | 0.9 | 0.4 |
| Yakima MSA | 153,074 | 18,932 | 1,178 | 0 | 173,184 | 0.7 | 0.7 |
| WA Non-Metro AA | 421,624 | 32,912 | 2,367 | 23,235 | 480,138 | 1.8 | 1.6 |
| Total | 23,795,634 | 1,465,502 | 12,119 | 1,146,548 | 26,419,802 | 100.0 | 100.0 |

*Due to rounding, totals may not equal $100.0 \%$. The tables present the data for all assessment areas. The narrative below addresses performance in fullscope areas only.

## Seattle CSA

As of June 30, 2019, Chase ranked third in deposits out of 57 institutions with 12.6 percent market share.

In overall home mortgage lending, Chase ranked third out of 660 lenders with a 4.1 percent market share. The two lenders ranked first and second in the market are respectively Boeing Employees Credit Union ( 9.15 percent) and Wells Fargo ( 7.7 percent).

In small loans to businesses, Chase ranked second out of 153 lenders with 15.6 percent market share. Other major lenders are Bank of America, N.A. (19.0 percent), and American Express National Bank (14.5 percent).

In small loans to farms, Chase ranked second out of 23 lenders with a 20.6 percent market share. The other major lenders and respective market shares are Bank of America, N.A. (26.9 percent), U.S. Bank, N.A. (15.9 percent), and Wells Fargo Bank, N.A. (13.4 percent).

## Spokane MSA

As of June 30, 2019, Chase ranked fifth in deposits out of 17 institutions with 8.9 percent market share.
In overall home mortgage lending, Chase ranked tenth out of 390 lenders with a 2.4 percent market share. Other lenders are Spokane Teachers ( 8.8 percent), Numerica Credit Union (5.8) percent), and Wells Fargo Bank, N.A. (5.6 percent).

In small loans to businesses, Chase ranked first out of 69 lenders with 15.6 percent market share. Other major lenders are Citibank, N.A. (11.8 percent), American Express National Bank (11.6 percent), U.S. Bank, N.A. (10.7 percent), and Bank of America, N.A. (10.3 percent).

In small loans to farms, Chase ranked second out of 13 lenders with a 15.0 percent market share. The other major lenders and respective market shares are Wells Fargo Bank, N.A. (17.4 percent), U.S. Bank, N.A. (14.6 percent), and John Deere Financial, F.S.B. (12.7).

## Distribution of Loans by Income Level of the Geography

The bank exhibits good geographic distribution of loans in its AAs.

## Home Mortgage Loans

Refer to Table O in the state of Washington section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of home mortgage loan originations and purchases is good. The following information was taken into consideration when determining this rating.

## Seattle CSA

- In determining overall performance, examiners considered the limited proportion of OOUs (2.2 percent) in low-income areas and overall level of competition.
- Between 2017 and 2019, the proportion of loans in low-income areas met the percentage of owneroccupied units and was near to the aggregate distribution of loans. The proportion of loans in
moderate-income areas was near to the percentage of owner-occupied units and was below the aggregate distribution of loans.
- Inconsistent and weaker performance in low- and moderate-income geographies between the 2014 and 2016 time periods affected overall conclusions. The proportion of loans in low-income areas was near to the percentage of owner-occupied units and below the aggregate distribution of loans. The proportion of loans in moderate-income areas was below both the percentage of owner-occupied units and the aggregate distribution of loans.


## Spokane MSA

- Examiners considered the limited proportion of low-income geographies ( 0.9 percent) and volume of OOUs ( 0.6 percent), which constrained lending opportunities.
- Between 2017 and 2019, the proportion of loans in low-income areas exceeded the percentage of owner-occupied units and was well below the aggregate distribution of loans. The proportion of loans in moderate-income areas was near to the percentage of owner-occupied units and was below the aggregate distribution of loans.
- Inconsistent and weaker performance in low-income geographies during the 2014 and 2016 time periods affected aggregated conclusions. The proportion of loans in low-income areas was below the percentage of owner-occupied units and the aggregate distribution of loans. The proportion of loans in moderate-income areas was near to both the percentage of owner-occupied units and the aggregate distribution of loans.


## Small Loans to Businesses

Refer to Table Q in the state of Washington section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to businesses.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to businesses for this evaluation is good. The following information was taken into consideration when determining this rating.

## Seattle CSA

- The small proportion of low-income geographies, volume of businesses in low-income geographies ( 5.1 percent), and level of competition constrained lending opportunities to existing businesses. Therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of businesses in those geographies.
- Performance against the aggregate distribution of lenders was given additional consideration as it reflects the difficulties all lenders are experiencing due to the economic constraints discussed above under the Description of the Full-Scope AA. The economic data particularly indicates the high cost of doing business and limited labor force as challenges for businesses.
- Between 2017 and 2019, the proportion of small loans to businesses in low-income geographies was below the proportion of businesses and well below the aggregate distribution, while the proportion
of small loans to businesses in moderate-income geographies was below the proportion of businesses and near to the aggregate distribution.
- During 2014 to 2016, the bank's performance was stronger, particularly in low-income geographies, and positively affected aggregated conclusions. The proportion of small loans to businesses in lowincome geographies was near to the proportion of businesses and exceeded the aggregate distribution, while the proportion of small loans to businesses in moderate-income geographies was below the proportion of businesses and near to the aggregate distribution.


## Spokane MSA

- The small proportion of low-income geographies, volume of businesses in low-income geographies ( 2.9 percent), and level of competition constrained lending opportunities to existing businesses. Therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of businesses in those geographies.
- Performance against the aggregate distribution of lenders was also given additional consideration as it reflects the difficulties all lenders are experiencing due to the economic constraints discussed above under the Description of the Full-Scope AA. The economic data particularly indicates the high cost of doing business and limited labor force as challenges for businesses.
- Between 2017 and 2019, the proportion of small loans to businesses in low- and moderate-income geographies was below the proportion of businesses and near to the aggregate distribution.
- During 2014 to 2016, the bank's performance was stronger in moderate-income geographies, and positively affected aggregated conclusions. The proportion of small loans to businesses in lowincome geographies was below the proportion of businesses and near to the aggregate distribution, while the proportion of small loans to businesses in moderate-income geographies near to the proportion of businesses and exceeded the aggregate distribution.


## Small Loans to Farms

Refer to Table S in the state of Washington section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to farms.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to farms is adequate. The following information was taken into consideration when determining this rating.

## Seattle CSA

- The limited number of farms in low-income geographies, (2.9 percent), constrained lending opportunities; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher number of farms in those geographies.
- The fact that farm lending is not a focus of the bank was also considered.
- Between 2017 and 2019, the proportion of loans to small farms in low-income geographies was well below the proportion of farms in those geographies and the aggregate distribution of all lenders. The proportion of loans to small farms in moderate-income geographies was well below the proportion of farms in those geographies and below the aggregate distribution of all lenders.
- During the 2014 to 2016 period, the proportion of loans to small farms in low-income geographies exceeded both the proportion of farms in those geographies and the aggregate distribution. The proportion of loans to small farms in moderate-income geographies was well below both the proportion of farms in those geographies and the aggregate distribution.


## Spokane MSA

- The limited percentage of farms in low-income geographies, ( 0.6 percent), constrained lending opportunities; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of farms in those geographies.
- The fact that farm lending is not a focus of the bank was also considered.
- Between 2017 and 2019, the bank made no small farm loans in low-income geographies. The proportion of loans to small farms in moderate-income geographies exceeded the proportion of farms and the aggregate distribution.
- During the 2014 to 2016 period, the bank made no farm loans in low- or moderate-income geographies during the period.


## Lending Gap Analysis

A review of home mortgage loans, small loans to business, and small loans to farms including summary reports and AA maps did not identify any unexplained conspicuous lending gaps in the bank's activities.

## Distribution of Loans by Income Level of the Borrower

The bank exhibits good distribution of loans among individuals of different income levels and business and farms of different sizes, given the product lines offered by the institution.

## Home Mortgage Loans

Refer to Table P in the state of Washington section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall borrower distribution of home mortgage loan originations and purchases for this evaluation is good. The following information was taken into consideration when determining this rating.

## Seattle CSA

- Greater significance was placed on performance against the aggregate distribution as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of the Full-Scope AA.
- Examiners particularly considered housing affordability challenges for low-income borrowers.
- Between 2017 and 2019, the proportion of loans to low-income borrowers was well below the percentage of low-income families and near to the aggregate distribution of lenders. The proportion of moderate-income loans was below the proportion of moderate-income families and near to the aggregate distribution.
- During 2014 to 2016, the bank's performance was stronger in lending to low-income borrowers than performance between 2017 to 2019. The proportion of loans to low-income borrowers was well below the percentage of low-income families and exceeded the aggregate distribution of lenders. The proportion of loans to moderate-income borrowers was below the proportion of moderateincome families and the aggregate distribution.


## Spokane MSA

- Greater significance was placed on performance against the aggregate distribution as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of the Full-Scope AA.
- Examiners particularly considered housing affordability challenges for low-income borrowers.
- Between 2017 and 2019, the proportion of loans to low-income borrowers was well below the percentage of low-income families and near to the aggregate distribution of lenders. The proportion of moderate-income loans exceeded both the proportion of moderate-income families and the aggregate distribution.
- During 2014 to 2016, the bank's performance in lending to low-income borrowers was stronger than performance between 2017 to 2019. The proportion of loans to low-income borrowers was well below the percentage of low-income families and exceeded the aggregate distribution of lenders. The proportion of loans to moderate-income borrowers exceeded both the proportion of moderateincome families and the aggregate distribution.


## Small Loans to Businesses

Refer to Table R in the state of Washington section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to businesses.

Based on the data in the tables and the following factors, the distribution of the bank's originations and purchases of small loans to businesses by revenue category is good. The following information was taken into consideration when determining this rating.

## Seattle CSA

- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 and 2019. The bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.


## Spokane MSA

- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 and 2019. The bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.


## Small Loans to Farms

Refer to Table T in the state of California section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to farms.

Based on the data in the table and the following considerations, the distribution of the bank's originations and purchases of small loans to farms by revenue category is excellent. The following information was taken into consideration when determining this rating.

## Seattle CSA

- Greater significance was placed on performance against the aggregate distribution of lenders as it reflects the difficulties all lenders are experiencing due to the economic constraints discussed above under the Description of the Full-Scope AA.
- The fact that farm lending is not a focus of the bank was considered.
- Between 2017 and 2019, the bank's percentage of loans to farms with revenues of $\$ 1$ million or less was below the percentage of farms and significantly exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 and 2019. The bank's percentage of loans to farms with revenues of $\$ 1$ million or less was below the percentage of farms and significantly exceeded the aggregate distribution.


## Spokane MSA

- Greater significance was placed on performance against the aggregate distribution of lenders as it reflects the difficulties all lenders are experiencing due to the economic constraints discussed above under the Description of the Full-Scope AA.
- The fact that farm lending is not a focus of the bank was considered.
- Between 2017 and 2019, the bank's percentage of loans to farms with revenues of $\$ 1$ million or less was near to the percentage of farms and significantly exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was consistent with performance between 2017 and 2019. The bank's percentage of loans to farms with revenues of $\$ 1$ million or less was below the percentage of farms and significantly exceeded the aggregate distribution.


## Community Development Lending

## Seattle- CSA

The bank is a leader in making CD loans.
The Lending Activity Tables, shown above, set forth the information and data used to evaluate the institution's level of CD lending. These tables include all CD loans, including multifamily loans that also qualify as CD loans.

The bank made 13 CD loans totaling $\$ 1.1$ billion. This represents 28.7 percent of the tier 1 capital allocated to the AA. The majority (or 64.8 percent) of CD loans were for affordable housing purposes, which is a critical need in this AA.

Examples of CD loans in the AA include:

- The bank originated a $\$ 100,000$ line of credit to a not-for-profit organization that creates and operates social enterprise businesses designed to provide jobs and internships for homeless and atrisk families residing in low-income housing in Snohomish County and Camano Island, Washington. The organization partners with the community colleges and the Workforce Development Council, allowing residents to get college credits and degree certificates. Through 12 -week paid internships, the organization enables participants to gain career ladder employment and wage progression.
- The bank originated a $\$ 99.0$ million loan for a multi-phase construction project for a building that continues the transformation of the South Lake Union community in Seattle, WA. The project is located in a low-income census tract and established over 5,000 new jobs.
- The bank provided an $\$ 11.6$ million loan to help preserve the availability of affordable housing on a multifamily property. This property is comprised of 179 units, of which 178 are affordable to lowand moderate-income households and is located in a moderate-income census tract in Tukwila, WA.
- The bank funded a $\$ 58.0$ million loan to develop three multifamily structures in three separate moderate-income census tracts in Seattle, WA. The projects will result in 363 units for low- and moderate-income individuals and families in the AA.


## Spokane MSA

The bank has made a relatively high level of CD loans.
The Lending Activity Tables, shown above, set forth the information and data used to evaluate the institution's level of CD lending. These tables include all CD loans, including multifamily loans that also qualify as CD loans.

The bank made one CD loan totaling $\$ 10.0$ million. This represents 10.5 percent of the tier 1 capital allocated to the AA. The bank originated a $\$ 10.0$ million loan to finance the redevelopment of the historic Ridpath Hotel into an apartment complex. The redevelopment consisted of 206 housing units, with 179 units available individuals and families earning up to 60 percent of the AMI. The City of Spokane's City Council supported the project and has indicated the need for more affordable housing.

## Product Innovation and Flexibility

The bank made extensive use of innovative and/or flexible lending practices in order to serve AA credit needs in each of the full-scope areas. Refer to the comments in the Product Innovation and Flexibility section in the front of this performance evaluation for program details.

## Seattle CSA

A total of 7,369 loans were funded totaling $\$ 1.8$ billion under the following innovative and/or flexible programs.

| Loan Type | Number of <br> Loans | Dollar Amount <br> $\mathbf{( \$ 0 0 0 ' s )}$ |
| :--- | :---: | :---: |
| DreaMaker | 975 | 294,411 |
| FHA | 1,119 | 288,803 |
| HARP | 1,935 | 332,688 |
| VA | 1,357 | 412,838 |
| SBA | 255 | 89,123 |
| USDA | 1,728 | 352,915 |

## Spokane CSA

As outlined below, a total of 821 loans were funded totaling $\$ 132.7$ million under the following innovative and/or flexible programs.

| Loan Type | Number of <br> Loans | Dollar Amount <br> $\mathbf{( \$ 0 0 0 ' s )}$ |
| :--- | :---: | :---: |
| DreaMaker | 102 | 16,658 |
| FHA | 215 | 29,713 |
| HARP | 203 | 25,020 |
| VA | 206 | 45,843 |
| SBA | 9 | 789 |
| USDA | 86 | 14,695 |

## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall Outstanding Lending Test rating and did not significantly affect the initial overall conclusions based on the AAs receiving fullscope review. Based on limited-scope reviews, the bank's performance under the Lending Test in the Bellingham MSA is consistent with the bank's overall performance in the full-scope areas. Lending performance in the Kennewick-Richland-Walla Walla CSA, Wenatchee MSA, Yakima MSA, and WA Non-Metro AA is weaker than the bank's performance under the Lending Test in the full-scope areas. Weaker performance is due to weaker geographic or borrower income distributions or lack of CD loans. Performance in the limited-scope areas did not impact the Lending Test rating for the state of Washington.

Refer to Tables O through T in the state of Washington section of appendix D for the facts and data that support these conclusions.

## INVESTMENT TEST

The bank's performance under the Investment Test in the state of Washington is rated Outstanding.

## Conclusions for Areas Receiving Full-Scope Reviews

Based on a full-scope review, the bank's performance in the Seattle CSA and the Spokane MSA is excellent.

## Seattle CSA

The bank has an excellent level of qualified CD investments and grants, often in a leadership position, particularly those that are not routinely provided by private investors. The current and prior period investments dollar volume represents 8.3 percent of tier 1 capital allocated to the AA. A significant majority, or 85.3 percent of total investments represent current period investments.

The bank exhibits excellent responsiveness to the needs identified in this AA including affordable housing, community services, and revitalize/stabilize for low- and moderate-income individuals and geographies. Ninety-nine percent of the bank's current period CD investments focused on affordable housing. Additionally, the bank provided 120 current period grants totaling $\$ 16.5$ million to a variety of organizations that primarily provide community service needs. All prior period investments support affordable housing. In total, the bank's investments helped create or retain 11,704 low- and moderateincome affordable housing units.

The bank makes extensive use of innovative and/or complex investments to support CD initiatives. Thirteen current period qualified investments, consisting of 12 Direct Investment LIHTC transactions, were complex. Fourteen current period CD investments and grants serve as catalysts as part of a local government plan for revitalization or stabilization to encourage further growth or improvements. In addition, the bank showed leadership with two investments made under the bank's New Skills at Work initiative. All seven complex prior period investments are Direct Investment LIHTC transactions.

Examples of CD investments in the AA include:

- The bank originated a $\$ 17.3$ million Direct Investment LIHTC transaction to an organization to provide 85 rental units to low- and moderate-income individuals and families in the AA.
- The bank originated a $\$ 21.9$ million Direct Investment LIHTC investment to provide 254 affordable rental housing units to low- and moderate-income individuals and families in the AA.
- The bank originated two NMTC equity investments totaling $\$ 3.0$ million with a hotel apartment organization. This organization is responsive to the Seattle Comprehensive Plan by renovating a vacant building and creating diverse housing opportunities along with retail and commercial use. This will also meet this low-income neighborhood's need for new market rate units and affordable residential units, which are in short supply. This project targets local businesses to return back to the building. This will help initiate additional investment and revitalization in this AA as well as help retain residents by providing much needed goods, services, and housing.
- The bank made two grants totaling $\$ 500,000$ to a community service organization that has been helping low- and moderate-income individuals transform their lives of poverty, homelessness, and hunger, through food for approximately 30 years. This organization addresses persistent poverty and economic mobility through advanced skill job training to low- and moderate-income individuals. The main goal and outcome of the Foodservice Apprenticeship Program is that graduates will increase their wages 25 percent. Participants in the program get practical work experience while giving back to their community.


## Spokane MSA

The bank has an excellent level of qualified CD investments and grants, particularly those that are not routinely provided by private investors. The current and prior period investments dollar volume represents 70.2 percent of tier 1 capital allocated to the AA. A significant majority, or 85.7 percent of total investments represent current period investments.

The bank exhibits excellent responsiveness to the needs identified in this AA including affordable housing and community services for low- and moderate-income individuals and geographies. All of the bank's current period CD investments focused on affordable housing. The bank also provided 10 current period grants totaling $\$ 1.1$ million to a variety of organizations that support community service needs, and one totaling $\$ 25,000$ supporting affordable housing. All prior period investments are related to LIHTC transactions that support affordable housing. Overall, the bank's investments helped create 542 low- and moderate-income affordable housing units.

The bank makes occasional use of innovative and/or complex investments to support CD initiatives. The bank made six current and prior period CD investments consisting of Direct Investment LIHTC transactions.

Examples of CD investments in the AA include:

- The bank made a $\$ 24.3$ million Direct Investment LIHTC transaction to provide 379 rental units to low- and moderate-income individuals and families in the AA.
- The bank provided a $\$ 13.0$ million LIHTC investment to fund a housing project that provided 119 units for low- and moderate-income households. All rental units funded by LIHTC funds are set aside for low- and moderate-income households. To qualify for these units, earnings are capped at between 50-60 percent of the AMI.
- The bank made five grants totaling $\$ 625,000$ to a nonprofit community organization. The mission of this nonprofit is to fight poverty and unemployment with critical insights, researched guidance, innovative funding, and strategic partnership.

| Qualified Investments - State of Washington |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Prior Period* |  | Current Period |  | Total |  |  |  | $\begin{gathered} \text { Unfunded } \\ \text { Commitments* } \end{gathered}$ |  |
|  | \# | \$(000's) | \# | \$(000's) | \# | $\begin{gathered} \hline \% \text { of } \\ \text { Total } \\ \# \\ \hline \end{gathered}$ | \$(000's) | $\begin{gathered} \hline \% \text { of } \\ \text { Total } \\ \$ \end{gathered}$ | \# | \$(000's) |
| Full Review: |  |  |  |  |  |  |  |  |  |  |
| Seattle-Tacoma CSA | 70 | 47,290 | 163 | 275,364 | 233 | 73.5 | 322,655 | 71.6 | 0 | 0 |
| Spokane-Spokane Valley MSA | 11 | 9,550 | 20 | 57,224 | 31 | 9.8 | 66,774 | 14.8 | 0 | 0 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |
| Bellingham MSA | 4 | 4,503 | 5 | 15,889 | 9 | 2.8 | 20,392 | 4.5 | 0 | 0 |
| Kennewick-Richland-Walla Walla CSA | 4 | 118 | 1 | 654 | 5 | 1.6 | 773 | 0.2 | 0 | 0 |
| Wenatchee MSA | 1 | 45 | 0 | 0 | 1 | 0.3 | 45 | 0.0 | 0 | 0 |
| Yakima MSA | 3 | 5,617 | 8 | 19,050 | 11 | 3.5 | 24,666 | 5.5 | 0 | 0 |
| WA Non-Metro AA | 4 | 2,290 | 5 | 5,051 | 9 | 2.8 | 7,341 | 1.6 | 0 | 0 |
| Statewide Investments with Purpose, Mandate, or Function ( $\mathrm{P} / \mathrm{M} / \mathrm{F}$ ) to Serve AAs | 0 | 0 | 17 | 7,939 | 17 | 5.4 | 7,939 | 1.8 | 0 | 0 |
| Statewide Investments with No Purpose, Mandate, or Function ( $\mathrm{P} / \mathrm{M} / \mathrm{F}$ ) to Serve AAs | 1 | 10 | 0 | 0 | 1 | 0.3 | 10 | 0.0 | 0 | 0 |

* Prior Period Investments' means investments made in a previous evaluation period that are outstanding as of the examination date.
** Unfunded Commitments' means legally binding investment commitments that are tracked and recorded by the institution's financial reporting system.


## Statewide Investments in State of Washington

The bank has qualified investments with and without $P / M / F$ to serve $A A s$ in the state of Washington. These CD investments support community services, with one supporting affordable housing. The investment represents 0.6 percent of total state investments. The level of investments did not impact the overall Investment Test rating for the state of Washington.

## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall Outstanding Investment Test rating and did not change the initial overall conclusions based on the AAs receiving a full-scope review. Based on limited-scope reviews, the bank's performance under the Investment Test in the Bellingham MSA, the Yakima MSA, and the WA Non-Metro AAs is consistent with the bank's overall performance under the Investment Test in the full-scope areas. The bank's performance in the Wenatchee MSA and the Kennewick-Richland-Walla Walla CSA are weaker than the bank's overall performance under the Investment Test in the full-scope area, due primarily to a lower volume of CD investments.

## SERVICE TEST

The bank's performance under the Service Test in state of Washington is rated High Satisfactory.

## Conclusions for Area Receiving a Full-Scope Review

Based on full-scope reviews, the bank's performance in the Seattle CSA is excellent and the bank's performance in the Spokane MSA is adequate. More weight was given to the Seattle-Tacoma CSA due to the bank's larger deposit base and branch presence.

## Retail Banking Services

Service delivery systems are accessible to geographies and individuals of different income levels in the bank's full-scope AAs.

Examiners evaluated the data as outlined in the Scope section at the front of this document including bank-provided data on usage of branches adjacent to low- and moderate-income geographies by individuals residing in those geographies and on increases in the usage of alternative delivery systems.

## Seattle CSA

Based on the data in the table below and performance context, the branch distribution is excellent. In low- and moderate-income geographies, the distribution exceeds the percentage of the population. The bank had nine branches in low-income geographies and 43 branches in moderate-income geographies. The distribution was augmented by 14 MUI tract branches that serve moderate-income tracts. Examiners reviewed data on the accounts held and transactions conducted at the MUI branches and confirmed they were serving the adjacent low- and moderate-income populations.

## Spokane MSA

Based on the data in the table below and performance context, the branch distribution is good. In lowand moderate-income geographies, the distribution is respectively well below and exceeds the percentage of the population. The bank had no branches in low-income geographies and six branches in moderate-income geographies. More weight was given to the distribution in moderate-income geographies due to the small portion ( 0.6 percent) of the population residing in low-income geographies.

| Distribution of Branch Delivery System |  |  |  |  |  |  |  | As of December 31, 2019 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Deposits | Branches |  |  |  |  |  | Population |  |  |  |
|  | $\%$ of <br> Rated <br> Area <br> Deposits in $\mathbf{A A}$ | \# of <br> BANK <br> Branches | \% of <br> Rated <br> Area <br> Branches <br> in $\mathbf{A A}$ | Location of Branches by Income of Geographies (\%) |  |  |  | \% of Population within Each Geography |  |  |  |
|  |  |  |  | Low | Mod | Mid | Upp | Low | Mod | Mid | Upp |
| SeattleTacoma CSA | 92.9 | 141 | 77.9 | 6.4 | 30.5 | 45.6 | 27.6 | 4.8 | 21.8 | 45.6 | 27.6 |
| Spokane- <br> Spokane <br> Valley MSA | 2.3 | 12 | 6.6 | 0 | 50.0 | 16.7 | 33.3 | 0.6 | 27.0 | 45.2 | 26.4 |

* May not add up to 100 percent due to geographies with unknown tract income level and rounding


## Seattle CSA

Alternative delivery systems enhanced the delivery of banking services to geographies and individuals of all income levels. The OCC considered the availability and use of alternative delivery systems over
the evaluation period. This included review of the bank's 261 deposit-taking ATMs, online banking, mobile banking, and telephone banking to determine the effectiveness of these systems to make retail banking services available to individuals in low- and moderate-income geographies. The bank increased the deposit-taking ATMs in low- and moderate-income geographies by 53.1 percent over the prior rating period to 23 ( 8.8 percent) deposit-taking ATMs in low-income geographies and 75 (28.7 percent) ATMs in moderate-income geographies. Additionally, bank-provided data on use of online, mobile, and telephone banking showed increases in the adoption of these services by low- and moderate-income individuals from the prior rating period.

## Spokane MSA

Alternative delivery systems did not significantly enhance the delivery of banking services to geographies and individuals of all income levels. The OCC considered the availability and use of alternative delivery systems over the evaluation period. This included review of the bank's 17 deposittaking ATMs, online banking, mobile banking, and telephone banking to determine the effectiveness of these systems to make retail banking services available to individuals in low- and moderate-income geographies. The bank decreased the deposit-taking ATMs in low- and moderate-income geographies by 10.0 percent from the prior rating period to no deposit-taking ATMs in low-income geographies and nine ( 52.9 percent) ATMs in moderate-income geographies. Additionally, bank-provided data on use of online, mobile, and telephone banking showed decreases in the adoption of these services by low- and moderate-income individuals from the prior rating period.

| Distribution of Branch Openings/Closings |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | \# of Branch <br> Openings | \# of Branch <br> Closings | Net change in Location of Branches <br> $(+$ or -$)$ |  |  |  |  |
|  |  |  | Mod | Mid | Upp |  |  |
| Seattle-Tacoma CSA | 3 | 9 | -2 | 0 | -5 | +1 |  |
| Spokane-Spokane <br> Valley MSA | 0 | 2 | 0 | 0 | -2 | 0 |  |

## Seattle CSA

The bank's opening and closing of branches has not adversely affected the accessibility of its delivery systems, particularly in low- and moderate-income geographies and/or to low- and moderate-income individuals. The bank closed two branches in low-income geographies and opened one branch and closed one branch in moderate-income geographies. Branch closures were due to reduced customer usage and unprofitability. Despite the branch closures, branch locations remained accessible to geographies and individuals of different income levels in the bank's AA.

Services, including where appropriate, business hours, do not vary in a way that inconveniences its AA, particularly low- and moderate-income geographies and/or individuals. Generally, branches are open Monday through Friday from 9:00 am to 6:00 pm and Saturday from 9:00 am to 1:00 pm. All retail banking services are available at all branches within the low- and moderate-income geographies.

## Spokane MSA

The bank's opening and closing of branches has not adversely affected the accessibility of its delivery systems, particularly in low- and moderate-income geographies and/or to low- and moderate-income individuals. The bank did not open or close any branches in low- and moderate-income geographies.

Services, including where appropriate, business hours, do not vary in a way that inconveniences its AA, particularly low- and moderate-income geographies and/or individuals. Generally, branches are open Monday through Friday from 9:00 am to 6:00 pm and Saturday from 9:00 am to 1:00 pm.

All retail banking services are available at all branches within the low- and moderate-income geographies.

## Community Development Services

## Seattle CSA

The bank provided an excellent level of CD services.
Bank records show that employees provided technical assistance and/or job-specific expertise for 853 qualified CD service activities to 35 organizations for a total of over 3,510 hours of service. All the bank's assistance was to organizations that provide community services to low- and moderate-income individuals and families. The bank's community development services were responsive to the community needs in the AA, particularly affordable housing, and greater access to banking services. The following are examples of CD services provided in this AA:

- The bank provided more than 115 homebuyer workshops and seminars for more than 515 hours, impacting approximately 833 low- and moderate-income individuals.
- A bank employee provided technical assistance for low- and moderate-income individuals, in coordination with nonprofits that served the low- and moderate-income communities. The assistance provided education on safe, low-cost alternatives to traditional checking accounts and options to avoid high cost financial products such as payday loans and check cashers and provided standards for alternative products that are safe, low cost options for underbanked and unbanked individuals and families, and for those who are reentering the banking system.


## Spokane MSA

The bank provided an adequate level of CD services.
Bank records show that employees provided technical assistance and/or job-specific expertise for 77 qualified CD service activities to seven organizations for a total of over 335 hours of service. All the bank's assistance was to organizations that provide community services to low- and moderate-income individuals and families. The bank's community development services were responsive to the community needs in the AA, focus on homeownership for low- and moderate-income individuals. The following are examples of CD services provided in this AA:

- The bank provided 43 individual pre-purchase homebuyer education for more than 168 hours, impacting approximately 42 low- and moderate-income individuals.
- A bank employee provided 140 hours of technical assistance benefiting 412 low- and moderateincome individuals. The assistance provided education to first-time homebuyer clients interested in homeownership. The employee explained the mortgage process and provided information on mortgage products, services, and programs targeting low- and moderate-income homebuyers.


## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall High Satisfactory Service Test rating and did not significantly change the initial overall conclusions based on the AAs receiving full-scope review. Based on limited-scope reviews, the bank's performance under the Service Test in the Wenatchee MSA and Yakima MSA is consistent with the bank's overall performance under the Service Test in the full-scope area and the bank's performance under the Service Test in the Bellingham MSA, Kennewick-Richland-Walla Walla MSA, and WA Non-Metro AA is weaker than the bank's overall performance under the Service Test in the full-scope areas due to weaker branch distribution in low- and moderate-income geographies.

## State Rating

## State of West Virginia

CRA rating for the State of West Virginia ${ }^{\mathbf{2 8} \text { : Satisfactory }}$
The Lending Test is rated: High Satisfactory
The Investment Test is rated: Outstanding
The Service Test is rated: Low Satisfactory
The major factors that support this rating include:

- A good level of lending activity.
- A good geographic distribution of home mortgage loans and small loans to businesses.
- An excellent borrower distribution of home mortgage loans and small loans to businesses.
- An adequate level of CD loans that has a neutral effect on the rating.
- The extensive use of flexible products that positively affected the rating.
- A good level of qualified investments that demonstrated excellent responsiveness to credit and community economic development needs.
- A high level of statewide investments enhanced the overall rating.
- Retail service delivery systems that are reasonably accessible to geographies and individuals of different income levels.
- An adequate level of CD services that were responsive to AA needs.


## Description of Institution's Operations in West Virginia

The state of West Virginia is Chase's 25th rating area based on its total deposits of $\$ 1.7$ billion, representing 0.1 percent of the bank's total deposits. As of December 31, 2019, the bank operated 18 branches and 39 deposit-taking ATMs within the rating area, representing 0.3 percent of total branches and 0.2 percent of total ATMs. The bank originated and purchased approximately $\$ 533.5$ million in loans or 0.1 percent of total bank loan originations and purchases during the evaluation period in the state.

According to FDIC Deposit Market Share Data as of June 30, 2019, there were 71 institutions operating 608 offices in the state of West Virginia. Chase ranked 6th in deposit market share with 5.4 percent. Major competitors in the state include Branch Banking and Trust Company with 15.4 percent market share; United Bank with 14 percent market share; and WesBanco Bank with 8.5 percent market share.

The bank delineated three AAs in the state of West Virginia. The Charleston-Huntington-Ashland CSA (Charleston CSA) accounted for 59.5 percent of the bank's deposits in the state of West Virginia and received a full-scope review. The Beckley MSA and West Virginia Non-Metro AA received limitedscope reviews. The delineated AAs are described in appendix A.

[^125]The Charleston CSA consists of the Charleston MSA and Huntington-Ashland MSA. The bank defines its assessment area as the entire Charleston MSA and the Cabell, Putnam, and Wayne counties of the Huntington-Ashland MSA.

According to FDIC Deposit Market Share, as of June 30, 2019, there were 33 institutions operating 193 offices in this area. The bank-maintains deposits of $\$ 1.02$ billion in the CSA, ranking it fifth in deposit market share. As of December 31, 2019, the bank operated ten branches and 21 deposit-taking ATMs in the AA, representing 0.2 percent of bank branches and 0.1 percent of deposit-taking ATMs in the area.

The following table provides a summary of the demographics that includes housing and business information for the Charleston CSA. Table A indicates that the volume of OOUs is small in low-income census tracts ( 1.8 percent) and over 22.0 percent of families in the AA are low-income. The Charleston CSA's cost of housing also limits access to affordable homeownership among low-income borrowers. The median housing value in the Charleston CSA is two times the median income, two to three times the moderate-income, and four times the low-income, indicating a large proportion of OOUs are not affordable to low-income borrowers. One simplistic method used to determine housing affordability assumes a maximum monthly principal and interest payment of no more than 36 percent of the applicant's income.

In the Charleston CSA, assuming a 30 -year mortgage with a 5.0 percent interest rate, 3.0 percent down payment, and not accounting homeowners insurance, real estate taxes, or any additional monthly expenses, a low-income borrower making $\$ 27,310$ per year (or less than 50 percent of the FFIEC adjusted median family income in the MSA) could afford a $\$ 78,961$ mortgage with a payment of $\$ 819$ per month; a moderate-income borrower earning $\$ 43,697$ per year (or less than 80 percent of the FFIEC adjusted median family income in the AA) could afford a $\$ 157,040$ mortgage with a payment of $\$ 1,311$ per month.

Median rents and the percentage of families below poverty level suggest rental housing is also unaffordable for many low-income residents.

| Table A - Demographic Information of the Assessment Area <br> Assessment Area: 170 Charleston-Huntington-Ashland WV-OH-KY CSA 2017-2019 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Demographic Characteristics | \# | $\begin{aligned} & \text { Low } \\ & \text { \% of \# } \end{aligned}$ | Moderate \% of \# | Middle \% of \# | Upper <br> \% of \# | $\begin{gathered} \text { NA* } \\ \text { \% of \# } \end{gathered}$ |
| Geographies (Census Tracts) | 125 | 5.6 | 22.4 | 47.2 | 24.0 | 0.8 |
| Population by Geography | 469,657 | 3.3 | 16.6 | 52.8 | 26.7 | 0.6 |
| Housing Units by Geography | 220,505 | 4.2 | 17.4 | 52.5 | 25.7 | 0.3 |
| Owner-Occupied Units by Geography | 137,364 | 1.8 | 15.1 | 54.3 | 28.8 | 0.0 |
| Occupied Rental Units by Geography | 55,376 | 8.5 | 20.2 | 48.0 | 22.5 | 0.9 |
| Vacant Units by Geography | 27,765 | 7.4 | 23.0 | 52.4 | 16.9 | 0.3 |
| Businesses by Geography | 25,550 | 7.3 | 11.4 | 52.0 | 28.9 | 0.3 |
| Farms by Geography | 574 | 3.1 | 11.5 | 56.4 | 28.9 | 0.0 |
| Family Distribution by Income Level | 123,055 | 22.0 | 17.2 | 19.2 | 41.6 | 0.0 |
| Household Distribution by Income Level | 192,740 | 25.6 | 15.5 | 16.9 | 42.0 | 0.0 |


| Median Family Income MSA - 16620 <br> Charleston, WV MSA | $\$ 54,658$ | Median Housing Value | $\$ 109,680$ |
| :--- | :--- | :--- | :---: |
| Median Family Income MSA - 26580 <br> Huntington-Ashland, WV MSA | $\$ 54,584$ | Median Gross Rent | $\$ 651$ |
|  |  | Families Below Poverty Level | $13.1 \%$ |

Source: 2015 ACS and 2019 D\&B Data
Due to rounding, totals may not equal $100.0 \%$
(*) The NA category consists of geographies that have not been assigned an income classification.

## Economic Data

According to the Moody's Analytics December 2019 report, the strengths of the Charleston, WV area include a low cost of living, low business costs and below average employment volatility. However, it is experiencing a rapid decline in population, below average incomes, low quality of life, high poverty rates and a high share of surface mines which produce lower quality coal. Charleston is one of the most coal dependent metro areas in the nation. The area struggles to overcome a declining coal industry. It is among the worst-performing metro areas. There is a growing over-65 population. However, it is a less healthy population with a high death rate that is tied to poor health. Economic drivers are energy and resources, healthcare, and state government. Major employment sectors include government, education and health services and professional and business services. In addition to federal, state, and local government, major employers in the area include Charleston Area Medical Center, Herbert J. Thomas Memorial Hospital Association, FronTier Communications, Walmart, and MC Junking Corp. are also significant employers.

## Community Contacts

Four community contacts completed during the examination period were reviewed to gain an understanding of the needs in the community. Contacts were completed with organizations focused on affordable housing and economic development/small business. Contacts noted that there are several poverty related issues that need to be addressed including dental and vision care; medical care/prescription assistance; and assistance with basic day to day needs such as utilities, food, and clothing. The population in the area is aging and the number of elder rental households is increasing. There is high demand for affordable rental housing units including a growing need for affordable elder housing. There is also a need for support for programs that support asset development and selfsufficiency among low-income households. There are only a small number of institutions that operate in Kanawha County so there is a need for traditional banking services. It was reported by a community contact that the economic conditions vary widely throughout Kanawha and Putnam counties with some individuals living in severe poverty while others are affluent individuals. However, the majorly of the area is severely depressed. The level of development in the counties also vary from extremely rural to urban. The exodus of major employers (coal mining companies) has left some the rural areas with a significant employment gap as many residents refuse to relocate to areas with more job opportunities. Eastern Kanawha County has been impacted the most over the last 6-7 years by the departure of key employers. In Ashland, a new manufacturing facility is built, which will bring approximately 700-800 well-paying jobs. This will help reverse the decline in jobs that had been occurring over the past few years due to the decline of the coal industry. For housing, more of the focus seems to be on new construction. However, bank financing for rehab of some of the older housing stock as many housing units are substandard and in need of refurbishing or removal is also necessary. Other needs mentioned for the area include:

- Workforce development
- Affordable home loans for low- and moderate-income individuals
- Small business incubators
- Technical assistance for small businesses
- Funding for programs to combat the opioid addiction epidemic


## Scope of Evaluation in West Virginia

The Charleston CSA received a full-scope review. The CSA accounts for 59.5 percent of deposits in the state of West Virginia. The remaining AAs in the state of West Virginia received limited-scope reviews. Performance in the limited-scope AAs and its effect on the CRA rating are discussed at the end of each test.

## CONCLUSIONS WITH RESPECT TO PERFORMANCE TESTS IN WEST VIRGINIA

## LENDING TEST

The bank's performance under the Lending Test in the state of West Virginia is rated High Satisfactory.

## Conclusions for Areas Receiving a Full-Scope Review

Based on a full-scope review, the bank's performance in the Charleston CSA is good.
Performance in AAs receiving limited-scope reviews was factored together with performance from AAs receiving full-scope reviews to determine the state's overall High Satisfactory Lending Test rating. Limited-scope conclusions did not significantly affect the initial overall conclusions based on the AAs receiving full-scope review.

## Lending Activity

Lending levels reflect good responsiveness to credit needs in the bank's AAs.
Examiners considered the number and amount of home mortgage, small business, and small farm loans originated or purchased relative to Chase's capacity based on deposits, competition, and market presence. Lending activity for home mortgage and small loans to businesses received the most weight in reaching conclusions. Respectively, home mortgage lending and small loans to businesses account for 41.0 percent and 58.4 percent of the loan volume in the state by number and 61.4 and 38.0 percent of loan volume by dollar. Small farm lending is not a strategic focus of the bank and received minimal weight in reaching conclusions. Farm loans represented 0.6 percent of the loan volume in the state by number and 0.06 percent loan volume by dollar.

| Number of Loans* |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home <br> Mortgage | Small <br> Business | Small <br> Farm | Community <br> Development | Total | \% <br> State <br> Loans | \% State <br> Deposits |
| Charleston-Huntington- <br> Ashland CSA | 1,886 | 2,707 | 29 | 2 | 4,624 | 65.6 | 59.5 |
| Beckley MSA | 485 | 706 | 9 | 0 | 1,200 | 17.0 | 16.0 |
| WV Non-Metro AA | 518 | 705 | 2 | 0 | 1,225 | 17.4 | 24.5 |
| Total | 2,889 | 4,118 | 40 | 2 | 7,049 | 100 | 100.0 |

*The tables present the data for all assessment areas. The narrative below addresses performance in full-scope areas only.

| Dollar Volume of Loans* (\$000's) |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home <br> Mortgage | Small <br> Business | Small <br> Farm | Community <br> Development | Total | \% State <br> Loans | \% State <br> Deposits |
| Charleston Huntington- <br> Ashland CSA | 206,877 | 149,023 | 238 | 4,550 | 360,688 | 67.6 | 59.5 |
| Beckley MSA | 53,192 | 29,258 | 64 | 0 | 82,514 | 15.5 | 16.0 |
| WV Non-Metro AA | 65,928 | 24,368 | 14 | 0 | 90,310 | 16.9 | 24.5 |
| Total | 325,997 | 202,649 | 316 | 4,550 | 533,512 | 100.0 | 100.0 |

*The tables present the data for all assessment areas. The narrative below addresses performance in full-scope areas only.
Chase ranked fourth in deposits out of 51 institutions with 7.2 percent market share.
In overall home mortgage lending, Chase ranked seventh with 3.7 percent market share. The top three lenders in the market are City National Bank of West Virginia (11.4 percent), Quicken Loans, Inc. (6.0 percent), and The Huntington National Bank ( 6.0 percent).

In small loans to businesses, Chase ranked third out of 76 lenders with a 10.0 percent market share. Other major lenders are Branch Banking and Trust Co., (16.0 percent), American Express National Bank (15.4 percent), and Synchrony Bank ( 7.5 percent).

In small loans to farms, Chase ranked first out of nine lenders with a 25.0 percent market share. The other major lenders and respective market shares are U.S. Bank, N.A. (25.0 percent), John Deere Financial, F.S.B. (12.5 percent), and Summit Community Bank, N.A. (14.1 percent).

## Distribution of Loans by Income Level of the Geography

The bank exhibits good geographic distribution of loans in its AA.

## Home Mortgage Loans

Refer to Table O in the state of West Virginia section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of home mortgage loan originations and purchases is adequate. The following information was taken into consideration when determining this rating.

- The limited proportion of housing units in low-income geographies, particularly OOUs ( 1.8 percent), constrained lending opportunities; therefore, performance in moderate-income geographies was given more consideration due to the higher percentage of OOUs in those geographies.
- The level of competition in the AA was also considered.
- Between 2017 and 2019, the proportion of loans in low-income areas was well below the percentage of owner-occupied units and the aggregate distribution of loans. In moderate-income areas the proportion of loans was below the percentage of owner-occupied units and exceeded the aggregate distribution of loans.
- During 2014 through 2016, performance in low-income geographies was below the percentage of owner-occupied units and exceeded the aggregate distribution of loans, while performance in moderate-income geographies was well below the percentage of owner-occupied units and below the aggregate distribution of loans.


## Small Loans to Businesses

Refer to Table Q in the state of West Virginia section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to businesses.

Based on the data in the table and the following considerations, the bank's overall geographic distribution of small loans to businesses for this evaluation is excellent. The following information was taken into consideration when determining this rating.

- Performance against the aggregate distribution of lenders was given additional consideration as it reflects the difficulties all lenders are experiencing due to the economic constraints discussed above under the Description of the Full-Scope AA.
- Between 2017 and 2019, the proportion of small loans to businesses in low-income geographies exceeded both the proportion of businesses and the aggregate distribution, while the proportion of small loans to businesses in moderate-income geographies was below the proportion of businesses and near to the aggregate distribution
- During 2014 to 2016, the bank's proportion of small loans to businesses in low- and moderateincome geographies was near to the proportion of businesses and exceeded the aggregate distribution.


## Small Loans to Farms

Refer to Table S in the state of West Virginia section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to farms.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to farms is good. The following information was taken into consideration when determining this rating.

- The limited number of farms in low-income geographies, (3.1 percent), constrained lending opportunities; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher number of farms in those geographies.
- The fact that farm lending is not a focus of the bank was also considered.
- Between 2017 and 2019, the bank made no loans to small farms in low-income geographies. The proportion of loans to small farms in moderate-income geographies was well below the proportion of farms and the aggregate distribution.
- During 2014 to 2016, the bank made no loans to small farms in low-income geographies. The proportion of loans to small farms in moderate-income geographies significantly exceeded the proportion of farms in those geographies and the aggregate distribution.


## Lending Gap Analysis

A review of home mortgage loans, small loans to business, and small loans to farms including summary reports and AA maps did not identify any unexplained conspicuous lending gaps in the bank's activities.

## Distribution of Loans by Income Level of the Borrower

The bank exhibits excellent distribution of loans among individuals of different income levels and business and farms of different sizes, given the product lines offered by the institution.

## Home Mortgage Loans

Refer to Table P in the state of West Virginia section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall borrower distribution of home mortgage loan originations and purchases for this evaluation is excellent. The following information was taken into consideration when determining this rating.

- Greater significance was placed on performance against the aggregate distribution as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of this Full-Scope AA.
- Examiners also particularly considered housing affordability challenges for low-income borrowers and placed slightly more weight on lending to moderate-income borrowers.
- Between 2017 and 2019, the proportion of loans to low-income borrowers was well below the percentage of low-income families and exceeded the aggregate distribution of lenders. The proportion of moderate-income loans met the proportion of moderate-income families and exceeded the aggregate distribution.
- During 2014 to 2016 the bank's performance was consistent with performance between 2017 to 2019. The proportion of loans to low-income borrowers was well below the percentage of lowincome families and exceeded the aggregate distribution of lenders. The proportion of moderateincome loans exceeded both the proportion of moderate-income families and the aggregate distribution.


## Small Loans to Businesses

Refer to Table R in the state of West Virginia section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to businesses.

Based on the data in the tables and the following considerations, the distribution of the bank's originations and purchases of small loans to businesses by revenue category is good. The following information was taken into consideration when determining this rating.

- Greater significance was placed on performance against the aggregate distribution of lenders as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of the Full-Scope AA.
- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was near to the percentage of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank’s performance was slightly weaker than performance between 2017 and 2019. The bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.


## Small Loans to Farms

Refer to Table T in the state of West Virginia section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to farms.

Based on the data in the table and the following considerations, the distribution of the bank's originations and purchases of small loans to farms by revenue category is good. The following information was taken into consideration when determining this rating.

- Greater significance was placed on performance against the aggregate distribution of lenders as it reflects the difficulties all lenders are experiencing due to the economic constraints discussed above under the Description of the Full-Scope AA.
- The fact that farm lending is not a focus of the bank was considered.
- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was near to the percentage of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.


## Community Development Lending

The bank has made an adequate level of CD loans.
The Lending Activity Tables, shown above, set forth the information and data used to evaluate the institution's level of CD lending. These tables include all CD loans, including multifamily loans that also qualify as $C D$ loans.

The bank originated or purchased two CD loans totaling $\$ 4.6$ million, which represents 3.5 percent of the tier 1 capital allocated to the AA. Both loans were for affordable housing purposes, which is a need in the AA.

Examples of CD loans in the AA include:

- The bank funded a $\$ 440,000$ term loan to finance a portion of a public housing project located in a moderate-income census tract in Charleston, WV. The redevelopment project began in 2011 and upon completion, created 66 affordable housing units. Thirty-six units are for the elderly and disabled and the remaining are family units.
- The bank funded a $\$ 4.1$ million loan for the construction of Section 8 housing in Kanawha County. This created 24 units of affordable housing in the AA.


## Product Innovation and Flexibility

The bank made extensive use of innovative and/or flexible lending practices to serve AA credit needs. A total of 686 loans were funded totaling nearly $\$ 81.2$ million. Refer to the comments in the Product Innovation and Flexibility section in the front of this performance evaluation for program details.

## Charleston CSA

| Loan Type | Number of <br> Loans | Dollar Amount <br> $\mathbf{( \$ 0 0 0 ' s )}$ |
| :--- | :---: | :---: |
| DreaMaker | 40 | 4,617 |
| FHA | 216 | 22,288 |
| HARP | 90 | 9,599 |
| VA | 110 | 17,993 |
| SBA | 9 | 2,682 |
| USDA | 221 | 24,043 |

## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall High Satisfactory Lending Test rating and did not significantly affect the initial overall conclusions based on the AAs receiving full-scope review. Based on limited-scope reviews, the bank's performance under the Lending Test in the Beckley MSA and WV Non-Metro AA is consistent with the bank's overall performance under the Lending Test in the full-scope area.

Refer to Tables O through T in the state of West Virginia section of appendix D for the facts and data that support these conclusions.

## INVESTMENT TEST

The bank's performance under the Investment Test in the state of West Virginia is rated Outstanding. A high number of statewide investments enhanced the bank's overall performance under the Investment Test.

## Conclusions for Area Receiving a Full-Scope Review

Based on a full-scope review, the bank's performance in the Charleston CSA is good.
The bank has an excellent level of qualified CD investments and grants, often in a leadership position, particularly those that are not routinely provided by private investors. The current and prior period investments represent 8.8 percent of tier 1 capital allocated to the AA. Sixty-five percent are current period investments.

The bank exhibits excellent responsiveness to credit and community economic development needs identified in the AA. Four current period CD investments totaled $\$ 3.2$ million with 81.1 percent supporting affordable housing. Eighteen current period grants totaled $\$ 745,000$ with 15.2 percent and 3.7 percent focusing on community services and revitalization/stabilization, respectively. All prior period investments support affordable housing. Three investments supporting revitalization/stabilization serve as catalysts to encourage future improvement and growth in the respective areas.

The bank does not use innovative and/or complex investments to support CD initiatives.
Examples of community development investments in the AA include:

- The bank provided four annual grants, totaling $\$ 272,000$, to an organization to fund the implementation and operation of its The Road to Self-Sufficiency program. The region the organization serves has an average unemployment rate of 8.8 percent, and approximately 22.1 percent of residents live below the poverty level. The organization, in partnership with the Consumer Credit Counseling Division (CCCD), provides training focusing on industrial certification programs, work adjustment/life skills training, customer service-janitorial-medical technician training, and general office skills. In addition, the CCCD provides financial stability and coaching support.
- The bank provided a $\$ 65,000$ grant to an organization for their farm's expansion project located in Kanawha County, WV. The project created at least ten jobs for low-income/unemployed residents by targeting economically disadvantaged, low-income, and unemployed individuals and exoffenders, for training and employment in the fields of agriculture and culinary arts.
- The bank provided two grants totaling $\$ 120,000$ to a local city Foundation for their River to Rail initiative. It targeted a low- and moderate-income area suffering from the spread of crime, slum and blighting conditions, and deterioration of the public infrastructure. Grant funding will be used to make improvements to public spaces, specifically new curb and sidewalk construction, installation of rain gardens, improvements to bicycle routes and facilities, landscaping, benches, and public art.

| Qualified Investments - State of West Virginia |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Prior Period* |  | Current Period |  | Total |  |  |  | UnfundedCommitments** |  |
|  | \# | \$(000's) | \# | \$(000's) | \# | \% of Total \# | \$(000's) | \% of Total \$ | \# | \$(000's) |
| Full Review: |  |  |  |  |  |  |  |  |  |  |
| Charleston-Huntington-Ashland CSA | 21 | 7,572 | 22 | 3,946 | 43 | 28.7 | 11,518 | 41 | 0 | 0 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |
| Beckley MSA | 3 | 40 | 1 | 3 | 4 | 2.7 | 43 | 0.1 | 0 | 0 |

Charter Number: 8

| WV Non-Metro AA | 1 | 243 | 5 | 4,957 | 6 | 4.0 | 5,200 | 18.5 | 0 | 0 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Statewide Investments with <br> purpose, mandate, or function <br> (P/M/F) to Serve AAs |  |  |  |  |  |  |  |  |  |  |
| Statewide Investment with No <br> purpose, mandate, or function <br> (P/M/F) to Serve AAs | 0 | 0 | 17 | 9,354 | 17 | 11.3 | 9,354 | 33.3 | 0 | 0 |

* Prior Period Investments' means investments made in a previous evaluation period that are outstanding as of the examination date.
** Unfunded Commitments' means legally binding investment commitments that are tracked and recorded by the institution's financial reporting system.


## Statewide Investments in the State of West Virginia

The bank has 27 current and prior period CD investment and grants with and without a $\mathrm{P} / \mathrm{M} / \mathrm{F}$ to serve AA in the broader statewide area. Ninety-nine percent support affordable housing. These investments represent a high 40 percent of total qualified investments and enhanced the bank's overall performance under the Investment Test in the state of West Virginia.

## Conclusions for Area Receiving a Limited-Scope Review

Performance in the limited-scope AAs was factored into the state's overall Outstanding Investment Test rating and did not change the initial overall conclusions based on the AA receiving a full-scope review. Based on limited-scope reviews, the bank's performance under the Investment Test in the WV NonMetro AA is strong than the bank's overall performance under the Investment Test in the full-scope area. Stronger performance is due to a high level of investments in relation to allocated tier 1 capital. The bank's performance under the Investment Test in the Beckley MSA is weaker than the bank's overall performance under the Investment Test in the full-scope area. Weaker performance is due to a lower level of investments.

## SERVICE TEST

The bank's performance under the Service Test in state of West Virginia is rated Low Satisfactory.

## Conclusions for Area Receiving a Full-Scope Review

Based on a full-scope review, the bank's performance in the Charleston CSA is adequate.

## Retail Banking Services

Service delivery systems are reasonably accessible to geographies and individuals of different income levels in the bank's AA.

Examiners evaluated the data as outlined in the Scope section at the front of this document including bank-provided data on usage of branches adjacent to low- and moderate-income geographies by individuals residing in those geographies and on increases in the usage of alternative delivery systems.

Based on the data in the table below and performance context, the branch distribution is adequate. In low- and moderate-income geographies, the distribution respectively exceeds and is well below the percentage of the population. The bank had one branch in a low-income geography and no branches in moderate-income geographies. The distribution was augmented by one MUI tract branch that serves moderate-income tracts. Examiners reviewed data on the accounts held and transactions conducted at the MUI branch and confirmed it was serving the adjacent moderate-income population.

Charter Number: 8

| Distribution of Branch Delivery System |  |  |  |  |  |  |  | As of December 31, 2019 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Deposits | Branches |  |  |  |  |  | Population |  |  |  |
| Assessment | \% of Rated <br> Area | \# of <br> BANK <br> Branches | \% of <br> Rated <br> Area <br> Branches <br> in AA | Location of Branches by Income of Geographies (\%) |  |  |  | \% of Population within Each Geography |  |  |  |
| Area | Deposits in <br> AA |  |  | Low | Mod | Mid | Upp | Low | Mod | Mid | Upp |
| $\begin{aligned} & \text { Charleston } \\ & \text { CSA } \end{aligned}$ | 59.5 | 10 | 55.6 | 10.0 | 0.0 | 80.0 | 10.0 | 3.5 | 17.7 | 50.4 | 27.8 |

* May not add up to 100 percent due to geographies with unknown tract income level and rounding

Alternative delivery systems enhanced the delivery of banking services to geographies and individuals of all income levels. The OCC considered the availability and use of alternative delivery systems over the evaluation period. This included review of the bank's 21 deposit-taking ATMs, online banking, mobile banking, and telephone banking to determine the effectiveness of these systems to make retail banking services available to individuals in low- and moderate-income geographies. The bank had four (10.0 percent) deposit-taking ATMs in low-income geographies and no ATMs in moderate-income geographies. Additionally, bank-provided data on use of online, mobile, and telephone banking showed increases in the adoption of these services by low- and moderate-income individuals from the prior rating period.

| Distribution of Branch Openings/Closings |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | \# of Branch Openings | \# of Branch Closings | Net change in Location of Branches (+ or -) |  |  |  |
|  |  |  | Low | Mod | Mid | Upp |
| Charleston-CSA | 0 | 4 | 0 | -1 | -2 | -1 |

The bank's opening and closing of branches has adversely affected the accessibility of its delivery systems, particularly in moderate-income geographies and/or to low- and moderate-income individuals. The bank did not open or close any branches in the low-income geographies and closed one branch in a moderate-income geography. The branch closure was due to its proximity to another Chase branch in a MUI geography. Data confirmed use of the MUI branch by individuals in the moderate-income geography.

## Community Development Services

The bank provided an adequate level of CD services.
Bank records show that employees provided technical assistance and/or job-specific expertise for 57 CD service activities to 17 organizations for a total of over 200 qualified hours of service over a six-year period, benefitting more than 250 low- and moderate-income individuals. All the bank's assistance was to organizations that provide community services to low- and moderate-income individuals and families. The following are examples of CD services provided in this AA:

- A bank employee provided 72 hours of board service for a not-for-profit micro enterprise development center and business incubator serving a predominately low- and moderate-income client base.
- A bank employee provided a financial literacy seminar for low- and moderate-income individuals, in coordination with a nonprofit that served the low- and moderate-income community. The education received helped equip participants with the knowledge and skills necessary to make good financial decisions, so that they can become self-sufficient and enjoy financial well-being over time.


## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall Low Satisfactory Service Test rating and did not significantly change the initial overall conclusions based on the AAs receiving full-scope review. Based on limited-scope reviews, the bank's performance under the Service Test in the WV Non-Metro AA is stronger than the bank's overall performance under the Service Test in the full-scope area due to stronger branch distribution in low- and moderate-income geographies. The bank's performance in the Beckley MSA is weaker than the bank's overall performance under the Service Test due to weaker branch distribution in low- and moderate-income geographies.

## State Rating

## State of Wisconsin

CRA rating for the State of Wisconsin ${ }^{29}$ : Satisfactory
The Lending Test is rated: High Satisfactory
The Investment Test is rated: Outstanding
The Service Test is rated: High Satisfactory
The major factors that support this rating include:

- An excellent level of lending activity.
- An adequate geographic distribution of home mortgage loans and small loans to businesses.
- A good borrower distribution of home mortgage loans and small loans to businesses.
- An adequate level of CD loans that has a neutral effect on the rating.
- The extensive use of innovative/flexible products, which positively affected the rating.
- An excellent level of qualified CD investment that displayed excellent responsiveness to credit and community economic development needs.
- The extensive use of innovative and/or complex investments.
- A high level of statewide investments.
- Retail service delivery systems that are accessible to geographies and individuals of different income levels.
- A significant level of CD services that were responsive to AA needs.


## Description of Institution's Operations in Wisconsin

The state of Wisconsin is Chase's 14th rating area based on its total deposits of $\$ 9.2$ billion, representing 0.7 percent of the bank's total deposits. As of December 31, 2019, the bank operated 57 branches and 101 deposit-taking ATMs within the rating area, representing 1.1 percent of total branches and 0.6 percent of total ATMs. The bank originated and purchased approximately $\$ 6.7$ billion in loans or 1.0 percent of total bank loan originations and purchases during the evaluation period in the state.

According to FDIC Deposit Market Share Data as of June 30, 2019, there were 225 banks s operating 1,919 branches $s$ in the state of Wisconsin. Chase ranks fourth in deposit market share with 6.6 percent. Major banking competitors in the state include U.S. Bank, N.A. with 17.3 percent deposit market share; BMO Harris Bank with 14.2 percent deposit market share; and Associated Bank with 11.5 percent deposit market share.

The bank has delineated seven AAs in the state of Wisconsin. The Milwaukee-Waukesha-West Allis MSA (Milwaukee MSA), which accounts for 66.9 percent of the deposits and 50.9 percent of lending in the state, received a full-scope review. The Appleton-Oshkosh-Neenah CSA, Fond du Lac MSA, Green Bay MSA, Madison-Janesville-Beloit CSA, Racine MSA, and WI Non-Metro received limited-scope reviews. The delineated AAs are described in appendix A.

[^126]
## Description of Full-Scope AA

The following table provides a summary of the demographics that includes housing and business information for the Milwaukee MSA. Table A indicates that the volume of OOUs is small in lowincome census tracts ( 7.3 percent) and 23.5 percent of families in the AA are low-income. The Milwaukee MSA's cost of housing also limits access to affordable homeownership among low-income borrowers. The median housing value in the Milwaukee MSA is 2.6 times the median income, 3.2 times the moderate-income, and 5.2 times the low-income, indicating a proportion of OOUs are unaffordable to low-income borrowers. One simplistic method used to determine housing affordability assumes a maximum monthly principal and interest payment of no more than 36 percent of the applicant's income.

In the Milwaukee MSA, assuming a 30 -year mortgage with a 5.0 percent interest rate, 3.0 down payment, and not accounting for homeowners insurance, real estate taxes, or any additional monthly expenses, a low-income borrower making $\$ 35,882$ per year (or less than 50 percent of the FFIEC adjusted median family income in the MSA) could afford a $\$ 119,802$ mortgage with a payment of $\$ 1,076$ per month; a moderate-income borrower earning $\$ 57,411$ per year (or less than 80 percent of the FFIEC adjusted median family income in the AA) could afford a $\$ 222,420$ mortgage with a payment of $\$ 1,722$ per month.

| Table A - Demographic Information of the Assessment Area Assessment Area: 376 Milwaukee-Racine-Waukesha WI MSA 2017-2019 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Demographic Characteristics | \# | Low <br> \% of \# | Moderate \% of \# | Middle \% of \# | Upper <br> \% of \# | $\begin{aligned} & \text { NA* } \\ & \text { \% of \# } \end{aligned}$ |
| Geographies (Census Tracts) | 431 | 23.0 | 15.8 | 32.3 | 28.3 | 0.7 |
| Population by Geography | 1,570,006 | 16.7 | 14.9 | 33.7 | 34.7 | 0.0 |
| Housing Units by Geography | 671,468 | 16.1 | 15.1 | 35.4 | 33.4 | 0.0 |
| Owner-Occupied Units by Geography | 376,569 | 7.3 | 11.9 | 36.2 | 44.5 | 0.0 |
| Occupied Rental Units by Geography | 247,577 | 25.6 | 20.0 | 36.1 | 18.3 | 0.0 |
| Vacant Units by Geography | 47,322 | 35.9 | 15.3 | 25.0 | 23.9 | 0.0 |
| Businesses by Geography | 92,318 | 10.9 | 11.9 | 35.0 | 42.2 | 0.0 |
| Farms by Geography | 2,088 | 5.7 | 7.0 | 38.2 | 49.1 | 0.0 |
| Family Distribution by Income Level | 388,209 | 23.5 | 16.2 | 19.4 | 40.9 | 0.0 |
| Household Distribution by Income Level | 624,146 | 25.2 | 15.4 | 17.0 | 42.4 | 0.0 |
| Median Family Income MSA - 33340 Milwaukee-Waukesha, WI MSA |  | \$71,764 | Median Housing Value |  |  | \$186,990 |
|  |  |  | Median Gross Rent |  |  | \$841 |
|  |  |  | Families Below Poverty Level |  |  | 11.1\% |
| Source: 2015 ACS and 2019 D\&B Data <br> Due to rounding, totals may not equal $100.0 \%$ <br> (*) The NA category consists of geographies that have not been assigned an income classification. |  |  |  |  |  |  |

## Economic Data

According to Moody's Analytics February 2020 Report, the area's strengths include a well-educated workforce; above-average per capita income; and an above-average resilience of manufacturers. Employment increased to finally exceed its prior peak reached in 2000, however the job recovery was
nuanced. Durables manufacturing fell as did professional services. Meanwhile, education/healthcare had strong gains, with additional support from trade. The labor market was weak for most of 2019. As Wisconsin's only large urban hub, Milwaukee is rapidly developing into a medical center. Since 2011, the area's healthcare employment share has grown by 25 percent above Wisconsin's. Aurora Healthcare, Ascension Wisconsin and Froedtert Health, the area's three largest employers, account for more than 5 percent of jobs. Given an above-average age and still-aging state population, demand for medical services is high and Milwaukee relies more on healthcare employment than average, in stark contrast to the rest of Wisconsin. As healthcare jobs pay more than farm and manufacturing jobs, the sector's presence will further cement a sizable 20 percent to 25 percent wage gap with the average Wisconsin metro area. Housing value appreciation in the area has slowed recently.

## Community Contacts

Two community contacts completed during the examination period with organizations serving the area were reviewed to ascertain credit and community development needs. Contacts were completed with organizations focused on community and social services for low-income individuals and economic development. Contacts noted that there are major pockets of low-income families and individuals in Milwaukee County. Milwaukee and Ozaukee counties have high levels of income inequality. Many low-income families have difficulty in locating safe and affordable housing due to ongoing deferred maintenance issues with many multi-family dwellings. Contacts identified the following needs in the area:

- Affordable housing
- Financial capability training
- Workforce development
- Small business and entrepreneurship support
- Access to transportation.


## Scope of Evaluation in Wisconsin

The Milwaukee MSA, which accounts for 66.9 percent of the bank's deposits in the state of Wisconsin received a full-scope review. The remaining AAs in the state of Wisconsin received limited-scope reviews. Performance in limited-scope AAs and its effect on the CRA rating are discussed at the end of each test.

## CONCLUSIONS WITH RESPECT TO PERFORMANCE TESTS IN WISCONSIN

## LENDING TEST

The bank's performance under the Lending Test in the state of Wisconsin is rated High Satisfactory.

Performance in AAs receiving limited-scope reviews was factored together with performance from AAs receiving full-scope reviews to determine the state's overall Outstanding Lending Test rating. Limitedscope conclusions did not significantly affect the initial overall conclusions based on the AAs receiving full-scope review.

## Conclusions for Areas Receiving a Full-Scope Review

Based on a full-scope review, the bank's performance in the Milwaukee MSA is good. Overall excellent lending levels, and good borrower distribution, off-set weaker but adequate geographic distribution of loans. The low level of CD lending had a neutral effect on the rating. Product innovation and flexibility was considered favorably.

## Lending Activity

Lending levels reflect excellent responsiveness to credit needs in the AA.
Examiners considered the number and amount of home mortgage, small business, and small farm loans originated or purchased relative to Chase's capacity based on deposits, competition, and market presence. Lending activity for home mortgage and small loans to businesses received the most weight in reaching conclusions. Respectively, home mortgage lending and small loans to businesses account for 34.6 percent and 64.2 percent of the loan volume in the state by number and 84.1 and 14.8 percent of loan volume by dollar. Small farm lending is not a strategic focus of the bank and received minimal weight in reaching conclusions. Farm loans represented 1.1 percent of the loan volume in the state by number and 0.42 percent loan volume by dollar.

| Number of Loans* |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home Mortgage | Small Business | Small <br> Farm | Community Development | Total |  | \% State <br> Deposits |
| Milwaukee-WaukeshaRacine MSA | 13,866 | 23,060 | 133 | 14 | 37,073 | 50.9 | 66.9 |
| Appleton-Oshkosh-Neenah CSA | 1,818 | 4,386 | 115 | 0 | 6,319 | 8.7 | 6.9 |
| Fond du Lac MSA | 385 | 926 | 56 | 0 | 1,367 | 1.9 | 0.9 |
| Green Bay MSA | 1,401 | 2,671 | 38 | 1 | 4,111 | 5.6 | 4.3 |
| Madison-Janesville-Beloit CSA | 3,621 | 8,881 | 180 | 4 | 12,686 | 17.4 | 13.3 |
| Racine MSA | 1,331 | 2,418 | 23 | 0 | 3,772 | 5.2 | 2.6 |
| WI Non-Metro AA | 2,798 | 4,448 | 224 | 2 | 7,472 | 10.3 | 5.1 |
| Total | 25,220 | 46,790 | 769 | 21 | 72,800 | 100.0 | 100.0 |

*The tables present the data for all assessment areas. The narrative below addresses performance in full-scope areas only.

| Dollar Volume of Loans* (\$000's) |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Home <br> Mortgage | Small <br> Business | Small <br> Farm | Community <br> Development | Total | \% State <br> Loans | \% State <br> Deposits |
| Milwaukee Waukesha- <br> Racine MSA | $3,389,530$ | 494,500 | 1,506 | 23,595 | $3,909,131$ | 58.7 | 66.9 |
| Appleton-Oshkosh- <br> Neenah CSA | 288,054 | 91,706 | 3,111 | - | 382,871 | 5.8 | 6.9 |
| Fond du Lac MSA | 56,329 | 15,914 | 492 | - | 72,735 | 1.1 | 0.9 |
| Green Bay MSA | 228,651 | 60,306 | 606 | 10,000 | 299,563 | 4.5 | 4.3 |
| Madison-Janesville-Beloit <br> CSA | 840,989 | 156,975 | 13,784 | 3,220 | $1,014,968$ | 15.2 | 13.3 |
| Racine MSA | 217,174 | 58,353 | 147 | - | 275,674 | 4.1 | 2.6 |
| WI Non-Metro AA | 581,283 | 107,630 | 8,744 | 4,400 | 702,057 | 10.6 | 5.1 |
| Total | $5,602,010$ | 985,384 | 28,390 | 41,215 | $6,656,999$ | 100.0 | 100.0 |

*The tables present the data for all assessment areas. The narrative below addresses performance in full-scope areas only.
Chase ranked third in deposits out of 46 financial institutions with a 9.8 percent market share.

In overall home mortgage lending, Chase ranked third out of 537 lenders with a 5.2 percent market share. The market is highly competitive. Other major lenders are Landmark Credit Union (10.9 percent), Wells Fargo Bank, N.A. (7.1 percent), and Associated Bank (4.7 percent).

In small loans to businesses, Chase ranked first out of 112 lenders with 18.5 percent market share. Other major lenders are U.S. Bank, N.A. (11.3 percent), State Bank of the Lakes (6.9 percent), and Town Bank ( 6.9 percent).

In small loans to farms, Chase ranked third out of 20 lenders with a 15.5 percent market share. The other major lenders and respective market shares are U.S. Bank, N.A. (31.6 percent), John Deere Financial, F.S.B. (20.1 percent), and BMO Harris Bank, N.A. (9.8 percent).

## Distribution of Loans by Income Level of the Geography

The bank exhibits adequate geographic distribution of loans in its AA.

## Home Mortgage Loans

Refer to Table O in the state of Wisconsin section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of home mortgage loan originations and purchases for this evaluation is adequate. The following information was taken into consideration when determining this rating.

- The smaller proportion of housing units in low-income geographies, particularly OOUs (7.3 percent), constrained lending opportunities; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher percentage of OOUs in those geographies.
- The high level of competition in the AA (537 home mortgage lenders) was also considered and examiners placed greater significance on performance compared to the aggregate of lenders.
- Between 2017 and 2019, the proportion of loans in low- income areas were well below the percentage of owner-occupied units and the aggregate distribution of loans. In moderate-income areas the proportion of loans was below the percentage of owner-occupied units and aggregate distribution of loans.
- During 2014 through 2016, performance in low- and moderate-income geographies was well below both the percentage of owner-occupied units and aggregate distribution of loans, while performance in moderate-income geographies was well below the percentage of owner-occupied units and below the aggregate distribution of loans.


## Small Loans to Businesses

Refer to Table Q in the state of Wisconsin section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to businesses.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to businesses for this evaluation is adequate. The following information was taken into consideration when determining this rating.

- Performance against the aggregate distribution of lenders was given additional consideration as it reflects the difficulties all lenders are experiencing due to the economic constraints discussed above under the Description of the Full-Scope AA.
- Between 2017 and 2019, the proportion of small loans to businesses in low-income geographies was well below both the proportion of businesses and the aggregate distribution, while the proportion of small loans to businesses in moderate-income geographies was below both the proportion of businesses and the aggregate distribution.
- During 2014 to 2016, the proportion of small loans to businesses in low-income geographies was well below both the proportion of businesses and the aggregate distribution, while the proportion of small loans to businesses in moderate-income geographies was well below both the proportion of businesses and the aggregate distribution.


## Small Loans to Farms

Refer to Table S in the state of Wisconsin section of appendix D for the facts and data used to evaluate the geographic distribution of the bank's originations and purchases of small loans to farms.

Based on the data in the tables and the following considerations, the bank's overall geographic distribution of small loans to farms is excellent. The following information was taken into consideration when determining this rating.

- The limited number of farms in low-income geographies (5.7 percent) constrained lending opportunities; therefore, performance in moderate-income geographies was given slightly more consideration due to the higher number of farms in those geographies.
- The fact that farm lending is not a focus of the bank was also considered.
- Between 2017 and 2019, the bank made no loans to small farms in low-income geographies. The proportion of loans to small farms in moderate-income geographies was near to the proportion of farms in those geographies and significantly exceeded the aggregate distribution of all lenders.
- During 2014 to 2016, performance in low-income geographies was stronger than performance during the 2017 to 2019 period. The proportion of loans to small farms in low-income geographies significantly exceeded both the proportion of farms and the aggregate distribution. In moderateincome geographies, performance was below the proportion of farms in those geographies and significantly exceeded the aggregate distribution for the respective geographies.


## Lending Gap Analysis

A review of home mortgage loans, small loans to business, and small loans to farms including summary reports and AA maps did not identify any unexplained conspicuous lending gaps in the bank's activities.

## Distribution of Loans by Income Level of the Borrower

The bank exhibits good distribution of loans among individuals of different income levels and business and farms of different sizes, given the product lines offered by the institution.

## Home Mortgage Loans

Refer to Table P in the state of Wisconsin section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's home mortgage loan originations and purchases.

Based on the data in the tables and the following considerations, the bank's overall borrower distribution of home mortgage loan originations and purchases for this evaluation is good. The following information was taken into consideration when determining this rating.

- Greater significance was placed on performance against the aggregate distribution as it reflects the difficulties all lenders are experiencing due to competition and the economic constraints discussed above under the Description of this Full-Scope AA.
- Examiners particularly considered housing affordability challenges for low-income borrowers.
- Between 2017 and 2019, the proportion of loans to low-income borrowers was well below the percentage of low-income families and below the aggregate distribution of lenders. The proportion of loans to moderate-income borrowers exceeded the proportion of moderate-income families and the aggregate distribution.
- During 2014 to 2016, the proportion of loans to low-income borrowers was well below the percentage of low-income families and below the aggregate distribution of lenders. The proportion of moderate-income loans met the proportion of moderate-income families and was below the aggregate distribution.


## Small Loans to Businesses

Refer to Table R in the state of Wisconsin section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to businesses.

Based on the data in the tables and the following factors, the distribution of the bank's originations and purchases of small loans to businesses by revenue category is good. The following information was taken into consideration when determining this rating.

- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was weaker than performance between 2017 and 2019. The bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was well below the percentage of businesses and exceeded the aggregate distribution.


## Small Loans to Farms

Refer to Table T in the state of California section of appendix D for the facts and data used to evaluate the borrower distribution of the bank's origination and purchase of small loans to farms.

Based on the data in the table and the following considerations, the distribution of the bank's originations and purchases of small loans to farms by revenue category is good. The following information was taken into consideration when determining this rating.

- The fact that farm lending is not a focus of the bank was considered.
- Between 2017 and 2019, the bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was below the percentage of businesses and exceeded the aggregate distribution.
- During 2014 to 2016, the bank's performance was stronger than performance between 2017 and 2019. The bank's percentage of loans to businesses with revenues of $\$ 1$ million or less was near to the percentage of businesses and exceeded the aggregate distribution.


## Community Development Lending

The bank has made a low level of CD loans.
The Lending Activity Tables, shown above, set forth the information and data used to evaluate the institution's level of CD lending. These tables include all CD loans, including multifamily loans that also qualify as CD loans.

The bank originated or purchased 14 CD loans totaling $\$ 23.6$ million, which represents less than 3 percent of the tier 1 capital allocated to the AA. The majority of the loans were for community service purposes, which is a need in the AA.

Examples of CD loans in the AA include:

- The bank funded a $\$ 1.0$ million loan to the School District of Cudahy to continue its efforts to offer quality education to low- and moderate-income students. The district, which serves 2,500 students, comprises five elementary schools, two middle schools, and one high school. Over 50.0 percent of the students are eligible for the free and reduced lunch program.
- The bank funded a $\$ 668,500$ loan to replace an existing library and it created additional housing in downtown Milwaukee, WI. The project is located in a low-income census tract and added 11 lowincome units of affordable housing. The renovation was deemed vital to spur economic growth in the downtown neighborhood.
- The bank originated a $\$ 7.0$ million loan to expand an academy that focuses on at-risk children in the city of Milwaukee to offer academic, social, emotional, and spiritual tools. The organization's mission is to serve men, women, and children who are homeless, hungry, or poor in the city of Milwaukee.


## Product Innovation and Flexibility

The bank makes extensive use of innovative and/or flexible lending practices to serve AA credit needs. A total of 2,512 loans were funded totaling nearly $\$ 414.8$ million. Refer to the comments in the Product Innovation and Flexibility section of this performance evaluation for additional details regarding the programs.

| Loan Type | Number of <br> Loans | Dollar Amount <br> $\mathbf{( \$ 0 0 0 ' s )}$ |
| :--- | :---: | :---: |
| DreaMaker | 550 | 86,020 |
| FHA | 901 | 135,878 |
| HARP | 380 | 48,663 |
| VA | 454 | 99,066 |
| SBA | 66 | 16,436 |
| USDA | 161 | 28,778 |

## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall High Satisfactory Lending Test rating and did not significantly affect the initial overall conclusions based on the AAs receiving full-scope review. Based on limited-scope reviews, performance under the Lending Test in the Appleton-Oshkosh-Neenah CSA, Green Bay MSA, Madison-Janesville-Beloit CSA, and WI Non-Metro AA is consistent with the bank's overall performance under the Lending Test in the full-scope area. Performance under the Lending Test in the Fond du Lac MSA is stronger than the bank's overall performance under the Lending Test in the full-scope area. Performance is stronger due to stronger geographic and borrower income distribution performance. Performance under the Lending Test in the Racine MSA is weaker than the bank's overall performance primarily due to the lack of CD lending.

Refer to Tables O through T in the state of Wisconsin section of appendix D for the facts and data that support these conclusions.

## INVESTMENT TEST

The bank's performance under the Investment Test in the state of Wisconsin is rated Outstanding.

## Conclusions for Area Receiving a Full-Scope Review

Based on a full-scope review, the bank's performance in the Milwaukee MSA is excellent.
The bank has an excellent level of qualified CD investments and grants, occasionally in a leadership position, particularly those that are not routinely provided by private investors. Current and prior period investments represent 13.0 percent of allocated tier 1 capital. The majority or 58.3 percent of total investments represent current period investments.

The bank exhibits excellent responsiveness to credit and community economic development needs. Identified credit needs are affordable housing, affordable rental housing, financial capability training for the underserved, and economic and workforce development. Affordable and rental housing comprised 65.3 percent of total qualified investment dollars in the AA and created or retained 3,633 housing units for low- and moderate-income individuals and families. Revitalization/stabilization represented 18.9 percent of investments and community services 15.8 percent. Sixty-four grants totaling $\$ 5.8$ million
were provided to a variety of organizations for purposes of affordable housing, revitalization/stabilization, and community services. In some occurrences, grants were provided in multiple years.

The bank makes extensive use of innovative and/or complex investments to support CD initiatives. Current and prior period complex investments were 53.9 percent or $\$ 55.6$ million of total investments, mainly related to affordable housing, community service, and revitalization/stabilization. Investments included seven Direct Investor LIHTC and 11 NMTC transactions. LIHTC investments required bank expertise and capacity in selecting projects and partners, negotiating agreements, overseeing project development and operations, and ensuring compliance. Thirty-two percent or $\$ 33.0$ million of total investments served as catalysts for future growth and other improvements.

Examples of CD Investments in the AA include:

- The bank provided a $\$ 1.7$ million grant (total grant $\$ 3.5$ million) to an organization for a program located in Milwaukee. The organization is rooted in the MKE United Strategic Action Agenda, an integrated economic development plan for inclusive growth of Milwaukee's downtown and adjacent communities. Targeted commercial districts are in three low- and moderate-income neighborhoods close to downtown that have suffered from historical disinvestment and are in opportunity zones. They include the north side-Martin Luther King Drive, North Fond Du Lac Avenue, and the south side-Cesar Chavez Drive and National Avenue. These programs will inject capital and financial and technical assistance for businesses to fuel expansion, redevelopment, and revitalization in low- and moderate-income neighborhoods.
- The bank originated an $\$ 8.9$ million LIHTC investment for apartments located in Milwaukee, Wisconsin. The new construction project was a 65 -unit mixed-use development in a five-story elevator-serviced building. Fifty-six (56) units were restricted to families earning up to 30, 50, and 60 percent of AMI, along with nine (9) market rate units. Thirteen (13) units were set aside at 30 percent AMI targeted for veterans and their families who are at risk of homelessness and require access to specific resources and services. Service organizations will help meet the needs of veteran tenants.
- The bank originated an $\$ 8.5$ million NMTC equity investment to finance the construction of a K-12 school located in a low-income census tract in Milwaukee, WI. The school provides access to college preparatory education and primarily serves low-income students in Wisconsin neighborhoods where access to excellent schools is limited. Over 600 students were housed in the four-story, 200,000 square foot facility in 2017 with 1,500 students expected by 2021. Estimates showed at least 85 percent of the students would be eligible for free or reduced-rate lunches. Bank financing enabled the school to provide a community health clinic, gym, track, soccer facility, swimming facility, playground, and handball courts. The project created new construction jobs.

| Qualified Investments - State of Wisconsin |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area (AA) | Prior Period* |  | Current Period |  | Total |  |  |  | $\qquad$ |  |
|  | \# | \$(000's) | \# | \$(000's) | \# | \% of Total \# | \$(000's) | \% of Total \$ | \# | \$(000's) |
| Full-scope Review: |  |  |  |  |  |  |  |  |  |  |
| Milwaukee-Waukesha-West Allis MSA | 46 | 43,053 | 88 | 60,114 | 134 | 48.9 | 103,167 | 32.4 | 0 | 0 |
| Limited Reviews: |  |  |  |  |  |  |  |  |  |  |
| Appleton-Oshkosh-Neenah CSA | 6 | 2,804 | 10 | 20,837 | 16 | 5.8 | 23,641 | 7.4 | 0 | 0 |
| Fond du Lac MSA | 3 | 932 | 2 | 1,645 | 5 | 1.8 | 2,576 | . 8 | 0 | 0 |
| Green Bay MSA | 3 | 4,333 | 1 | 2,984 | 4 | 1.5 | 7,317 | 2.3 | 0 | 0 |
| Madison-Janesville-Beloit CSA | 10 | 3,582 | 20 | 104,877 | 30 | 10.9 | 108,458 | 34.0 | 0 | 0 |
| Racine MSA | 3 | 30 | 1 | 49 | 4 | 1.5 | 79 | 0.0 | 0 | 0 |
| WI Non-Metro AA | 2 | 47 | 2 | 5,729 | 4 | 1.5 | 5,776 | 1.8 | 0 | 0 |
| Statewide Investments with Purpose, Mandate, or Function (P/M/F) to Serve AAs | 0 | 0 | 54 | 63,942 | 54 | 19.7 | 63,942 | 20.1 | 0 | 0 |
| Statewide Investments with No Purpose, Mandate, or Function (P/M/F) to Serve AAs | 23 | 3,771 | 0 | 0 | 23 | 8.4 | 3,771 | 1.2 | 0 | 0 |

* Prior Period Investments' means investments made in a previous evaluation period that are outstanding as of the examination date.
** Unfunded Commitments' means legally binding investment commitments that are tracked and recorded by the institution's financial reporting system.


## Statewide Investments in the State of Wisconsin

Qualified Investments with and without a $\mathrm{P} / \mathrm{M} / \mathrm{F}$ to serve areas in the broader statewide area had a positive impact on the overall state of Wisconsin Investment Test rating. Thirty-one (31) support affordable housing, 22 support community service, and one (1) supports revitalization/stabilization. Affordable housing investments totaled $\$ 50.2$ million, community service $\$ 7.9$ million, and revitalization/stabilization $\$ 5.8$ million. Twenty (20) of the community service investments were grants provided to consumer credit counseling agencies for financial education to low- and moderate-income individuals and families to assist them in using credit responsibly and building assets. These investments enhanced the bank's overall Investment Test rating for the state of Wisconsin.

## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall Outstanding Investment Test rating and did not significantly change the initial overall conclusions based on the AA receiving fullscope review. Based on limited-scope reviews, the bank's performance under the Investment Test in the Appleton-Oshkosh-Neenah CSA, Fond du Lac MSA, Green Bay MSA, Madison-Janesville-Beloit CSA and WI Non-Metro AA is consistent with the bank's overall performance under the Investment Test in the full-scope area. Strong performance is due to high levels of investments in relation to allocated tier 1 capital. Performance in the Racine MSA is weaker than the bank's overall performance under the Investment Test in the full-scope area. Weaker performance is based on low levels of qualified investments compared to allocated tier 1 capital.

## SERVICE TEST

The bank's performance under the Service Test in Wisconsin is rated High Satisfactory.

## Conclusions for Area Receiving a Full-Scope Review

Based on a full-scope review, including the data in the tables below, the bank's performance in the Milwaukee MSA is good.

## Retail Banking Services

Service delivery systems are accessible to geographies and individuals of different income levels in the bank's AA.

Examiners evaluated the data as outlined in the Scope section at the front of this document including bank-provided data on usage of branches adjacent to low- and moderate-income geographies by individuals residing in those geographies and on increases in the usage of alternative delivery systems.

Based on the data in the table below and performance context, the branch distribution is good. In lowand moderate-income geographies, the distribution is respectively near to and well below the percentage of the population. The bank had four branches in low-income geographies and two branches in moderate-income geographies. The distribution was augmented by two MUI tract branches that serve moderate-income tracts. Examiners reviewed data on the accounts held and transactions conducted at the adjacent MUI branches and confirmed they were serving those low- and moderate-income populations.

| Distribution of Branch Delivery System |  |  |  |  |  |  |  | As of December 31, 2019 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area | Deposits | Branches |  |  |  |  |  | Population |  |  |  |
|  | $\%$ of Rated | \# of <br> BANK <br> Branches | \% ofRatedAreaBranchesin AA | Location of Branches by Income of Geographies (\%) |  |  |  | \% of Population within Each Geography |  |  |  |
|  | Deposits in AA |  |  | Low | Mod | Mid | Upp | Low | Mod | Mid | Upp |
| Milwaukee MSA | 66.9 | 28 | 49.1 | 14.3 | 7.1 | 25.0 | 53.6 | 16.7 | 14.9 | 33.7 | 34.7 |

* May not add up to 100 percent due to geographies with unknown tract income level and rounding

Alternative delivery systems enhanced the delivery of banking services to geographies and individuals of all income levels. The OCC considered the availability and use of alternative delivery systems over the evaluation period. This included review of the bank's 60 deposit-taking ATMs, online banking, mobile banking, and telephone banking to determine the effectiveness of these systems to make retail banking services available to individuals in low- and moderate-income geographies. The bank increased the deposit-taking ATMs in low- and moderate-income geographies by 70.0 percent over the prior rating period to ten ( 16.7 percent) deposit-taking ATMs in low-income geographies and seven (11.7 percent) ATMs in moderate-income geographies. Additionally, bank-provided data on use of online, mobile, and telephone banking showed increases in the adoption of these services by low- and moderate-income individuals from the prior rating period.

| Distribution of Branch Openings/Closings |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | \# of Branch Openings | \# of Branch Closings | Net change in Location of Branches (+ or -) |  |  |  |
|  |  |  | Low | Mod | Mid | Upp |
| Milwaukee MSA | 0 | 2 | -1 | 0 | -1 | 0 |

The bank's opening and closing of branches has not adversely affected the accessibility of its delivery systems, particularly in low- and moderate-income geographies and/or to low- and moderate-income individuals. The bank closed one branch in a low-income geography and did not open or close any branches in moderate-income geographies. The branch closure was due to reduced customer usage and unprofitability. Despite the branch closure, branch locations remained accessible to geographies and individuals of different income levels in the bank's AA.

Services, including where appropriate, business hours, do not vary in a way that inconveniences its AA, particularly low- and moderate-income geographies and/or individuals. Generally, branches are open Monday through Friday from 9:00 am to 6:00 pm and Saturday from 9:00 am to 2:00 pm. All retail banking services are available at all branches within the low- and moderate-income geographies.

## Community Development Services

The bank had a significant level of CD services that were responsive to AA needs.
Bank records show employees provided nearly 594 qualified CD service activities to 21 organizations, logging over 3,153 hours over a six-year period which benefitted more than 9,015 low- and moderateincome individuals. All the bank's assistance was to organizations that provide community services to low- and moderate-income individuals and families. The bank's community development services responsiveness varies to the community needs in the AA, particularly community services. Nonprofit and community partners identified the following needs in the community, affordable housing, and affordable rental housing. The following are examples of CD services provided:

- Bank employees provided more than 314 hours of board service for four different nonprofits that serve the needs of low- and moderate-income communities.
- The bank provided more than 60 homebuyer workshops and seminars for more than 90 hours, impacting approximately 2,000 low- and moderate-income individuals.
- Bank employees provided more than 150 training sessions for more than 600 hours, impacting more than 150 low- and moderate-income individuals.


## Conclusions for Areas Receiving Limited-Scope Reviews

Performance in the limited-scope AAs was factored into the state's overall High Satisfactory Service Test rating and did not significantly change the initial overall conclusions based on the AAs receiving full-scope review. Based on limited-scope reviews, the bank's performance under the Service Test in the WI Non-Metro AA is stronger the bank's overall performance under the Service Test in the fullscope area due to stronger branch distribution in low- and moderate-income geographies. The bank's performance in the Fond du Lac MSA, Green Bay MSA, Madison-Janesville-Beloit CSA, and Racine MSA is consistent with the bank's overall performance under the Service Test in the full-scope area. The bank's performance under the Appleton-Oshkosh-Neenah CSA is well below the bank's overall performance under the Service Test in the full-scope area due to no branches in moderate-income geographies. This AA had no low-income tracts.

## Appendix A: Scope of Examination

The following table identifies the time period covered in this evaluation, affiliate activities that were reviewed, and loan products considered. The table also reflects the MSAs and non-Metro AAs that received comprehensive examination review, designated by the term "full-scope," and those that received a less comprehensive review, designated by the term "limited-scope".

| Time Period Reviewed: | January 1, 2014, through December 31, 2019 |  |
| :---: | :---: | :---: |
| Bank Products Reviewed: | Home mortgage loans consisting of home purchase, home improvement and home refinance, small business loans including business credit cards, small farm loans, community development loans including letters of credit, qualified investments, and qualified community development services |  |
| Affiliate(s) | Affiliate Relationship | Products Reviewed |
| Banc One Community Development Corporation | Subsidiary | Community Development Investments |
| Banc One Neighborhood Development Corporation | Affiliate | Community Development Investments |
| Chase Bank USA, N.A. (through 2018 only) | Affiliate | Business Credit Cards |
| Chase Community Development Corporation | Subsidiary | Community Development Investments |
| Chase Community Equity, LLC | Subsidiary | Community Development Investments |
| CDB Chase New Markets Corp Sub-CDE <br> Elimination Company | Subsidiary | Community Development Investments |
| Chase New Markets Corporation | Subsidiary | Community Development Loans and Investments |
| Chase NMTC CFHC Investment Fund, LLC | Subsidiary | Community Development Investments |
| CHASE NMTC CHASS INVESTMENT FUND, LLC | Subsidiary | Community Development Investments |
| Chase NMTC Cook Investment Fund, LLC | Subsidiary | Community Development Investments |
| Chase NMTC Emerge Center Investment Fund, LLC | Subsidiary | Community Development Investments |
| Chase NMTC KIPP Bronx Investment Fund, LLC | Subsidiary | Community Development Investments |
| Chase NMTC Madison Theatre Investment Fund, LLC | Subsidiary | Community Development Investments |
| Chase NMTC Mercy Oakwood Shores Invest. Fund, LLC | Subsidiary | Community Development Investments |
| Chase NMTC Refresh Investment Fund, LLC | Subsidiary | Community Development Investments |
| Chase NMTC San Pablo Helms Investment Fund, LLC | Subsidiary | Community Development Investments |
| Chase NMTC Shops and Lofts Investment Fund, LLC | Subsidiary | Community Development Investments |
| Chase NMTC Swedish Covenant Investment Fund, LLC | Subsidiary | Community Development Investments |
| Chase NMTC Testa Investment Fund, LLC | Subsidiary | Community Development Investments |
| Chase NMTC Truong Investment Fund, LLC | Subsidiary | Community Development Investments |
| Chase NMTC WIS27 Investment Fund, LLC | Subsidiary | Community Development Investments |
| CL II Holdings LLC | Affiliate | Community Development Investments |
| CL II Management LLC | Affiliate | Community Development Investments |
| CNMC SUB-CDE 1, LLC | Subsidiary | Community Development Investments |
| CNMC SUB-CDE 10, LLC | Subsidiary | Community Development Investments |
| CNMC SUB-CDE 11, LLC | Subsidiary | Community Development Investments |
| CNMC SUB-CDE 12, LLC | Subsidiary | Community Development Investments |
| CNMC SUB-CDE 122, LLC | Subsidiary | Community Development Investments |
| CNMC SUB-CDE 123, LLC | Subsidiary | Community Development Investments |
| CNMC SUB-CDE 127, LLC | Subsidiary | Community Development Investments |
| CNMC SUB-CDE 13, LLC | Subsidiary | Community Development Investments |

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| CNMC SUB-CDE 14, LLC | Subsidiary | Community Development Investments |
| :---: | :---: | :---: |
| CNMC SUB-CDE 149, LLC | Subsidiary | Community Development Investments |
| CNMC SUB-CDE 15, LLC | Subsidiary | Community Development Investments |
| CNMC SUB-CDE 150, LLC | Subsidiary | Community Development Investments |
| CNMC SUB-CDE 156, LLC | Subsidiary | Community Development Investments |
| CNMC SUB-CDE 157, LLC | Subsidiary | Community Development Investments |
| CNMC SUB-CDE 159, LLC | Subsidiary | Community Development Investments |
| CNMC SUB-CDE 16, LLC | Subsidiary | Community Development Investments |
| CNMC SUB-CDE 160, LLC | Subsidiary | Community Development Investments |
| CNMC SUB-CDE 161, LLC | Subsidiary | Community Development Investments |
| CNMC SUB-CDE 162, LLC | Subsidiary | Community Development Investments |
| CNMC SUB-CDE 164, LLC | Subsidiary | Community Development Investments |
| CNMC SUB-CDE 165, LLC | Subsidiary | Community Development Investments |
| CNMC SUB-CDE 166, LLC | Subsidiary | Community Development Investments |
| CNMC SUB-CDE 167, LLC | Subsidiary | Community Development Investments |
| CNMC SUB-CDE 168, LLC | Subsidiary | Community Development Investments |
| CNMC SUB-CDE 17, LLC | Subsidiary | Community Development Investments |
| CNMC SUB-CDE 18, LLC | Subsidiary | Community Development Investments |
| CNMC SUB-CDE 2, LLC | Subsidiary | Community Development Investments |
| CNMC SUB-CDE 20, LLC | Subsidiary | Community Development Investments |
| CNMC SUB-CDE 21, LLC | Subsidiary | Community Development Investments |
| CNMC SUB-CDE 24, LLC | Subsidiary | Community Development Investments |
| CNMC SUB-CDE 3, LLC | Subsidiary | Community Development Investments |
| CNMC SUB-CDE 4, LLC | Subsidiary | Community Development Investments |
| CNMC SUB-CDE 5, LLC | Subsidiary | Community Development Investments |
| CNMC SUB-CDE 7, LLC | Subsidiary | Community Development Investments |
| CNMC SUB-CDE 8, LLC | Subsidiary | Community Development Investments |
| CNMC SUB-CDE 89, LLC | Subsidiary | Community Development Investments |
| CNMC SUB-CDE 9, LLC | Subsidiary | Community Development Investments |
| CNMC SUB-CDE 90, LLC | Subsidiary | Community Development Investments |
| Commercial Lending II LLC | Affiliate | Community Development Investments |
| Conglomerate - Master NMTC Investment Fund | Subsidiary | Community Development Loans and Investments |
| First Chicago Leasing Corporation | Affiliate | Community Development Investments |
| FNBC Leasing Corporation | Subsidiary | Community Development Investments |
| Gilford Capital Fund II, LLC | Subsidiary | Community Development Investments |
| ICIB Fund I Holdings, Inc. | Subsidiary | Community Development Investments |
| J.P. Morgan Chase Community Development Corporation | Affiliate | Community Development Loans and Investments |
| JPMC Specialty Morgan LLC | Subsidiary | Community Development Investments |
| JPMorgan Chase \& Company | Affiliate | Community Development Investments |
| Plainfield Tower West, LLC | Subsidiary | Community Development Investments |
| Protech Tax Credit Fund III, LLC | Subsidiary | Community Development Investments |
| Providian Bancorp Services | Subsidiary | Community Development Investments |
| Rivergrade Investment Corporation | Subsidiary | Community Development Investments |
| RPC SPE, LLC | Subsidiary | Community Development Investments |
| WaMu 2007 MF-1 Trust | Subsidiary | Community Development Investments |
| Washington Mutual Community Development, Inc. | Subsidiary | Community Development Investments |
|  |  |  |
| List of Assessment Areas and Type of Examination |  |  |
| Rating and Assessment Areas | Type of Exam | Other Information |
|  |  |  |
| MMSA(s) |  |  |
| New York-Newark CSA | Full-Scope | CT: <br> Bridgeport-Stamford-Norwalk MSA (County of Fairfield), and New HavenMilford MSA (County of New Haven) |


|  |  | NY: <br> New York-Newark-Jersey City MSA (Counties of Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Rockland, Suffolk, and Westchester) <br> Kingston MSA (County of Ulster), and Poughkeepsie-Newburgh-Middletown MSA (County of Dutchess and Orange) <br> NJ: <br> New York-Newark-Jersey City MSA (Counties of Bergen, Essex, Hunterdon, Hudson, Morris, Middlesex, Monmouth, Ocean, Passaic Somerset, Sussex, and Union); Trenton-Princeton MSA (County of Mercer); and Allentown-BethlehemEaston MSA (County of Warren, NJ) |
| :---: | :---: | :---: |
| Chicago-Naperville CSA | Full-Scope | IL: <br> Chicago-Naperville-Evanston MSA (Counties of Cook, DeKalb, DuPage, Grundy, Kane, Kendall, Lake, McHenry, and Will) <br> IN: <br> Chicago-Naperville-Evanston MSA (Counties of Lake and Porter), and Michigan City-La Porte MSA (County of LaPorte) <br> WI: <br> Chicago-Naperville-Evanston MSA (County of Kenosha) |
| Philadelphia-Reading-Camden MMSA (Philadelphia MMSA) | Full-Scope | DE: <br> Philadelphia-Camden-Wilmington MSA (County of New Castle) <br> NJ: <br> Philadelphia-Camden-Wilmington MSA (Counties of Burlington and Camden) <br> PA: <br> Philadelphia-Camden-Wilmington MSA (Counties of Bucks, Chester, Delaware, Montgomery, and Philadelphia) |
| Washington-Arlington-Alexandria MMSA | Full-Scope | DC: <br> Washington-Arlington-Alexandria MD: (County of District of Columbia) <br> MD: Washington-Arlington-Alexandria <br> MD: (County of Prince George's) <br> VA: <br> Washington-Arlington-Alexandria DC-VA-MD-WV MD: (Counties of Arlington, Fairfax, Prince William, and Loudoun), |


|  |  | and <br> Cities of Alexandria, Fairfax, Falls <br> Church, Manassas, and Manassas Park |
| :---: | :---: | :---: |
| Portland-Vancouver-Salem CSA | Full-Scope | OR: <br> Albany-Lebanon MSA (County of Linn), <br> Corvallis MSA (County of Benton), <br> Portland-Vancouver-Hillsboro MSA (Counties of Clackamas, Columbia, Multnomah, Washington, and Yamhill), and <br> Salem, OR MSA (Counties of Marion and Polk) <br> WA: <br> Longview MSA (County of Cowlitz), and <br> Portland-Vancouver-Hillsboro MSA (County of Clark) |
| Louisville/Jefferson County-Elizabethtown-Bardstown CSA | Full-Scope | IN: <br> Louisville/Jefferson County MSA (Counties of Clark, Floyd, and Harrison) <br> KY: <br> Elizabethtown-Fort Knox MSA (County of Hardin); and <br> Louisville/Jefferson County MSA (Counties of Jefferson, Oldham, and Shelby) |
| Cincinnati-Wilmington-Maysville MMSA | Full-Scope | KY: <br> Cincinnati MSA (Counties of Boone, Campbell, and Kenton) <br> OH : <br> Cincinnati MSA (Counties of Butler, Clermont, Hamilton, and Warren) |
| Wheeling MMSA | Full-Scope | OH: Wheeling MSA (County of Belmont) <br> WV: Wheeling MSA (Counties of Marshall and Ohio) |
| State of Arizona |  |  |
| Phoenix-Mesa-Chandler MSA | Full-Scope | Phoenix-Mesa-Chandler MSA, (Counties of Maricopa and Pinal) |
| Tucson MSA | Full-Scope | Tucson MSA (County of Pima) |
| Flagstaff MSA | Limited-Scope | Flagstaff MSA (County of Coconino) |
| Lake Havasu City-Kingman MSA | Limited-Scope | Lake Havasu City-Kingman MSA (County of Mohave) |
| Prescott Valley-Prescott MSA | Limited-Scope | Prescott Valley-Prescott MSA, (County of Yavapai) |
| Sierra Vista-Douglas MSA | Limited-Scope | Sierra Vista-Douglas MSA (County of Cochise) |
| Yuma MSA | Limited-Scope | Yuma MSA (County of Yuma) |

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| AZ Non-Metro Roll-up |  | Nogales MiSA (County of Santa Cruz), <br> Show Low MiSA (County of Navajo), <br> Safford MiSA (County of Graham), <br> Payson MiSA (County of Gila), <br> and <br> County of La Paz |
| :--- | :--- | :--- |
| State of California | Limited-Scope |  |
| Los Angeles-Long Beach CSA |  | Los Angeles-Long Beach-Anaheim MSA <br> (Counties of Los Angeles and Orange), |
| Sacrand |  |  |

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|  |  |  |
| :---: | :---: | :---: |
| Salinas MSA | Limited-Scope | Salinas MSA (County of Monterey) |
| San Diego-Chula Vista-Carlsbad MSA | Limited-Scope | San Diego-Carlsbad MSA (County of San Diego) |
| San Luis Obispo-Paso Robles MSA | Limited-Scope | San Luis Obispo-Paso Robles MSA (County of San Luis Obispo) |
| Santa Maria-Santa Barbara MSA | Limited-Scope | Santa Maria-Santa Barbara MSA (County of Santa Barbara) |
| Visalia-Porterville-Hanford CSA | Limited-Scope | Visalia MSA (County of Tulare), and <br> Hanford-Corcoran MSA (County of King) |
| CA Non-Metro Roll-up | Limited-Scope | Clearlake MiSA (County of Lake), Crescent City MiSA (County of Del Norte), Eureka-Arcata MiSA (County of Humboldt), Ukiah MiSA (County of Mendocino), and <br> Counties of Inyo and Siskiyou |
| State of Colorado |  |  |
| Denver-Aurora CSA | Full-Scope | Boulder MSA (County of Boulder), and <br> Greeley MSA (County of Weld) |
| Colorado Springs MSA | Limited-Scope | Colorado Springs MSA (Counties of El Paso and Teller) |
| Fort Collins, CO MSA | Limited-Scope | Fort Collins MSA (County of Larimer) |
| CO Non-Metro Roll-up | Limited-Scope | Glenwood Springs MiSA (County of Pitkin) |
| State of Florida |  |  |
| Miami-Port St. Lucie- Fort Lauderdale CSA | Full-Scope | Miami-Fort Lauderdale-Pompano Beach MSA (Counties of Broward, MiamiDade, Palm Beach) <br> Port St. Lucie MSA (Counties of Martin and St. Lucie), and Sebastian-Vero Beach MSA (County of Indian River) |
| Orlando-Deltona-Daytona Beach CSA | Full-Scope | Deltona-Daytona Beach-Ormond Beach MSA (Counties of Flagler and Volusia); <br> Orlando-Kissimmee-Sanford MSA (Counties of Lake, Orange, Osceola, and Seminole), and The Villages MSA (County of Sumter); |

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| Cape Coral-Fort Myers-Naples CSA | Limited-Scope | Cape Coral-Fort Myers MSA (County of Lee), and Naples-Marco Island MSA (County of Collier) |
| :---: | :---: | :---: |
| Gainesville MSA | Limited-Scope | Gainesville-Lake City MSA (Counties of Alachua, Gilchrist, and Levy) |
| Jacksonville MSA | Limited-Scope | Jacksonville MSA (Counties of Baker, Clay, Duval, Nassau, and St. Johns) |
| Lakeland-Winter Haven MSA | Limited-Scope | Lakeland-Winter Haven MSA (County of Polk) |
| North Port-Sarasota CSA | Limited-Scope | North Port-Sarasota-Bradenton MSA (Counties of Manatee and Sarasota), and Punta Gorda MSA (County of Charlotte) |
| Ocala MSA | Limited-Scope | Ocala MSA (County of Marion) |
| Palm Bay-Melbourne-Titusville MSA | Limited-Scope | Palm Bay-Melbourne-Titusville MSA (County of Brevard) |
| Tallahassee-MSA | Limited-Scope | Tallahassee-Bainbridge MSA (Counties of Jefferson, Leon, and Wakulla) |
| Tampa-St. Petersburg-Clearwater MSA | Limited-Scope | Tampa-St. Petersburg-Clearwater MSA (Counties of Hernando, Hillsborough, Pasco, Pinellas) |
| State of Georgia |  |  |
| Atlanta-Athens-Clarke County-Sandy Springs CSA | Full-Scope | Atlanta-Sandy Springs-Alpharetta MSA (Counties of Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Paulding, and Rockdale), and Gainesville MSA (County of Hall) |
| State of Idaho |  |  |
| Boise City MSA | Full-Scope | Boise City MSA (Counties of Ada and Canyon) |
| Coeur d'Alene MSA | Limited-Scope | Coeur d'Alene MSA (County of Kootenai) |
| Idaho Falls MSA | Limited-Scope | Idaho Falls MSA (County of Bonneville) |
| Pocatello MSA | Limited-Scope | Pocatello MSA (County of Bannock) |
| Twin Falls MSA | Limited-Scope | Twin Falls MSA (County of Twin Falls) |
| ID Non-Metro Roll-up | Limited-Scope | Mountain Home MiSA (County of Elmore); and Moscow MiSA (County of Latah) |
| State of Illinois |  |  |
| Champaign-Urbana MSA | Full-Scope | Champaign-Urbana MSA (Counties of Champaign and Piatt) |
| Bloomington MSA | Limited-Scope | Bloomington MSA (County of McLean) |
| Davenport-Moline-Rock Island MSA | Limited-Scope | Davenport Moline-Rock Island MSA (Counties of Henry and Rock Island) |
| Peoria MSA | Limited-Scope | Peoria MSA (Counties of Marshall, Peoria, Stark, Tazewell, and Woodford) |

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| Rockford MSA | Limited-Scope | Rockford MSA (Counties of Boone and Winnebago) |
| :---: | :---: | :---: |
| Springfield MSA | Limited-Scope | Springfield MSA (Counties of Menard and Sangamon) |
| State of Indiana |  |  |
| Indianapolis-Carmel-Muncie CSA | Full-Scope | Indianapolis-Carmel-Anderson MSA (Counties of Boone, Hamilton, Hancock, Hendricks, Johnson, Marion, and Morgan); <br> Muncie MSA (County of Delaware) and <br> Crawfordsville MiSA (Counties of Montgomery) |
| Bloomington-Bedford CSA | Limited-Scope | Bloomington MSA (County of Monroe) and <br> Bedford MiSA (County of Lawrence) |
| Fort Wayne-Huntington-Auburn CSA | Limited-Scope | Fort Wayne MSA (County of Allen and Whitley County), and Kendallville MiSA (County of Noble) |
| Lafayette-West Lafayette MSA | Limited-Scope | Lafayette-West Lafayette MSA (County of Tippecanoe) |
| South Bend-Elkhart-Mishawaka CSA | Limited-Scope | Elkhart-Goshen MSA (County of Elkhart) <br> South Bend-Mishawaka MSA (County of St. Joseph) |
| IN Non-Metro | Limited-Scope | Richmond MiSA (County of Wayne) and Scottsburg MiSA (County of Scott) |
| State of Kentucky |  |  |
| Lexington-Fayette--Richmond--Frankfort CSA | Full-scope | Lexington-Fayette MSA (Counties of Fayette and Jessamine) and <br> Richmond-Berea MiSA (County of Madison) |
| Bowling Green MSA | Limited-Scope | Bowling Green MSA (County of Warren) |
| Owensboro MSA | Limited-Scope | Owensboro MSA (County of Daviess) |
| KY Non-Metro Roll-up | Limited-Scope | Danville MiSA (Counties of Boyle and Lincoln) |
| State of Louisiana |  |  |
| Baton Rouge MSA | Full-Scope | Baton Rouge MSA (Parish of Ascension, East Baton Rouge, Iberville, Livingston, and West Baton Rouge) |
| Monroe-Ruston CSA | Full-Scope | Monroe MSA (Parish of Quachita), and <br> Ruston MiSA (Parish of Lincoln) |
| Alexandria MSA | Limited-Scope | Alexandria MSA (Parish of Rapides) |

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| Houma-Thibodaux MSA | Limited-Scope | Houma-Thibodaux MSA (Parish of Lafourche and Terrebonne) |
| :---: | :---: | :---: |
| Lafayette-Opelousas CSA | Limited-Scope | Lafayette MSA (Parish of Acadia, Iberia, Lafayette, St. Martin, and Vermillion), and <br> Opelousas MiSA (Parish of St. Landry) |
| Lake Charles MSA | Limited-Scope | Lake Charles MSA (Parish of Calcasieu) |
| New Orleans-Metairie-Hammond CSA | Limited-Scope | New Orleans-Metairie MSA (Parish of Jefferson, Orleans, St. Bernard, St. Charles, St. John the Baptist, and St. Tammany), and <br> Hammond MSA (Parish of Tangipahoa) |
| Shreveport-Bossier City MSA | Limited-Scope | Shreveport-Bossier City, LA MSA (Parish of Bossier, Caddo and De Soto) |
| LA Non-Metro Roll-up | Limited-Scope | DeRidder MiSA (Parish of Beauregard) |
| State of Massachusetts |  |  |
| Boston-Worcester-Providence CSA | Full-Scope | Boston-Cambridge-Newton MSA (Counties of Norfolk, Essex, Middlesex, Plymouth, and Suffolk), and <br> Worcester MSA (County of Worcester) |
| Pittsfield MSA | Limited-Scope | Pittsfield MSA (County of Berkshire) |
| Springfield MSA | Limited-Scope | Springfield MSA (County of Hampden) |
| State of Michigan |  |  |
| Detroit-Warren-Ann Arbor CSA | Full-Scope | Ann Arbor MSA (County of Washtenaw), <br> Detroit-Warren-Dearborn MSA (Counties of Lapeer, Livingston, Macomb, Oakland, St. Clair, and Wayne), and <br> Flint MSA (County of Genesee) |
| Grand Rapids-Kentwood-Muskegon CSA | Limited-Scope | Grand Rapids-Kentwood MSA (Counties of Ionia, Montcalm, and Ottawa), and <br> Muskegon, MI MSA (County of Muskegon) |
| Kalamazoo-Battle Creek-Portage CSA | Limited-Scope | Battle Creek MSA (County of Calhoun), and <br> Kalamazoo-Portage MSA (County of Kalamazoo) |
| Lansing-East Lansing MSA | Limited-Scope | Lansing-East Lansing MSA (Counties of Clinton, Eaton, Ingham, and Shiawassee) <br> Owosso MiSA: (County of Shiawassee) |
| Niles MSA | Limited-Scope | Niles MSA (County of Berrien) |
| Saginaw MSA | Limited-Scope | Saginaw MSA (County of Saginaw) |


| MI Non-Metro Roll-up | Limited-Scope | Traverse City MiSA (Counties of Benzie, Grand Traverse and Kalkaska) <br> City Petosky, <br> County of Sanilac, and <br> Township of Roscommon |
| :---: | :---: | :---: |
| State of Nevada |  |  |
| Las Vegas-Henderson-Paradise MSA | Full-Scope | Las Vegas-Henderson-Paradise MSA (County of Clark) |
| Reno MSA | Limited-Scope | Reno MSA (County of Washoe) |
| State of New York |  |  |
| Rochester MSA | Full-Scope | Rochester MSA (Counties of Monroe, Ontario, and Wayne) |
| Syracuse MSA | Limited-Scope | Syracuse MSA (Counties of Madison, Onondaga, and Oswego) |
| NY Non-Metro Roll-up | Limited-Scope | County of Sullivan |
| State of Ohio |  |  |
| Columbus MSA | Full-Scope | Columbus MSA (Counties of Delaware, Fairfield, Franklin, Hocking, Licking, Madison, Morrow, Perry, Pickaway, and Union) |
| Cleveland-Akron-Canton CSA | Limited-Scope | Akron MSA (Counties of Portage and Summit) <br> Cleveland-Elyria MSA (Counties of Cuyahoga, Geauga, Lake, Lorain, and Medina), and <br> Canton-Massillon MSA (County of Stark) |
| Dayton-Springfield-Kettering, CSA | Limited-Scope | Dayton-Kettering MSA (Counties of Greene, Miami, and Montgomery) and <br> Springfield MSA (County of Clark) |
| Youngstown-Warren-Boardman MSA | Limited-Scope | Youngstown-Warren MSA (Counties of Mahoning and Trumbull) |
| Lima MSA | Limited-Scope | Lima MSA (County of Allen) |
| Mansfield MSA | Limited-Scope | Mansfield MSA (County of Richland) |
| Toledo MSA | Limited-Scope | Mansfield MSA (Counties of Lucas and Wood) |
| Weirton-Steubenville MSA | Limited-Scope | Weirton-Steubenville MSA (County of Jefferson) |
| OH Non-Metro Roll-up | Limited-Scope | Ashland MiSA (County of Ashland), Athens MiSA (County of Athens), Celina MiSA (County of Merer), Coshocton MiSA (County of Coshocton), Findlay MiSA (County of Hancock), Greenville MiSA (County of Darke), Marietta MiSA (County of Washington), <br> Marion MiSA (County of Marion) <br> New Philadelphia-Dover MiSA (County of Tuscarawas), <br> Salem MiSA (County of Columbiana), Sidney MiSA (County of Shelby), |


|  |  | Wapakoneta MiSA (County of Auglaize), Wooster MiSA (County of Wayne); and Zanesville MiSA (County of Muskingum), <br> Counties of Preble and Wyandot |
| :---: | :---: | :---: |
| State of Oklahoma |  |  |
| Oklahoma City MSA | Full-Scope | Oklahoma City MSA (Counties of Canadian, Cleveland and Oklahoma) |
| Tulsa MSA | Limited-Scope | Tulsa MSA (County of Tulsa) |
| State of Oregon |  |  |
| Medford-Grants Pass CSA | Full-Scope | Grants Pass MSA (County of Josephine), and <br> Medford, MSA (County of Jackson) |
| Bend-Redmond-Prineville CSA | Limited-Scope | Bend MSA (County of Deschutes) |
| Eugene-Springfield MSA | Limited-Scope | Eugene-Springfield MSA (County of Lane) |
| OR Non-Metro Roll-up | Limited-Scope | Brookings MiSA (County of Curry), Coos Bay MiSA (County of Coos), Klamath Falls MiSA (County of Klamath), Newport MiSA (County of Lincoln), and Roseburg MiSA (County of Douglas) |
| State of Texas |  |  |
| Austin-Round Rock-Georgetown MSA | Full-Scope | Austin-Round Rock-Georgetown MSA (Counties of Bastrop, Caldwell, Hays, and Travis) |
| Dallas-Fort Worth CSA | Full-Scope | Dallas-Fort Worth-Arlington MSA (Counties of Collin, Dallas, Denton, Ellis, Hunt, Johnson, Kaufman, Parker, Rockwall, and Tarrant) <br> Sherman-Denison MSA (County of Grayson) |
| Houston-The Woodlands-Sugar Land MSA | Full-Scope | Houston-The Woodlands-Sugar Land MSA (Counties of Austin, Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller) |
| Abilene MSA | Limited-Scope | Abilene MSA (County of Taylor) |
| Amarillo MSA | Limited-Scope | Amarillo MSA (Counties of Potter and Randall) |
| Beaumont-Port Arthur MSA | Limited-Scope | Beaumont-Port Arthur MSA (Counties of Jefferson and Orange) |
| Brownsville-Harlingen MSA | Limited-Scope | Brownsville-Harlingen MSA (County of Cameron) |
| College Station-Bryan MSA | Limited-Scope | College Station-Bryan MSA (County of Brazos) |
| El Paso MSA | Limited-Scope | El Paso MSA (County of El Paso) |
| Killeen-Temple MSA | Limited-Scope | Killeen-Temple MSA (County of Bell) |
| Laredo MSA | Limited-Scope | Laredo MSA (County of Webb) |
| Longview MSA | Limited-Scope | Longview MSA (County of Gregg and Harrison) |
| Lubbock MSA | Limited-Scope | Lubbock MSA (County of Lubbock) |

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| McAllen-Edinburg-Mission MSA | Limited-Scope | McAllen-Edinburg-Mission MSA <br> (County of Hidalgo) |
| :--- | :--- | :--- |
| Midland MSA | Limited-Scope | Midland MSA (County of Midland) |
| Odessa MSA | Limited-Scope | Odessa MSA (County of Ector) |
| San Antonio-New Braunfels MSA | Limited-Scope | San Antonio-New Braunfels MSA <br> (Counties of Bexar, Comal, and <br> Guadalupe) |
| Tyler MSA | Limited-Scope | Tyler, MSA (County of Smith) |
| Waco MSA | Limited-Scope | Waco MSA (County of Falls) |

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| Kennewick-Richland-Walla Walla CSA | Limited-Scope | Kennewick-Richland MSA (Counties of Benton and Franklin) <br> Walla Walla MSA (County of Walla Walla) |
| :---: | :---: | :---: |
| WA Non-Metro Roll-up | Limited-Scope | Aberdeen MiSA (County of Grays Harbor), Ellensburg MiSA (County of Kittitas), Moses Lake MiSA (County of Grant), Port Angeles MiSA (County of Clallam), and Pullman MiSA (County of Whitman), and <br> Counties of Jefferson and Okanogan |
| State of West Virginia |  |  |
| Charleston-Huntington-Ashland CSA | Full-Scope | Charleston MSA (Counties of Boone, Clay, Jackson, Kanawha, and Lincoln), and <br> Huntington-Ashland MSA (Counties of Cabell, Putnam, and Wayne) |
| Beckley MSA | Limited-Scope | Beckley MSA (Counties of Fayette and Raleigh) |
| WV Non-Metro Roll-up | Limited-Scope | Counties of Logan, Clarksburg, and Upshur |
| State of Wisconsin |  |  |
| Milwaukee-Waukesha-West Allis MSA | Full-Scope | Milwaukee-Waukesha MSA (Counties of Milwaukee, Ozaukee, Washington, and Waukesha) |
| Appleton-Oshkosh-Neenah CSA | Limited-Scope | Appleton MSA (Counties of Calumet and Outagamie), and <br> Oshkosh-Neenah MSA (County of Winnebago) |
| Fond du Lac MSA | Limited-Scope | Fond du Lac MSA (County of Fond du Lac) |
| Green Bay MSA | Limited-Scope | Green Bay MSA (County of Brown) |
| Madison-Janesville-Beloit CSA | Limited-Scope | Janesville-Beloit MSA (County of Rock), and Madison MSA (County of Dane) |
| Racine MSA | Limited-Scope | Racine MSA (County of Racine) |
| WI Non-Metro Roll-up | Limited-Scope | Beaver Dam MiSA (County of Dodge), Stevens Point (County of Portage), Watertown-Fort Atkinson MiSA (County of Jefferson), Whitewater MiSA (County of Walworth), and <br> Counties of Langlade and Waupaca |

## Appendix B: Summary of MMSA and State Ratings

| RATINGS: |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
| JPMorgan Chase Bank, N.A. |  |  |  |  |
| Overall Bank: | Lending Test <br> Rating* | Investment Test <br> Rating | Service Test <br> Rating | Overall Bank/State/ <br> Multistate Rating |
| JPMorgan Chase <br> Bank, N.A. | High Satisfactory | High Satisfactory | High Satisfactory | Satisfactory |
| MMSA or State: |  |  |  |  |
| New York-Newark, <br> NY-NJ-CT-PA CSA | High Satisfactory | High Satisfactory | High Satisfactory | Satisfactory |
| Chicago-Naperville, <br> IL-IN-WI CSA | High Satisfactory | Outstanding | Outstanding | Outstanding |
| Philadelphia-Reading- <br> Camden, PA-NJ-DE <br> MMSA | High Satisfactory | Outstanding | Outstanding | Outstanding |
| Washington- <br> Arlington-Alexandria, <br> DC-VA-MD-WV <br> MMSA | Outstanding | Outstanding | Outstanding | Outstanding |
| Portland-Vancouver- <br> Salem, OR-WA CSA | Outstanding | Outstanding | Outstanding | Outstanding |
| Louisville/Jefferson <br> County- <br> Elizabethtown-- <br> Bardstown, KY-IN <br> CSA | Low Satisfactory | Outstanding | High Satisfactory | Satisfactory |
| Cincinnati- <br> Wilmington- <br> Maysville, OH-KY <br> MMSA | High Satisfactory | Outstanding | Outstanding | Outstanding |
| Wheeling, WV-OH <br> MMSA | High Satisfactory | Outstanding | Needs to Improve | Satisfactory |
| Arizona | High Satisfactory | High Satisfactory | Outstanding | Satisfactory |
| California | Outstanding | Outstanding | High Satisfactory | Outstanding |
| Colorado | Outstanding | Outstanding | Outstanding | Outstanding |
| Florida | Outstanding | High Satisfactory | High Satisfactory | Outstanding |
| Georgia | Outstanding | Outstanding | High Satisfactory | Outstanding |
| Idaho | High Satisfactory | Low Satisfactory | High Satisfactory | Satisfactory |
| Illinois | High Satisfactory | Outstanding | High Satisfactory | Satisfactory |
| Indiana | Outstanding | High Satisfactory | Satisfactory |  |
| Kentucky | High Satisfactory | Hatisfactory | High Satisfactory | High Satisfactory |
| Satisfactory |  |  |  |  |
| Louisiana | High Satisfactory | Low Satisfactory | Satisfactory |  |


| Massachusetts | Outstanding | Outstanding | High Satisfactory | Outstanding |
| :--- | :---: | :---: | :---: | :---: |
| Michigan | High Satisfactory | Outstanding | Outstanding | Outstanding |
| Nevada | High Satisfactory | Outstanding | High Satisfactory | Satisfactory |
| New York | High Satisfactory | Outstanding | Outstanding | Outstanding |
| Ohio | High Satisfactory | Outstanding | Outstanding | Outstanding |
| Oklahoma | Low Satisfactory | High Satisfactory | Outstanding | Satisfactory |
| Oregon | Outstanding | High Satisfactory | Outstanding | Outstanding |
| Texas | High Satisfactory | High Satisfactory | High Satisfactory | Satisfactory |
| Utah | Outstanding | High Satisfactory | Outstanding | Outstanding |
| Washington | Outstanding | Outstanding | Outstanding | Outstanding |
| West Virginia | High Satisfactory | Outstanding | Low Satisfactory | Satisfactory |
| Wisconsin | High Satisfactory | Outstanding | High Satisfactory | Satisfactory |

${ }^{(*)}$ The Lending Test is weighted more heavily than the Investment and Service Tests in the overall rating.

## Appendix C: Definitions and Common Abbreviations

The following terms and abbreviations are used in this performance evaluation, including the CRA tables. The definitions are intended to provide the reader with a general understanding of the terms, not a strict legal definition.

Affiliate: Any company that controls, is controlled by, or is under common control with another company. A company is under common control with another company if the same company directly or indirectly controls both companies. For example, a bank subsidiary is controlled by the bank and is, therefore, an affiliate.

Aggregate Lending (Aggt.): The number of loans originated and purchased by all reporting lenders (HMDA or CRA) in specified income categories as a percentage of the aggregate number of loans originated and purchased by all reporting lenders in the state/assessment area.

Census Tract (CT): A small, relatively permanent statistical subdivision of a county delineated by a local committee of census data users for the purpose of presenting data. Census tracts nest within counties, and their boundaries normally follow visible features, but may follow legal geography boundaries and other non-visible features in some instances, Census tracts ideally contain about 4,000 people and 1,600 housing units.

Combined Statistical Area (CSA): A geographic entity consisting of two or more adjacent Core Based Statistical Areas with employment interchange measures of at least 15. An employment interchange measure is a measure of ties between two adjacent entities. The employment interchange measure is the sum of the percentage of workers living in the smaller entity who work in the larger entity and the percentage of employment in the smaller entity that is accounted for by workers who reside in the larger entity.

Community Development (CD): Affordable housing (including multifamily rental housing) for low- or moderate-income individuals; community services targeted to low- or moderate-income individuals; activities that promote economic development by financing businesses or farms that meet Small Business Administration Development Company or Small Business Investment Company programs size eligibility standards or have gross annual revenues of \$1 million or less; or activities that revitalize or stabilize low- or moderate-income geographies, distressed or underserved nonmetropolitan middleincome geographies, or designated disaster areas.

Community Reinvestment Act (CRA): the statute that requires the OCC to evaluate a bank's record of meeting the credit needs of its entire community, including LMI areas, consistent with the safe and sound operation of the bank, and to take this record into account when evaluating certain corporate applications filed by the bank.

Consumer Loan(s): A loan(s) to one or more individuals for household, family, or other personal expenditures. A consumer loan does not include a home mortgage, small business, or small farm loan. This definition includes the following categories: motor vehicle loans, credit card loans, other secured consumer loans, and other unsecured consumer loans.

Family: Includes a householder and one or more other persons living in the same household who are related to the householder by birth, marriage, or adoption. The number of family households always equals the number of families; however, a family household may also include non-relatives living with the family. Families are classified by type as either a married-couple family or other family, which is further classified into 'male householder' (a family with a male householder' and no wife present) or 'female householder' (a family with a female householder and no husband present).

Full-Scope Review: Performance under the Lending, Investment, and Service Tests is analyzed considering performance context, quantitative factors (e.g., geographic distribution, borrower distribution, and total number and dollar amount of investments), and qualitative factors (e.g., innovativeness, complexity, and responsiveness).

Geography: A census tract delineated by the United States Bureau of the Census in the most recent decennial census.

Home Mortgage Disclosure Act (HMDA): The statute that requires certain mortgage lenders that conduct business or have banking offices in a metropolitan statistical area to file annual summary reports of their mortgage lending activity. The reports include such data as the race, gender, and the income of applicants, the amount of loan requested, the disposition of the application (e.g., approved, denied, and withdrawn), the lien status of the collateral, any requests for preapproval, and loans for manufactured housing.

Home Mortgage Loans: A closed-end mortgage loan or an open-end line of credit as these terms are defined under $\S 1003.2$ of this title, and that is not an excluded transaction under $\S 1003.3(\mathrm{c})(1)$ through (10) and (13) of this title.

Household: Includes all persons occupying a housing unit. Persons not living in households are classified as living in group quarters. In 100 percent tabulations, the count of households always equals the count of occupied housing units.

Limited-Scope Review: Performance under the Lending, Investment, and Service Tests is analyzed using only quantitative factors (e.g., geographic distribution, borrower distribution, total number and dollar amount of investments, and branch distribution).

Low-Income Individual: Individual income that is less than 50 percent of the area median income.
Low-Income Geography: A census tract with a median family income that is less than 50 percent.
Market Share: The number of loans originated and purchased by the institution as a percentage of the aggregate number of loans originated and purchased by all reporting lenders in the state/assessment area.

Median Family Income (MFI): The median income determined by the U.S. Census Bureau every five years and used to determine the income level category of geographies. The median is the point at which half of the families have income above, and half below, a range of incomes. Also, the median income determined by the Federal Financial Institutions Examination Council (FFIEC) annually that is used to determine the income level category of individuals. For any given area, the median is the point at which half of the families have income above, and half below, a range of incomes.

Metropolitan Division: As defined by Office of Management and Budget, a county or group of counties within a Core Based Statistical Area that contains an urbanized population of at least 2.5 million. A Metropolitan Division consists of one or more main/secondary counties that represent an employment center or centers, plus adjacent counties associated with the main/secondary county or counties through commuting ties.

Metropolitan Statistical Area: An area, defined by the Office of Management and Budget, as a core based statistical area associated with at least one urbanized area that has a population of at least 50,000 . The Metropolitan Statistical Area comprises the central county or counties containing the core, plus adjacent outlying counties having a high degree of social and economic integration with the central county or counties as measured through commuting.

Middle-Income: Individual income that is at least 80 percent and less than 120 percent of the area median income, or a median family income that is at least 80 percent and less than 120 percent, in the case of a geography

Moderate-Income: Individual income that is at least 50 percent and less than 80 percent of the area median income, or a median family income that is at least 50 percent and less than 80 percent, in the case of a geography.

Multifamily: Refers to a residential structure that contains five or more units.
MMSA (state): Any multistate metropolitan statistical area or multistate combined statistical area, as defined by the Office of Management and Budget.

Owner-Occupied Units: Includes units occupied by the owner or co-owner, even if the unit has not been fully paid for or is mortgaged.

Qualified Investment: A qualified investment is defined as any lawful investment, deposit, membership share, or grant that has as its primary purpose community development.

Rating Area: A rated area is a state or multi-state metropolitan statistical area. For an institution with domestic branches in only one state, the institution's CRA rating would be the state rating. If an institution maintains domestic branches in more than one state, the institution will receive a rating for each state in which those branches are located. If an institution maintains domestic branches in two or more states within a multi-state metropolitan statistical area, the institution will receive a rating for the multi-state metropolitan statistical area.

Small Loan(s) to Business(es): A loan included in 'loans to small businesses' as defined in the Consolidated Report of Condition and Income (Call Report) instructions. These loans have original amounts of $\$ 1$ million or less and typically are either secured by nonfarm or nonresidential real estate or are classified as commercial and industrial loans.

Small Loan(s) to Farm(s): A loan included in 'loans to small farms' as defined in the instructions for preparation of the Consolidated Report of Condition and Income (Call Report). These loans have original amounts of $\$ 500,000$ or less and are either secured by farmland or are classified as loans to finance agricultural production and other loans to farmers.

Tier 1 Capital: The total of common shareholders' equity, perpetual preferred shareholders' equity with non-cumulative dividends, retained earnings and minority interests in the equity accounts of consolidated subsidiaries.

Upper-Income: Individual income that is at least 120 percent of the area median income, or a median family income that is at least 120 percent, in the case of a geography.

## Appendix D: Tables of Performance Data

## Content of Standardized Tables

A separate set of tables is provided for each state. All multistate metropolitan statistical areas, if applicable, are presented in one set of tables. References to the bank include activities of any affiliates that the bank provided for consideration (refer to appendix A: Scope of the Examination). For purposes of reviewing the Lending Test tables, the following are applicable: (1) purchased loans are treated the same as originations; and (2) aggregate is the percentage of the aggregate number of reportable loans originated and purchased by all HMDA or CRA reporting lenders in the MMSA/assessment area. Deposit data are compiled by the FDIC and are available as of June $30^{\text {th }}$ of each year. Tables without data are not included in this PE.

The following is a listing and brief description of the tables included in each set:
Table O. Assessment Area Distribution of Home Mortgage Loans by Income Category of the Geography - Compares the percentage distribution of the number of loans originated and purchased by the bank in low-, moderate-, middle-, and upper-income geographies to the percentage distribution of owner-occupied housing units throughout those geographies. The table also presents aggregate peer data for the years the data is available.

Table P. Assessment Area Distribution of Home Mortgage Loans by Income Category of the Borrower - Compares the percentage distribution of the number of loans originated and purchased by the bank to low-, moderate-, middle-, and upper-income borrowers to the percentage distribution of families by income level in each MMSA/assessment area. The table also presents aggregate peer data for the years the data is available.

Table Q. Assessment Area Distribution of Loans to Small Businesses by Income Category of the Geography - The percentage distribution of the number of small loans (less than or equal to $\$ 1$ million) to businesses that were originated and purchased by the bank in low-, moderate-, middle-, and upper-income geographies compared to the percentage distribution of businesses (regardless of revenue size) in those geographies. Because aggregate small business data are not available for geographic areas smaller than counties, it may be necessary to compare bank loan data to aggregate data from geographic areas larger than the bank's assessment area.

Table R. Assessment Area Distribution of Loans to Small Businesses by Gross Annual Revenue - Compares the percentage distribution of the number of small loans (loans less than or equal to $\$ 1$ million) originated and purchased by the bank to businesses with revenues of $\$ 1$ million or less to: 1) the percentage distribution of businesses with revenues of greater than $\$ 1$ million; and, 2) the percentage distribution of businesses for which revenues are not available. The table also presents aggregate peer small business data for the years the data is available.

Table S. Assessment Area Distribution of Loans to Farms by Income Category of the Geography - The percentage distribution of the number of small loans (less than or equal to $\$ 500,000$ ) to farms originated and purchased by the bank in low-, moderate-, middle-,
and upper-income geographies compared to the percentage distribution of farms (regardless of revenue size) throughout those geographies. Because aggregate small farm data are not available for geographic areas smaller than counties, it may be necessary to use geographic areas larger than the bank's assessment area.

Table T. Assessment Area Distribution of Loans to Farms by Gross Annual Revenues -
Compares the percentage distribution of the number of small loans (loans less than or equal to $\$ 500$ thousand) originated and purchased by the bank to farms with revenues of $\$ 1$ million or less to: 1) the percentage distribution of farms with revenues of greater than $\$ 1$ million; and, 2) the percentage distribution of farms for which revenues are not available. The table also presents aggregate peer small farm data for the years the data is available.

Table U. Assessment Area Distribution of Consumer Loans by Income Category of the Geography - Compares the percentage distribution of the number of loans originated and purchased by the bank in low-, moderate-, middle-, and upper-income geographies to the percentage distribution of households in those geographies.

Table V. Assessment Area Distribution of Consumer Loans by Income Category of the Borrower - Compares the percentage distribution of the number of loans originated and purchased by the bank to low-, moderate-, middle-, and upper-income borrowers to the percentage distribution of households by income level in each MMSA/assessment area.

Charter Number: 8

| Assessment Area Distribution of Home Mortgage Loans By Income Category of the Geography - Multi State (New York) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Home Mortgage Loans |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \% \text { of } \\ & \text { Total } \end{aligned}$ | Overall Market |  |  | \% Aggregate | \% of <br> Owner- <br> Occupied <br> Housing <br> Units |  | \% <br> Aggregate |  |  | \% Aggregate | \% of <br> Owner- <br> Occupied <br> Housing <br> Units |  | \% Aggregate | \% of <br> Owner- <br> Occupied <br> Housing <br> Units | \% Bank <br> Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| New York-Newark, NY-NJ- <br> CTPA CSA (2017-2018) | 57,710 | 27,112,100 | 63.75 | 427,179 | 3.14 | 2.74 | 3.96 | 13.53 | 11.83 | 13.62 | 37.49 | 32.09 | 34.74 | 45.78 | 53.25 | 47.61 | 0.06 | 0.10 | 0.07 |
| New York-Newark, NY-NJ. CTPA CSA (2019) | 32,810 | 17,316,808 | 36.25 | N/A | 3.14 | 3.03 | N/A | 13.53 | 11.90 | N/A | 37.49 | 33.16 | N/A | 45.78 | 51.81 | N/A | 0.06 | 0.10 | N/A |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total | 90,520 | 44,428,908 | 100.00 | 427,179 | 3.14 | 2.84 | 3.96 | 13.53 | 11.85 | 13.62 | 37.49 | 32.48 | 34.74 | 45.78 | 52.73 | 47.61 | 0.06 | 0.10 | 0.07 |

Source: 2015 ACS; 01/01/2017-12/31/2019 Bank Data, 2019 HMDA Aggregate Data, 'N/A' data not available.
Due to rounding, totals may not equal 100.0


Due to rounding, totals may not equal 100.0

| le Q: Assessment Area Distribution of Loans to Small Businesses By Income Category of the Geography - Multi State (New York) 2017-2019 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Small Businesses |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \% \text { of } \\ & \text { Total } \end{aligned}$ | Overall Market | \% of Businesses | $\%$ <br> Bank <br> Loans | \% Aggregate | $\begin{gathered} \hline \text { \% of } \\ \text { Busines- } \\ \text { ses } \end{gathered}$ | $\%$ <br> Bank <br> Loans | \% Aggregate | $\begin{gathered} \text { \% of } \\ \text { Busines. } \\ \text { ses } \end{gathered}$ | $\%$ <br> Bank <br> Loans | \% Aggregate | \% of Businesses | \% Bank Loans | \% Aggregate | $\begin{array}{\|c\|} \hline \% \text { of } \\ \text { Busines- } \\ \text { ses } \end{array}$ | $\begin{gathered} \text { \% Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| New York-Newark, NY-NJ-CT-PA CSA (2017-2018) | 261,218 | 5,782,985 | 58.80 | 706,770 | 7.48 | 7.04 | 7.08 | 15.66 | 16.27 | 15.30 | 29.20 | 27.25 | 30.09 | 46.61 | 48.69 | 46.60 | 1.05 | 0.75 | 0.93 |
| New York-Newark, NY-NJ-CT-PA CSA (2019) | 183,018 | 3,567,585 | 41.20 | N/A | 7.09 | 6.89 | N/A | 15.99 | 15.73 | N/A | 30.73 | 28.62 | N/A | 45.18 | 47.99 | NA | 1.00 | 0.77 | NA |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total | 444,236 | 9,350,570 | 100.00 | 706,770 | 7.27 | 6.98 | 7.08 | 15.84 | 16.05 | 15.30 | 30.02 | 27.81 | 30.09 | 45.84 | 48.40 | 46.60 | 1.02 | 0.76 | 0.93 |

Due to rounding, totals may not equal 100.0

2017-2019

|  | Total Loans to Small Businesses |  |  |  | Businesses with Revenues <= 1MM |  |  | Businesses with Revenues > 1 MM |  | Businesses with Revenues Not Available |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area: | \# | \$ | \% of Total | Overall Market | \% of Businesses | \% Bank Loans | \% Aggregate | \% of Businesses | \% Bank Loans | \% of Businesses | \% Bank Loans |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |
| New York-Newark, NY-NJ-CT-PA CSA (2017-2018) | 261,218 | 5,782,985 | 58.80 | 706,770 | 85.90 | 67.90 | 41.31 | 6.59 | 17.12 | 7.51 | 14.98 |
| New York-Newark, NY-NJ-CT-PA CSA (2019) | 183,018 | 3,567,585 | 41.20 | N/A | 87.56 | 72.94 | N/A | 5.64 | 18.55 | 6.80 | 8.51 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |
| Total | 444,236 | 9,350,570 | 100.00 | 706,770 | 86.79 | 69.98 | 41.31 | 6.08 | 17.71 | 7.13 | 12.31 |

Due to rounding, totals may not equal 100.0

Charter Number: 8

| S: $\quad$ Assessment Area Distribution of Loans to Farms By Income Category of the Geography - Multi State (New York) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | $\begin{array}{\|c\|} \hline \text { 2017-2019 } \\ \hline \text { ne Tracts } \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Farms |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \% \text { of } \\ & \text { Total } \end{aligned}$ | Overall Market | \% of Farms |  | \% <br> Aggregate | $\%$ of Farms |  | \% Aggregate | $\%$ of Farms |  | \% <br> Aggregate | \% of Farms |  | \% Aggregate | $\%$ of Farms | \% Bank <br> Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| New York-New ark, NY- <br> NJ-CT-PA CSA (2017- <br> 2018) | 869 | 9,239 | 60.31 | 1,095 | 3.25 | 2.65 | 1.83 | 12.29 | 8.29 | 9.77 | 34.41 | 30.15 | 32.60 | 49.86 | 58.92 | 55.80 | 0.20 | 0.00 | 0.00 |
| New York-New ark, NY-NJ-CT-PA CSA (2019) | 572 | 6,793 | 39.69 | N/A | 3.73 | 3.15 | NA | 13.17 | 8.22 | N/A | 35.63 | 35.31 | NA | 47.29 | 52.62 | NA | 0.18 | 0.70 | N/A |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total | 1,441 | 16,032 | 100.00 | 1,095 | 3.50 | 2.85 | 1.83 | 12.76 | 8.26 | 9.77 | 35.05 | 32.20 | 32.60 | 48.50 | 56.42 | 55.80 | 0.19 | 0.28 | 0.00 |

Due to rounding, totals may not equal 100.0


Due to rounding, totals may not equal 100.0

Charter Number: 8


Due to rounding, totals may not equal 100.0


Due to rounding, totals may not equal 100.0

Charter Number: 8

| Assessment Area Distribution of Loans to Small Businesses By Income Category of the Geography - Multi State (Chicago) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Small Businesses |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\%$ of Total | Overall Market | \% of Busines- ses |  | \% Aggregate | $\%$ of Busines- ses | $\%$ <br> Bank <br> Loans | \% Aggregate | $\%$ of Busines- ses |  | \% Aggregate | \% of Businesses | $\%$ <br> Bank <br> Loans | \% Aggregate | \% of Busines- ses | \% Bank Loans | \% Aggregate |
| Full Review. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Chicago-Naperville, IL-INWICSA (2017-2018) | 104,186 | 1,997,172 | 58.03 | 230,617 | 5.01 | 2.44 | 3.90 | 15.69 | 13.42 | 15.94 | 31.26 | 30.00 | 31.95 | 47.57 | 53.92 | 47.96 | 0.48 | 0.23 | 0.25 |
| Chicago-Naperville, IL-INWICSA (2019) | 75,357 | 1,297,836 | 41.97 | NA | 4.94 | 2.72 | NA | 15.56 | 13.62 | NA | 30.46 | 30.73 | NA | 48.58 | 5268 | NA | 0.46 | 0.24 | NA |
| Limited Review. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total | 179,543 | 3,295,008 | 100.00 | 230,617 | 4.97 | 2.56 | 3.90 | 15.62 | 13.50 | 15.94 | 30.82 | 30.31 | 31.95 | 48.12 | 53.40 | 47.96 | 0.47 | 0.23 | 0.25 |
| Source: 2015ACS; 01/01/2017-12/31/2019 Due to rounding, totalsmay not equal 100.0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |



Source: 2015 ACS; 01/01/2017-12/31/2019
Due to rounding, totals may not equal 100.0

Charter Number: 8

| Assessment Area Distribution of Loans to Farms By Income Category of the Geography - Multi State (Chicago) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | $\begin{array}{\|c\|} \hline \text { 2017-2019 } \\ \hline \text { ne Tracts } \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Farms |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \% \text { of } \\ & \text { Total } \end{aligned}$ | Overall Market | $\%$ of <br> Farms | $\left\lvert\, \begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \end{gathered}\right.$ | \% Aggregate | $\%$ of Farms |  | \% Aggregate | \% of Farms |  | \% <br> Aggregate | $\%$ of Farms | $\begin{array}{\|c} \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | \% <br> Aggregate | $\%$ of Farms | \% Bank <br> Loans | \% <br> Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Chicago-Naperville, IL-IN- <br> WI CSA (2017-2018) | 425 | 5,363 | 58.46 | 1,224 | 3.00 | 1.88 | 0.57 | 13.33 | 4.47 | 5.56 | 42.19 | 38.12 | 59.97 | 41.43 | 55.53 | 33.91 | 0.05 | 0.00 | 0.00 |
| Chicago-Naperville, IL-INWI CSA (2019) | 302 | 3,418 | 41.54 | N/A | 3.16 | 0.33 | N/A | 13.78 | 4.64 | N/A | 41.22 | 47.68 | NA | 41.77 | 47.35 | N/A | 0.07 | 0.00 | NA |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total | 727 | 8,781 | 100.00 | 1,224 | 3.09 | 1.24 | 0.57 | 13.57 | 4.54 | 5.56 | 41.67 | 42.09 | 59.97 | 41.61 | 52.13 | 33.91 | 0.06 | 0.00 | 0.00 |

Source: 2015 ACS; 01/01/2017 - 12/31/2019 Bank Data, 2019 HMDA Aggregate Data, 'N/A' data not available.
Due to rounding, totals may not equal 100.0


Due to rounding, totals may not equal 100.0

Charter Number: 8


Due to rounding, totals may not equal 100.0


Due to rounding, totals may not equal 100.0

Charter Number: 8



Due to rounding, totals may not equal 100.0

Charter Number: 8

| S: Assessment Area Distribution of Loans to Farms By Income Category of the Geography - Multi State (Philadelphia) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Farms |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \% \text { of } \\ & \text { Total } \end{aligned}$ | Overall Market | \% of Farms |  | \% <br> Aggregate | $\%$ of Farms |  | \% Aggregate | \% of Farms |  | \% <br> Aggregate | \% of Farms | $\begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | $\%$ of Farms | \% Bank <br> Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Philadelphia-Reading- <br> Camden, PA-NJ-DE-MD <br> CSA (2018) | 23 | 232 | 43.40 | 140 | 1.85 | 0.00 | 0.71 | 12.24 | 13.04 | 7.14 | 35.47 | 30.43 | 30.71 | 50.11 | 56.52 | 61.43 | 0.33 | 0.00 | 0.00 |
| Philadelphia-ReadingCamden, PA-NJ-DE-MD CSA (2019) | 30 | 281 | 56.60 | N/A | 1.87 | 0.00 | N/A | 12.79 | 13.33 | N/A | 35.08 | 16.67 | N/A | 49.82 | 70.00 | NA | 0.44 | 0.00 | N/A |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total | 53 | 513 | 100.00 | 140 | 1.86 | 0.00 | 0.71 | 12.53 | 13.21 | 7.14 | 35.27 | 22.64 | 30.71 | 49.95 | 64.15 | 61.43 | 0.39 | 0.00 | 0.00 |

Due to rounding, totals may not equal 100.0

|  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Farms |  |  |  | Farms with Revenues <= 1MM |  |  | Farms with Revenues > 1MM |  | Farms with Revenues Not Available |  |
| Assessment Area: | \# | \$ | \% of Total | Overall Market | \% of Businesses | \% Bank Loans | \% Aggregate | \% of Businesses | \% Bank Loans | \% of Businesses | \% Bank Loans |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |
| Philadelphia-Reading- <br> Camden, PA-NJ-DE-MD <br> CSA (2018) | 23 | 232 | 43.40 | 140.00 | 94.72 | 78.26 | 37.14 | 3.07 | 17.39 | 2.20 | 4.35 |
| Philadelphia-ReadingCamden, PA-NJ-DE-MD CSA (2019) | 30 | 281 | 56.60 | 0.00 | 95.07 | 80.00 | NA | 2.77 | 16.67 | 2.16 | 3.33 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |
| Total | 53 | 513 | 100.00 | 140 | 94.90 | 79.25 | 37.14 | 2.92 | 16.98 | 2.18 | 3.77 |

Due to rounding, totals may not equal 100.0

Charter Number: 8

| Table 0: Assessment Area Distribution of Home Mortgage Loans By Income Category of the Geography - Multi State (Washington) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Home Mortgage Loans |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \% \text { of } \\ & \text { Total } \end{aligned}$ | Overall Market | \% OwnerOccupied Housing Units |  | \% Aggregate |  | \% <br> Bank <br> Loans | \% <br> Aggregate | \% OwnerOccupied Housing Units | $\begin{aligned} & \% \\ & \text { Bank } \\ & \text { Loans } \end{aligned}$ | \% Aggregate | \% of OwnerOccupied Housing Units |  | \% Aggregate | \% of OwnerOccupied Housing Units | \% Bank Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Washington-Baltimore- <br> Arlington, DC-MD-VA-WV- <br> PA (2018) | 1,019 | 472,563 | 16.94 | 177,437 | 3.92 | 4.51 | 5.03 | 16.52 | 11.97 | 16.53 | 35.48 | 33.46 | 34.99 | 43.92 | 49.85 | 43.26 | 0.16 | 0.20 | 0.19 |
| Washington-Baltimore- <br> Arlington, DC-MD-VA-WV- <br> PA (2019) | 4,997 | 2,871,159 | 83.06 | N/A | 3.92 | 6.64 | N/A | 16.52 | 12.99 | N/A | 35.48 | 29.52 | N/A | 43.92 | 50.45 | N/A | 0.16 | 0.40 | N/A |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total | 6,016 | 3,343,722 | 100.00 | 177,437 | 3.92 | 6.28 | 5.03 | 16.52 | 12.82 | 16.53 | 35.48 | 30.19 | 34.99 | 43.92 | 50.35 | 43.26 | 0.16 | 0.37 | 0.19 |

Due to rounding, totals may not equal 100.0

| Assessment Area Distribution of Home Mortgage Loans By Income Category of the Borrower - Multi State (Washington) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Home Mortgage Loans |  |  |  | Low-Income Borrowers |  |  | Moderate Income Borrowers |  |  | Middle-Income Borrowers |  |  | Upper-Income Borrowers |  |  | Not Available-Income Borrowers |  |  |
| Assessment Area: | \# | \$ | \% of <br> Total | Overall Market | \% Families | $\%$ <br> Bank <br> Loans | \% Aggregate | \% <br> Families | $\%$ <br> Bank <br> Loans | \% <br> Aggregate | \% Families | \% Bank Loans | \% Aggregate | \% Families | $\%$ <br> Bank <br> Loans | \% Aggregate | \% Families | \% Bank <br> Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Washington-Baltimore- <br> Arlington, DC-MD-VA-WV- <br> PA (2018) | 1,019 | 472,563 | 16.94 | 177,437 | 21.95 | 4.91 | 8.52 | 16.33 | 12.37 | 18.44 | 19.85 | 16.58 | 21.62 | 41.87 | 45.93 | 34.78 | 0.00 | 20.22 | 16.64 |
| Washington-Baltimore- <br> Arlington, DC-MD-VA-WV- <br> PA (2019) | 4,997 | 2,871,159 | 83.06 | N/A | 21.95 | 5.88 | N/A | 16.33 | 17.23 | N/A | 19.85 | 22.91 | N/A | 41.87 | 48.45 | N/A | 0.00 | 5.52 | N/A |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total | 6,016 | 3,343,722 | 100.00 | 177,437 | 21.95 | 6.22 | 8.52 | 16.33 | 17.84 | 18.44 | 19.85 | 23.74 | 21.62 | 41.87 | 52.20 | 34.78 | 0.00 | 8.01 | 16.64 |

Due to rounding, totals may not equal 100.0

Charter Number: 8

| Assessment Area Distribution of Loans to Small Businesses By Income Category of the Geography - Multi State (Washington) |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Small Businesses |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | NotAvailable-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\%$ of <br> Total | Overall Market | \% of Businesses | $\%$ <br> Bank <br> Loans | \% Aggregate | \% of Businesses | $\%$ <br> Bank <br> Loans | \% Aggregate | \% of Businesses |  | \% Aggregate | \% of Businesses | $\%$ <br> Bank <br> Loans | \% Aggregate | \% of <br> Busines- <br> ses | \% Bank Loans | \% Aggregate |
| Full Review. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Washington-BaltimoreArlington DC-MD-VA-WVPA (2018) | 7,825 | 86,831 | 26.74 | 134,761 | 4.78 | 3.17 | 4.16 | 18.23 | 12.41 | 17.87 | 33.03 | 31.97 | 3271 | 4320 | 51.99 | 44.89 | 0.75 | 0.46 | 0.37 |
| Washington-BaltimoreArlington DC-MD-VA-WVPA (2019) | 21,443 | 279,521 | 73.26 | NA | 4.73 | 3.29 | NA | 18.04 | 11.70 | NA | 33.33 | 31.45 | NA | 43.26 | 53.11 | NA | 0.64 | 0.45 | NA |
| Limited Review. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total | 29,268 | 366,352 | 100.00 | 134,761 | 4.76 | 3.26 | 4.16 | 18.12 | 11.89 | 17.87 | 33.20 | 31.59 | 32.71 | 43.24 | 52.81 | 44.89 | 0.69 | 0.45 | 0.37 |

Source: 2015 ACS; 01/01/2017 - 12/31/2019 Bank Data, 2019 HMDA Aggregate Data, 'N/A' data not available.
Due to rounding, totals may not equal 100.0

| Table R: | Assessment Area Distribution of Loans to Small Businesses Loans by Gross Annual Revenues - Multi State (Washington) |  |  |  |  |  |  |  |  | 2017-2019 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Small Businesses |  |  |  | Businesses with Revenues <= 1MM |  |  | Businesses with Revenues > 1 MM |  | Businesses with Revenues Not Available |  |
| Assessment Area: | \# | \$ | \% of Total | Overall Market | \% of Businesses | \% Bank Loans | \% Aggregate | \% of Businesses | \% Bank Loans | \% of Businesses | \% Bank Loans |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |
| Washington-Baltimore- <br> Arlington, DC-MD-VA-WV- <br> PA (2018) | 7,825 | 86,831 | 26.74 | 134,761 | 84.65 | 65.69 | 48.51 | 6.04 | 17.51 | 9.31 | 16.81 |
| Washington-Baltimore- <br> Arlington, DC-MD-VA-WV- <br> PA (2019) | 21,443 | 279,521 | 73.26 | N/A | 87.24 | 71.19 | N/A | 4.92 | 17.38 | 7.84 | 11.43 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |
| Total | 29,268 | 366,352 | 100.00 | 134,761 | 86.08 | 69.72 | 48.51 | 5.43 | 17.41 | 8.50 | 12.86 |

Due to rounding, totals may not equal 100.0

Charter Number: 8

| ble S: Assessment Area Distribution of Loans to Farms By Income Category of the Geography - Multi State (Washington) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Farms |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\%$ of <br> Total | Overall Market | \% of Farms |  | \% <br> Aggregate | $\%$ of Farms | $\begin{array}{\|c} \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | \% <br> Aggregate | \% of Farms |  | \% <br> Aggregate | \% of Farms | $\begin{array}{\|c} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | \% <br> Aggregate | $\%$ of Farms | \% Bank Loans | \% <br> Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Washington-BaltimoreArlington, DC-MD-VA-WV-PA (2017-2018) | 46 | 386 | 35.38 | 331 | 3.64 | 2.17 | 1.51 | 17.50 | 2.17 | 11.78 | 36.49 | 52.17 | 47.73 | 42.18 | 43.48 | 38.97 | 0.19 | 0.00 | 0.00 |
| Washington-BaltimoreArlington, DC-MD-VA-WV-PA (2019) | 84 | 866 | 64.62 | N/A | 3.85 | 0.00 | NA | 18.22 | 7.14 | N/A | 36.51 | 36.90 | N/A | 41.27 | 54.76 | N/A | 0.14 | 1.19 | N/A |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total | 130 | 1,252 | 100.00 | 331 | 3.75 | 0.77 | 1.51 | 17.89 | 5.38 | 11.78 | 36.50 | 42.31 | 47.73 | 41.69 | 50.77 | 38.97 | 0.16 | 0.77 | 0.00 |

Due to rounding, totals may not equal 100.0

| Assessment Area Distribution of Loans to Farms by Gross Annual Revenues - Multi State (Washington) 2017-2019 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Farms |  |  |  | Farms with Revenues <= 1MM |  |  | Farms with Revenues > 1MM |  | Farms with Revenues Not Available |  |
| Assessment Area: | \# | \$ | \% of Total | Overall Market | \% of Businesses | \% Bank Loans | \% Aggregate | \% of Businesses | \% Bank Loans | \% of Businesses | \% Bank Loans |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |
| Washington-BaltimoreArlington, DC-MD-VA-WV-PA (2017-2018) | 46 | 386 | 35.38 | 331.00 | 93.35 | 69.57 | 34.74 | 4.00 | 15.22 | 2.65 | 15.22 |
| Washington-BaltimoreArlington, DC-MD-VA-WV-PA (2019) | 84 | 866 | 64.62 | 0.00 | 94.29 | 77.38 | NA | 3.40 | 10.71 | 2.31 | 11.90 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |
| Total | 130 | 1,252 | 100.00 | 331 | 93.86 | 74.62 | 34.74 | 3.67 | 12.31 | 2.47 | 13.08 |

[^127]Charter Number: 8

| O: Assessment Area Distribution of Home Mortgage Loans By Income Category of the Geography - Multi State (Portland) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Home Mortgage Loans |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \% \text { of } \\ & \text { Total } \end{aligned}$ | Overall Market | \% of OwnerOccupied Housing Units | \% <br> Bank <br> Loans | \% Aggregate |  | \% <br> Bank <br> Loans | \% <br> Aggregate | $\%$ of OwnerOccupied Housing Units | $\begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | \% of OwnerOccupied Housing Units | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | \% Aggregate | $\%$ of OwnerOccupied Housing Units | \% Bank Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Portland-Vancouver-Salem, OR-WA CSA (2017-2018) | 8,621 | 3,088,978 | 61.60 | 123,144 | 1.18 | 1.23 | 1.29 | 18.27 | 19.09 | 19.19 | 49.04 | 40.99 | 48.83 | 31.47 | 38.65 | 30.64 | 0.04 | 0.03 | 0.04 |
| Portland-Vancouver-Salem, OR-WA CSA (2019) | 5,375 | 1,975,194 | 38.40 | N/A | 1.18 | 1.40 | N/A | 18.27 | 18.10 | N/A | 49.04 | 43.96 | N/A | 31.47 | 36.52 | N/A | 0.04 | 0.02 | N/A |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total | 13,996 | 5,064,172 | 100.00 | 123,144 | 1.18 | 1.29 | 1.29 | 18.27 | 18.71 | 19.19 | 49.04 | 42.13 | 48.83 | 31.47 | 37.83 | 30.64 | 0.04 | 0.03 | 0.04 |

Due to rounding, totals may not equal 100.0


Source: 2015 ACS; 01/01/2017-12/31/2019 Bank Data, 2019 HMDA Aggregate Data, 'N/A' data not available.
Due to rounding, totals may not equal 100.0

Charter Number: 8



Due to rounding, totals may not equal 100.0

Charter Number: 8


Due to rounding, totals may not equal 100.0

| Assessment Area Distribution of Loans to Farms by Gross Annual Revenues - Multi State (Portland) 2017-2019 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Farms |  |  |  | Farms with Revenues <= 1MM |  |  | Farms with Revenues > 1MM |  | Farms with Revenues Not Available |  |
| Assessment Area: | \# | \$ | \% of Total | Overall Market | \% of Businesses | \% Bank Loans | \% Aggregate | \% of Businesses | \% Bank Loans | \% of Businesses | \% Bank Loans |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |
| Portland-VancouverSalem, OR-WA CSA (2017-2018) | 378 | 3,872 | 57.19 | 1,329.00 | 94.62 | 76.46 | 50.56 | 3.75 | 13.23 | 1.62 | 10.32 |
| Portland-VancouverSalem, OR-WA CSA (2019) | 283 | 4,060 | 42.81 | 0.00 | 95.30 | 71.73 | NA | 3.26 | 19.79 | 1.44 | 8.48 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |
| Total | 661 | 7,932 | 100.00 | 1,329 | 94.98 | 74.43 | 50.56 | 3.49 | 16.04 | 1.52 | 9.53 |

Due to rounding, totals may not equal 100.0

Charter Number: 8

| Assessment Area Distribution of Home Mortgage Loans By Income Category of the Geography - Multi State (Louisville) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Home Mortgage Loans |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \% \text { of } \\ & \text { Total } \end{aligned}$ | Overall Market | $\%$ of <br> Owner- <br> Occupied <br> Housing <br> Units |  | \% Aggregate | $\%$ of <br> Owner- <br> Occupied <br> Housing <br> Units |  | \% <br> Aggregate | \% of <br> Owner- <br> Occupied Housing Units | \% <br> Bank <br> Loans | \% Aggregate | \% of <br> Owner- <br> Occupied Housing Units | $\begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | \% of <br> Owner- <br> Occupied Housing Units | \% Bank <br> Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Louisville/Jefferson County-- <br> Elizabethtown--Bardstown, KY-IN CSA (2017-2018) | 2,677 | 460,220 | 64.52 | 42,802 | 4.17 | 2.24 | 3.08 | 13.88 | 10.09 | 12.49 | 44.67 | 41.09 | 43.74 | 37.22 | 46.47 | 40.61 | 0.06 | 0.11 | 0.09 |
| Louisville/Jefferson County--Elizabethtown--Bardstown, KY-IN CSA (2019) | 1,472 | 268,413 | 35.48 | N/A | 4.17 | 2.51 | N/A | 13.88 | 9.44 | N/A | 44.67 | 38.32 | N/A | 37.22 | 49.73 | N/A | 0.06 | 0.00 | N/A |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total | 4,149 | 728,633 | 100.00 | 42,802 | 4.17 | 2.34 | 3.08 | 13.88 | 9.86 | 12.49 | 44.67 | 40.11 | 43.74 | 37.22 | 47.63 | 40.61 | 0.06 | 0.07 | 0.09 |

Due to rounding, totals may not equal 100.0


Due to rounding, totals may not equal 100.0

Charter Number: 8

| Assessment Area Distribution of Loans to Small Businesses By Income Category of the Geography - Multi State (Louisville) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Smal Businesses |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | \% of Total | Overall Market | \% of Businesses | $\%$ <br> Bank <br> Loans | \% Aggregate |  | $\begin{array}{\|l\|} \hline \% \\ \text { Bank } \\ \text { Loans } \\ \hline \end{array}$ | \% Aggregate |  |  | \% Aggregate |  |  | \% Aggregate | \% of <br> Busines- <br> ses | \% Bank Loans | \% Aggregate |
| Full Review. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Louisville/Jefferson County-Elizabethtown-Bardstown, KY-INCSA (2017-2018) | 6,069 | 125,978 | 57.15 | 21,893 | 7.16 | 4.55 | 6.84 | 15.09 | 10.94 | 15.49 | 34.97 | 31.14 | 3289 | 39.00 | 51.41 | 41.84 | 3.77 | 1.96 | 294 |
| Louisville/Jefferson County-Elizabethtown-Bardstown, KY $-\mathbb{N}$ CSA (2019) | 4,550 | 73,188 | 42.85 | NA | 7.07 | 4.77 | NA | 14.84 | 10.57 | NA | 35.03 | 31.69 | NA | 39.51 | 50.81 | NA | 3.55 | 215 | NA |
| Limited Review. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total | 10,619 | 199,166 | 100.00 | 21,893 | 7.11 | 4.64 | 6.84 | 14.96 | 10.78 | 15.49 | 35.00 | 31.38 | 3289 | 39.27 | 51.15 | 41.84 | 3.65 | 204 | 294 |

Due to rounding, totals may not equal 100.0

| Assessment Area Distribution of Loans to Small Businesses Loans by Gross Annual Revenues - Multi State (Louisville) $2017-2019$ |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Small Businesses |  |  |  | Businesses with Revenues <= 1MM |  |  | Businesses with Revenues > 1 MM |  | Businesses with Revenues Not Available |  |
| Assessment Area: | \# | \$ | \% of Total | Overall Market | \% of Businesses | \% Bank Loans | \% Aggregate | \% of Businesses | \% Bank Loans | \% of Businesses | \% Bank Loans |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |
| Louisville/Jefferson County--Elizabethtown--Bardstown, KY-IN CSA (2017-2018) | 6,069 | 125,978 | 57.15 | 21,893 | 82.03 | 68.25 | 46.37 | 6.48 | 19.41 | 11.49 | 12.34 |
| Louisville/Jefferson County--Elizabethtown--Bardstown, KY-IN CSA (2019) | 4,550 | 73,188 | 42.85 | N/A | 83.75 | 70.02 | N/A | 5.62 | 21.49 | 10.63 | 8.48 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |
| Total | 10,619 | 199,166 | 100.00 | 21,893 | 82.95 | 69.01 | 46.37 | 6.02 | 20.30 | 11.03 | 10.69 |

Source: 2015 ACS; 01/01/2017-12/31/2019 Bank Data, 2019 HMDA Aggregate Data, 'N/A' data not available.
Due to rounding, totals may not equal 100.0

Charter Number: 8

| ble S: Assessment Area Distribution of Loans to Farms By Income Category of the Geography - Multi State (Louisville) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Farms |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \text { \% of } \\ & \text { Total } \end{aligned}$ | Overall Market | $\%$ of Farms |  | \% <br> Aggregate | $\%$ of Farms |  | \% Aggregate | \% of Farms |  | \% <br> Aggregate | \% of Farms |  | \% <br> Aggregate | $\%$ of Farms | \% Bank <br> Loans | \% <br> Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Louisville/Jefferson County--Eizabethtown-Bardstow n, KY-IN CSA (2017-2018) | 88 | 664 | 54.32 | 251 | 2.89 | 0.00 | 0.40 | 8.60 | 4.55 | 1.99 | 48.27 | 39.77 | 54.18 | 39.75 | 55.68 | 43.03 | 0.48 | 0.00 | 0.40 |
| Louisville/Jefferson County--Eizabethtow n-Bardstow n, KY-IN CSA (2019) | 74 | 641 | 45.68 | N/A | 2.82 | 0.00 | N/A | 9.22 | 4.05 | N/A | 48.28 | 51.35 | N/A | 39.25 | 44.59 | N/A | 0.44 | 0.00 | N/A |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total | 162 | 1,305 | 100.00 | 251 | 2.85 | 0.00 | 0.40 | 8.92 | 4.32 | 1.99 | 48.28 | 45.06 | 54.18 | 39.49 | 50.62 | 43.03 | 0.46 | 0.00 | 0.40 |

Due to rounding, totals may not equal 100.0

| Assessm ent Area Distribution of Loans to Farms by Gross Annual Revenues - Multi State (Louisville) |  |  |  |  |  |  |  | 2017-2019 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Farms |  |  |  | Farms with Revenues <=1MM |  |  | Farms with Revenues > 1MM |  | Farms with Revenues Not Available |  |
| Ass es s ment Area: | \# | \$ | \% of Total | Overall Market | \% of Businesses | \% Bank Loans | \% Aggregate | \% of Businesses | \% Bank Loans | \% of Bus iness es | \% Bank Loans |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |
| Louisville/Jefferson <br> County--Bizabethtown-- <br> Bardstow n, KY-IN CSA (2017-2018) | 88 | 664 | 54.32 | 251.00 | 96.78 | 73.86 | 27.49 | 1.89 | 6.82 | 1.33 | 19.32 |
| Louisville/Jefferson County--Bizabethtown-Bardstow n, KY-IN CSA (2019) | 74 | 641 | 45.68 | 0.00 | 97.04 | 75.68 | NA | 1.72 | 6.76 | 1.24 | 17.57 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |
| Total | 162 | 1,305 | 100.00 | 251 | 96.92 | 74.69 | 27.49 | 1.80 | 6.79 | 1.28 | 18.52 |


| ble O: Assessment Area Distribution of Home Mortgage Loans By Income Category of the Geography - Multi State (Cincinnati) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Home Mortgage Loans |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \text { \% of } \\ & \text { Total } \end{aligned}$ | Overall Market |  | \% <br> Bank <br> Loans | \% Aggregate | \% of <br> Owner- <br> Occupied <br> Housing <br> Units | \% <br> Bank <br> Loans | \% <br> Aggregate | \% of <br> Owner- <br> Occupied <br> Housing <br> Units |  | \% Aggregate | \% of Owner- Occupied Housing Units | $\begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate |  | \% Bank Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cincinnati-WilmingtonMaysville, OH-KY-IN CSA (2017-2018) | 2,717 | 478,544 | 63.38 | 70,371 | 4.16 | 3.17 | 3.38 | 14.30 | 12.44 | 13.61 | 42.29 | 40.41 | 43.28 | 39.15 | 43.87 | 39.59 | 0.10 | 0.11 | 0.13 |
| Cincinnati-WilmingtonMaysville, OH-KY-IN CSA (2019) | 1,570 | 313,903 | 36.62 | N/A | 4.16 | 2.99 | N/A | 14.30 | 12.42 | N/A | 42.29 | 37.96 | N/A | 39.15 | 46.43 | N/A | 0.10 | 0.19 | N/A |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total | 4,287 | 792,447 | 100.00 | 70,371 | 4.16 | 3.10 | 3.38 | 14.30 | 12.43 | 13.61 | 42.29 | 39.51 | 43.28 | 39.15 | 44.81 | 39.59 | 0.10 | 0.14 | 0.13 |
| Source: 2015 ACS; 01/01/2017-12/31/2019 <br> Due to rounding, totals may not equal 100.0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |


| Assessment Area Distribution of Home Mortgage Loans By Income Category of the Borrower - Multi State (Cincinnati) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Home Mortgage Loans |  |  |  | Low-Income Borrowers |  |  | Moderate Income Borrowers |  |  | Middle-Income Borrowers |  |  | Upper-Income Borrowers |  |  | Not Available-Income Borrowers |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \% \text { of } \\ & \text { Total } \end{aligned}$ | Overall Market | \% Families | $\%$ <br> Bank <br> Loans | \% Aggregate | \% <br> Families | $\%$ <br> Bank <br> Loans | \% <br> Aggregate | \% Families |  | \% Aggregate | \% Families | $\%$ <br> Bank <br> Loans | \% Aggregate | \% Families | \% Bank Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cincinnati-WilmingtonMaysville, OH-KY-IN CSA (2017-2018) | 2,717 | 478,544 | 63.38 | 70,371 | 21.90 | 9.57 | 9.79 | 16.36 | 21.72 | 19.75 | 19.79 | 18.51 | 20.62 | 41.95 | 38.46 | 36.20 | 0.00 | 11.74 | 13.64 |
| Cincinnati-Wilmington- <br> Maysville, OH-KY-IN CSA (2019) | 1,570 | 313,903 | 36.62 | N/A | 21.90 | 8.85 | N/A | 16.36 | 21.15 | N/A | 19.79 | 19.43 | N/A | 41.95 | 46.11 | N/A | 0.00 | 4.46 | N/A |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total | 4,287 | 792,447 | 100.00 | 70,371 | 21.90 | 10.24 | 9.79 | 16.36 | 23.65 | 19.75 | 19.79 | 20.73 | 20.62 | 41.95 | 45.38 | 36.20 | 0.00 | 9.07 | 13.64 |

Source: 2015 ACS; 01/01/2017-12/31/2019 Bank Data, 2019 HMDA Aggregate Data, 'N/A' data not available.
Due to rounding, totals may not equal 100.0

Charter Number: 8


Due to rounding, totals may not equal 100.0


[^128]Charter Number: 8

| le S: Assessment Area Distribution of Loans to Farms By Income Category of the Geography - Multi State (Cincinnati) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Farms |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | \% of <br> Total | Overall Market | \% of Farms |  | \% <br> Aggregate | \% of Farms |  | \% <br> Aggregate | \% of Farms |  | \% <br> Aggregate | $\%$ of <br> Farms |  | \% <br> Aggregate | \% of Farms | \% Bank <br> Loans | \% <br> Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cincinnati-WilmingtonMaysville, OH-KY-IN CSA (2017-2018) | 56 | 414 | 62.22 | 227 | 3.41 | 0.00 | 0.44 | 13.65 | 7.14 | 5.73 | 50.38 | 51.79 | 56.39 | 32.35 | 41.07 | 37.44 | 0.21 | 0.00 | 0.00 |
| Cincinnati-WilmingtonMaysville, OH-KY-IN CSA (2019) | 34 | 355 | 37.78 | N/A | 3.61 | 0.00 | N/A | 12.75 | 11.76 | N/A | 48.59 | 44.12 | N/A | 34.86 | 44.12 | NA | 0.19 | 0.00 | N/A |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total | 90 | 769 | 100.00 | 227 | 3.52 | 0.00 | 0.44 | 13.18 | 8.89 | 5.73 | 49.44 | 48.89 | 56.39 | 33.67 | 42.22 | 37.44 | 0.20 | 0.00 | 0.00 |

Due to rounding, totals may not equal 100.0

Table T: $\quad$ Assessment Area Distribution of Loans to Farm s by Gross Annual Revenues - Multi State (Cincinnati)
2017-2019

|  | Total Loans to Farms |  |  |  | Farms with Revenues $<=1 \mathrm{MM}$ |  |  | Farms with Revenues > 1MM |  | Farms with Revenues Not Available |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ass ess ment Area: | \# | \$ | \% of Total | Overall Market | \% of Businesses | \% Bank Loans | \% Aggregate | \% of Businesses | \% Bank Loans | \% of Bus iness es | \% Bank Loans |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |
| Cinc innati-WilmingtonMaysville, OH-KY-IN CSA (2017-2018) | 56 | 414 | 62.22 | 227.00 | 95.95 | 71.43 | 58.59 | 1.99 | 8.93 | 2.05 | 19.64 |
| Cinc innati-WilmingtonMaysville, OH-KY-IN CSA (2019) | 34 | 355 | 37.78 | NA | 96.23 | 61.76 | NA | 1.82 | 5.88 | 1.95 | 32.35 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |
| Total | 90 | 769 | 100.00 | 227 | 96.10 | 67.78 | 58.59 | 1.90 | 7.78 | 2.00 | 24.44 |

Due to rounding, totals may not equal 100.0

Charter Number: 8

| Table 0: Assessment Area Distribution of Home Mortgage Loans By Income Category of the Geography - Multi State (Wheeling) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Home Mortgage Loans |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | \% of <br> Total | Overall Market |  | \% <br> Bank <br> Loans | \% Aggregate |  | \% <br> Bank <br> Loans | \% <br> Aggregate | \% of <br> Owner- <br> Occupied Housing <br> Units | \% <br> Bank <br> Loans | \% Aggregate | \% of <br> Owner- <br> Occupied Housing Units | \% <br> Bank <br> Loans | \% Aggregate | \% of <br> Owner- <br> Occupied Housing <br> Units | \% Bank <br> Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $48540$ <br> Wheeling, WV-OH MSA | 206 | 20,970 | 100.00 | 2,782 | 0.00 | 0.00 | 0.00 | 11.99 | 6.31 | 10.32 | 68.79 | 70.87 | 66.10 | 19.21 | 22.82 | 23.58 | 0.00 | 0.00 | 0.00 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total | 206 | 20,970 | 100.00 | 2,782 | 0.00 | 0.00 | 0.00 | 11.99 | 6.31 | 10.32 | 68.79 | 70.87 | 66.10 | 19.21 | 22.82 | 23.58 | 0.00 | 0.00 | 0.00 |

Source: 2015 ACS; 01/01/2017-12/31/2019 Bank Data, 2019 HMDA Aggregate Data, 'N/A' data not available.
Due to rounding, totals may not equal 100.0

| Assessment Area Distribution of Home Mortgage Loans By Income Category of the Borrower - Multi State (Wheeling) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Home Mortgage Loans |  |  |  | Low-Income Borrowers |  |  | Moderate Income Borrowers |  |  | Middle-Income Borrowers |  |  | Upper-Income Borrowers |  |  | Not Available-Income Borrowers |  |  |
| Assessment Area: | \# | \$ | \% of <br> Total | Overall Market | \% Families | $\%$ <br> Bank <br> Loans | \% Aggregate | \% <br> Families | $\%$ <br> Bank <br> Loans | \% <br> Aggregate | \% Families | $\%$ <br> Bank <br> Loans | \% Aggregate | \% Families | $\%$ <br> Bank <br> Loans | \% Aggregate | \% Families | \% Bank <br> Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 48540 <br> Wheeling, WV-OH MSA | 206 | 20,970 | 100.00 | 2,782 | 19.14 | 9.22 | 9.85 | 19.31 | 20.39 | 21.89 | 20.88 | 22.33 | 22.90 | 40.67 | 21.84 | 33.79 | 0.00 | 26.21 | 11.57 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total | 206 | 20,970 | 100.00 | 2,782 | 19.14 | 12.50 | 9.85 | 19.31 | 27.63 | 21.89 | 20.88 | 30.26 | 22.90 | 40.67 | 29.61 | 33.79 | 0.00 | 26.21 | 11.57 |

Due to rounding, totals may not equal 100.0

| Assessment Area Distribution of Loans to Small Businesses By Income Category of the Geography - Multi State (Wheeling) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loansto Small Businesses |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | NotAvailable-Income Tracts |  |  |
| AssessmentArea: | \# | \$ | $\begin{aligned} & \% \text { of } \\ & \text { Total } \end{aligned}$ | Overall Market | $\%$ of Businesses | \% Bank Loans | \% Aggregate | \% of Businesses | $\%$ <br> Bank <br> Loans | \% Aggregate | \% of Businesses | $\%$ Bank Loans | \% Aggregate | \% of Businesses | \% Bank Loans | \% Aggregate | \% of Businesses | \% Bank Loans | \% Aggregate |
| Ful Review. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $48540$ <br> Wheelin. WU.OHMSA | 617 | 11,583 | 100.00 | 1,599 | 0.00 | 0.00 | 0.00 | 2129 | 25.28 | 25.64 | 59.44 | 53.81 | 55.35 | 1927 | 20.91 | 19.01 | 0.00 | 0.00 | 0.00 |
| Limited Review. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total | 617 | 11,583 | 100.00 | 1,599 | 0.00 | 0.00 | 0.00 | 21.29 | 25.28 | 25.64 | 59.44 | 53.81 | 55.35 | 19.27 | 20.91 | 19.01 | 0.00 | 0.00 | 0.00 |

Source: 2015ACS; 01/01/2017 - 12/31/2019 Bank Data, 2019 HMDA Aggregate Data, 'N/A' data nod available.
Due to rounding, totals may not equal 100.0

| Table R: | Assessment Area Distribution of Loans to Small Businesses Loans by Gross Annual Revenues - Multi State (Wheeling) |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Small Businesses |  |  |  | Businesses with Revenues <= 1MM |  |  | Businesses with Revenues > 1MM |  | Businesses with Revenues Not Available |  |
| Assessment Area: | \# | \$ | \% of Total | Overall Market | \% of Businesses | \% Bank Loans | \% Aggregate | \% of Businesses | \% Bank Loans | \% of Businesses | \% Bank Loans |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |
| 48540 <br> Wheeling, WV-OHMSA | 617 | 11,583 | 100.00 | 1,599 | 78.42 | 60.29 | 36.27 | 6.27 | 29.98 | 15.31 | 9.72 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |
| Total | 617 | 11,583 | 100.00 | 1,599 | 78.42 | 60.29 | 36.27 | 6.27 | 29.98 | 15.31 | 9.72 |

Source: 2015 ACS; 01/01/2017-12/31/2019 Bank Data, 2019 HMDA Aggregate Data, 'N/A' data not available.
Due to rounding, totals may not equal 100.0

Charter Number: 8


Due to rounding, totals may not equal 100.0

| Table T: Assessment Area Distribution of Loans to Farms by Gross Annual Revenues - Multi State (Wheeling) |  |  |  |  |  |  |  | 2017-2019 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Farms |  |  |  | Farms with Revenues <= 1MM |  |  | Farms with Revenues > 1MM |  | Farms with Revenues Not Available |  |
| Assessment Area: | \# | \$ | \% of Total | Overall <br> Market | \% of Businesses | \% Bank Loans | \% Aggregate | \% of Businesses | \% Bank Loans | \% of Businesses | \% Bank Loans |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |
| 48540 <br> Wheeling, WV-OHMSA | 9 | 56 | 100.00 | 27.00 | 96.98 | 88.89 | 48.15 | 1.51 | 0.00 | 1.51 | 11.11 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |
| Total | 9 | 56 | 100.00 | 27 | 96.98 | 88.89 | 48.15 | 1.51 | 0.00 | 1.51 | 11.11 |

Source: 2015 ACS; 01/01/2017-12/31/2019 Bank Data, 2019 HMDA Aggregate Data, 'N/A' data not available.
Due to rounding, totals may not equal 100.0

| Table O: | Assessment Area Distribution of Home Mortgage Loans By Income Category of the Geography - Arizona |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Home Mortgage Loans |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\begin{gathered} \% \text { of } \\ \text { Total } \end{gathered}$ | Overall Market | $\qquad$ | $\begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | \% of OwnerOccupied Housing Units | $\begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | $\begin{gathered} \% \\ \text { Aggregate } \end{gathered}$ | \% of OwnerOccupied Housing Units | $\begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | \% of OwnerOccupied Housing Units | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | \% Aggregate | $\qquad$ OwnerOccupied Housing Units | $\begin{aligned} & \text { \% Bank } \\ & \text { Loans } \end{aligned}$ | \% Aggregate |
| Freull Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 34,228 | 8,746,730 | 77.75 | 212,812 | 4.46 | 2.85 | 3.69 | 19.63 | 14.71 | 15.78 | 37.14 | 34.59 | 39.82 | 38.75 | 47.58 | 40.18 | 0.02 | 0.28 | 0.53 |
| 99999 <br> Tucson-Nogales, AZ CSA | 5,210 | 1,030,204 | 11.83 | 36,775 | 4.73 | 3.07 | 3.66 | 21.42 | 16.31 | 15.98 | 32.87 | 28.39 | 33.21 | 40.96 | 52.21 | 47.13 | 0.02 | 0.02 | 0.01 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 22380 <br> Flagstaff, AZ MSA | 637 | 192,098 | 1.45 | 4,488 | 3.51 | 0.00 | 0.07 | 18.21 | 6.91 | 10.07 | 35.60 | 34.85 | 37.21 | 42.68 | 58.24 | 52.52 | 0.00 | 0.00 | 0.13 |
| 29420 <br> Lake Havasu City-Kingman, <br> AZ MSA | 968 | 169,261 | 2.20 | 8,627 | 0.00 | 0.00 | 0.00 | 9.22 | 2.17 | 3.19 | 72.31 | 72.31 | 72.38 | 18.47 | 25.52 | 24.43 | 0.00 | 0.00 | 0.00 |
| 39150 <br> Prescott Valley-Prescott, <br> AZ MSA | 1,537 | 360,138 | 3.49 | 10,742 | 0.00 | 0.00 | 0.00 | 18.72 | 13.08 | 16.85 | 61.16 | 61.29 | 65.26 | 20.12 | 25.63 | 17.89 | 0.00 | 0.00 | 0.00 |
| 43420 <br> Sierra Vista-Douglas, AZ MSA | 195 | 27,425 | 0.44 | 3,559 | 2.32 | 1.54 | 2.25 | 26.56 | 26.15 | 24.45 | 44.17 | 34.87 | 38.30 | 26.95 | 37.44 | 35.01 | 0.00 | 0.00 | 0.00 |
| 49740 Yuma, AZ MSA | 375 | 60,043 | 0.85 | 5,964 | 0.00 | 0.00 | 0.00 | 25.72 | 26.40 | 17.99 | 46.95 | 34.67 | 42.05 | 27.33 | 38.93 | 39.91 | 0.00 | 0.00 | 0.05 |
| 99999 AZ Non-Metro Roll-up | 872 | 151,546 | 1.98 | 7,173 | 0.82 | 0.00 | 0.01 | 24.70 | 10.55 | 10.29 | 45.25 | 45.87 | 48.18 | 29.22 | 43.58 | 41.52 | 0.00 | 0.00 | 0.00 |
| Total | 44,022 | 10,737,445 | 99.99 | 290,140 | 3.79 | 2.59 | 3.20 | 20.04 | 14.52 | 15.40 | 39.56 | 35.85 | 41.08 | 36.60 | 46.83 | 39.92 | 0.02 | 0.22 | 0.39 |

Source: 2015 ACS; 01/01/2017-12/31/2019
Due to rounding, totals may not equal 100.0

| Table P: <br> Assessment Area: | Assessment Area Distribution of Home Mortgage Loans By Income Category of the Borrower - Arizona |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | $\begin{array}{\|c\|} \hline \text { 2017-2019 } \\ \hline \text { Borrowers } \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Home Mortgage Loans |  |  |  | Low-Income Borrowers |  |  | Moderate Income Borrowers |  |  | Middle-Income Borrowers |  |  | Upper-Income Borrowers |  |  | Not Available-Income Borrowers |  |  |
|  | \# | \$ | $\begin{gathered} \% \text { of } \\ \text { Total } \end{gathered}$ | Overall Market | \% Families | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \\ \hline \end{array}$ | \% Aggregate | $\begin{gathered} \% \\ \text { Families } \end{gathered}$ | $\begin{array}{\|c\|} \hline \% \\ \hline \text { Bank } \\ \text { Loans } \\ \hline \end{array}$ | $\begin{gathered} \% \\ \text { Aggregate } \end{gathered}$ | \% Families | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \\ \hline \end{array}$ | \% Aggregate | \% Families | $\begin{array}{\|c\|} \hline \% \\ \hline \text { Bank } \\ \text { Loans } \\ \hline \end{array}$ | \% Aggregate | \% Families | $\begin{gathered} \text { \% Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 38060 <br> Phoenix-Mesa-Chandler, AZ MSA | 34,228 | 8,746,730 | 77.75 | 212,812 | 21.94 | 7.54 | 5.24 | 17.29 | 20.16 | 16.55 | 19.51 | 20.08 | 20.87 | 41.26 | 46.74 | 39.14 | 0.00 | 5.48 | 18.21 |
| 99999 <br> Tucson-Nogales, AZ CSA | 5,210 | 1,030,204 | 11.83 | 36,775 | 22.19 | 6.76 | 5.26 | 17.33 | 18.46 | 14.90 | 19.11 | 19.52 | 19.62 | 41.37 | 49.17 | 39.46 | 0.00 | 6.08 | 20.76 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & 22380 \\ & \text { Flagstaff, AZ MSA } \\ & \hline \end{aligned}$ | 637 | 192,098 | 1.45 | 4,488 | 23.97 | 2.20 | 3.85 | 15.64 | 11.30 | 14.17 | 17.18 | 18.05 | 21.39 | 43.21 | 65.31 | 47.62 | 0.00 | 3.14 | 12.97 |
| 29420 <br> Lake Havasu City-Kingman, AZ MSA | 968 | 169,261 | 2.20 | 8,627 | 18.48 | 5.68 | 4.09 | 19.29 | 13.74 | 12.69 | 22.22 | 21.90 | 18.86 | 40.00 | 54.65 | 47.85 | 0.00 | 4.03 | 16.51 |
| 39150 <br> Prescott Valley-Prescott, AZ MSA | 1,537 | 360,138 | 3.49 | 10,742 | 18.79 | 4.42 | 6.00 | 19.29 | 16.66 | 14.89 | 22.35 | 23.36 | 22.88 | 39.56 | 51.14 | 41.60 | 0.00 | 4.42 | 14.63 |
| 43420 <br> Sierra Vista-Douglas, AZ MSA | 195 | 27,425 | 0.44 | 3,559 | 23.06 | 4.62 | 8.88 | 16.02 | 15.90 | 15.20 | 19.86 | 21.03 | 17.98 | 41.05 | 44.10 | 34.31 | 0.00 | 14.36 | 23.63 |
| 49740 Yuma, AZ MSA | 375 | 60,043 | 0.85 | 5,964 | 20.03 | 5.60 | 3.44 | 19.14 | 13.33 | 13.50 | 19.58 | 20.27 | 20.09 | 41.26 | 46.40 | 40.17 | 0.00 | 14.40 | 22.80 |
| 99999 <br> AZ Non-Metro Roll-up | 872 | 151,546 | 1.98 | 7,173 | 22.21 | 3.21 | 2.37 | 17.00 | 7.91 | 8.25 | 18.75 | 16.28 | 16.76 | 42.03 | 61.24 | 55.81 | 0.00 | 11.35 | 16.81 |
| Total | 44,022 | 10,737,445 | 99.99 | 290,140 | 21.75 | 7.54 | 5.15 | 17.43 | 20.41 | 15.84 | 19.58 | 21.28 | 20.58 | 41.23 | 50.78 | 40.03 | 0.00 | 5.68 | 18.39 |


| ble Q: Assessment Area Distribution of Loans to Small Businesses By Income Category of the Geography - Arizona |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Small Businesses |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | \% of Total | Overall Market | $\begin{gathered} \text { \% of } \\ \text { Busines- } \end{gathered}$ ses | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | \% Aggregate | $\%$ of <br> Busines- <br> ses | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \\ \hline \end{array}$ | \% Aggregate | $\qquad$ | $\begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | $\qquad$ | $\begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | $\begin{gathered} \hline \% \text { of } \\ \text { Busines- } \\ \text { ses } \end{gathered}$ | \% Bank Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 38060 <br> Phoenix-Mesa-Chandler, AZ MSA | 65,420 | 1,266,393 | 78.09 | 108,647 | 6.44 | 4.60 | 6.79 | 16.70 | 13.88 | 16.92 | 29.59 | 27.73 | 27.93 | 46.74 | 53.29 | 47.80 | 0.53 | 0.50 | 0.57 |
| 99999 <br> Tucson-Nogales, AZ CSA | 9,547 | 183,888 | 11.40 | 17,564 | 6.25 | 5.28 | 6.27 | 23.33 | 19.39 | 24.14 | 29.63 | 28.32 | 29.20 | 39.76 | 46.33 | 39.38 | 1.02 | 0.68 | 1.00 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & 22380 \\ & \text { Flagstaff, AZ MSA } \end{aligned}$ | 1,412 | 26,863 | 1.69 | 2,750 | 0.33 | 0.00 | 0.15 | 19.86 | 20.11 | 20.87 | 31.81 | 27.90 | 30.95 | 46.13 | 50.71 | 47.64 | 1.87 | 1.27 | 0.40 |
| 29420 <br> Lake Havasu City-Kingman, AZ MSA | 1,515 | 29,722 | 1.81 | 3,671 | 0.00 | 0.00 | 0.00 | 4.52 | 1.98 | 4.88 | 72.07 | 74.98 | 73.85 | 23.41 | 23.04 | 21.27 | 0.00 | 0.00 | 0.00 |
| 39150 <br> Prescott Valley-Prescott, AZ MSA | 3,068 | 60,719 | 3.66 | 5,532 | 0.00 | 0.00 | 0.00 | 23.30 | 19.98 | 23.10 | 50.38 | 48.79 | 51.01 | 26.32 | 31.23 | 25.89 | 0.00 | 0.00 | 0.00 |
| 43420 <br> Sierra Vista-Douglas, AZ <br> MSA <br> 4eran | 523 | 9,442 | 0.62 | 1,375 | 4.00 | 2.49 | 3.85 | 29.98 | 21.61 | 27.42 | 41.58 | 40.73 | 41.60 | 24.44 | 35.18 | 27.13 | 0.00 | 0.00 | 0.00 |
| 49740 <br> Yuma, AZ MSA | 751 | 14,236 | 0.90 | 1,917 | 0.00 | 0.00 | 0.00 | 29.41 | 23.83 | 28.48 | 38.62 | 41.81 | 38.34 | 31.96 | 34.35 | 33.18 | 0.01 | 0.00 | 0.00 |
| 99999 AZ Non-Metro Roll-up | 1,542 | 31,212 | 1.84 | 3,317 | 0.17 | 0.00 | 0.00 | 20.41 | 17.90 | 22.13 | 47.25 | 46.24 | 47.15 | 32.16 | 35.86 | 30.72 | 0.00 | 0.00 | 0.00 |
| Total | 83,778 | 1,622,475 | 100.01 | 144,773 | 5.59 | 4.21 | 5.89 | 18.26 | 14.83 | 18.17 | 32.27 | 29.97 | 30.90 | 43.31 | 50.50 | 44.48 | 0.57 | 0.49 | 0.55 |

Source: 2015 ACS; 01/01/2017-12/31/2019 Bank Data, 2019 HMDA Aggregate Data, 'N/A' data not available.
Due to rounding, totals may not equal 100.0


Due to rounding, totals may not equal 100.0

Charter Number: 8

| Se S: Assessment Area Distribution of Loans to Farms By Income Category of the Geography - Arizona |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Farms |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \text { \% of } \\ & \text { Total } \end{aligned}$ | Overall Market | $\% \text { of }$ Farms | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | \% Aggregate | $\begin{aligned} & \text { \% of } \\ & \text { Farm s } \end{aligned}$ | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | Aggregate | $\begin{aligned} & \text { \% of } \\ & \text { Farms } \end{aligned}$ | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | \% Aggregate | $\begin{aligned} & \text { \% of } \\ & \text { Farm s } \end{aligned}$ | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | $\begin{gathered} \text { \% } \\ \text { Aggregate } \end{gathered}$ | $\begin{aligned} & \text { \% of } \\ & \text { Farms } \end{aligned}$ | $\begin{aligned} & \text { \% Bank } \\ & \text { Loans } \end{aligned}$ | $\stackrel{\%}{\text { Agregate }}$ |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 38060 <br> Phoenix-Mesa-Chandler <br> AZ MSA | 456 | 5,148 | 65.52 | 484 | 5.65 | 1.54 | 2.27 | 20.59 | 15.35 | 22.11 | 31.74 | 30.92 | 38.02 | 41.68 | 50.22 | 37.19 | 0.34 | 1.97 | 0.41 |
| 99999 <br> Tucson-Nogales, AZ CSA | 56 | 507 | 8.05 | 75 | 4.82 | 0.00 | 1.33 | 22.80 | 21.43 | 13.33 | 34.23 | 33.93 | 41.33 | 37.91 | 44.64 | 44.00 | 0.23 | 0.00 | 0.00 |
| Limited Review : |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{array}{\|l\|} \hline 22380 \\ \text { Flagstaff, AZ MSA } \\ \hline \end{array}$ | 9 | 66 | 1.29 | 22 | 0.00 | 0.00 | 0.00 | 17.13 | 0.00 | 0.00 | 30.39 | 55.56 | 59.09 | 51.93 | 44.44 | 40.91 | 0.55 | 0.00 | 0.00 |
| 29420 . Kingman, AZ MSA | 10 | 105 | 1.44 | 13 | 0.00 | 0.00 | 0.00 | 5.90 | 0.00 | 15.38 | 78.23 | 100.00 | 84.62 | 15.87 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39150 <br> Prescott Valley-Prescott, AZ MSA | 38 | 291 | 5.46 | 49 | 0.00 | 0.00 | 0.00 | 20.85 | 23.68 | 20.41 | 53.53 | 36.84 | 46.94 | 25.62 | 39.47 | 32.65 | 0.00 | 0.00 | 0.00 |
| $\begin{aligned} & 43420 \\ & \text { Sierra Vista-Douglas, AZ } \\ & \text { MSA } \end{aligned}$ | 28 | 330 | 4.02 | 81 | 1.20 | 0.00 | 0.00 | 11.03 | 10.71 | 7.41 | 73.86 | 85.71 | 90.12 | 13.91 | 3.57 | 2.47 | 0.00 | 0.00 | 0.00 |
| 49740 Yuma, AZ MSA | 51 | 531 | 7.33 | 85 | 0.00 | 0.00 | 0.00 | 19.73 | 5.88 | 16.47 | 52.88 | 64.71 | 55.29 | 27.40 | 29.41 | 28.24 | 0.00 | 0.00 | 0.00 |
| 99999 <br> AZ Non-Metro Roll-up | 48 | 637 | 6.90 | 85 | 0.00 | 0.00 | 0.00 | 13.38 | 25.00 | 18.82 | 39.92 | 33.33 | 32.94 | 46.71 | 41.67 | 48.24 | 0.00 | 0.00 | 0.00 |
| Total | 696 | 7,615 | 100.01 | 894 | 4.40 | 1.01 | 1.34 | 19.84 | 15.66 | 18.46 | 37.01 | 37.64 | 45.86 | 38.49 | 44.40 | 34.12 | 0.26 | 1.29 | 0.22 |

Due to rounding, totals may not equal 100.0

|  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Farms |  |  |  | Farms with Revenues <= 1mm |  |  | Farms with Revenues > 1mm |  | Farms with Revenues Not Available |  |
| Assessment Area: | \# | \$ | \% of Total | Overall Market | $\begin{gathered} \% \text { of } \\ \text { Businesses } \end{gathered}$ | \% Bank Loans | \% Aggregate | $\begin{gathered} \text { \% of } \\ \text { Businesses } \\ \hline \end{gathered}$ | \% Bank Loans | $\begin{gathered} \% \text { of } \\ \text { Businesses } \end{gathered}$ | \% Bank Loans |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |
| 38060 <br> Phoenix-Mesa-Chandler, AZ MSA | 456 | 5,148 | 65.52 | 484.00 | 93.99 | 71.27 | 37.60 | 3.96 | 15.57 | 2.05 | 13.16 |
| 99999 Tucson-Nogales, AZ CSA | 56 | 507 | 8.05 | 75.00 | 96.27 | 66.07 | 46.67 | 2.58 | 10.71 | 1.15 | 23.21 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |
| 22380 Flagstaff, AZ MSA | 9 | 66 | 1.29 | 22.00 | 92.82 | 100.00 | 50.00 | 2.76 | 0.00 | 4.42 | 0.00 |
| 29420 <br> Lake Havasu CityKingman, AZ MSA | 10 | 105 | 1.44 | 13.00 | 97.05 | 100.00 | 69.23 | 1.85 | 0.00 | 1.11 | 0.00 |
| 39150 <br> Prescott Valley-Prescott, AZ MSA | 38 | 291 | 5.46 | 49.00 | 96.29 | 89.47 | 65.31 | 1.77 | 0.00 | 1.94 | 10.53 |
| 43420 <br> Sierra Vista-Douglas, AZ MSA | 28 | 330 | 4.02 | 81.00 | 97.12 | 89.29 | 40.74 | 1.44 | 3.57 | 1.44 | 7.14 |
| 49740 <br> Yuma, AZ MSA | 51 | 531 | 7.33 | 85.00 | 78.90 | 68.63 | 29.41 | 12.60 | 21.57 | 8.49 | 9.80 |
| 99999 AZ Non-Metro Roll-up | 48 | 637 | 6.90 | 85.00 | 94.69 | 68.75 | 47.06 | 3.40 | 20.83 | 1.91 | 10.42 |
| Total | 696 | 7,615 | 100.01 | 894 | 94.17 | 72.99 | 41.05 | 3.72 | 14.22 | 2.10 | 12.79 |

[^129]Charter Number: 8

| Assessment Area Distribution of Home Mortgage Loans By Income Category of the Geography - California |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-20 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Home Mortgage Loans |  |  |  | Low-ncome tracts |  |  | Moderate income Tracts |  |  | Madienncome Tracts |  |  | Upper-fncome Tracta |  |  | Not Avallablenncome Tracte |  |  |
| Assesament Area: | * | s | $\begin{aligned} & \text { \% or } \\ & \text { Total } \end{aligned}$ | Overall Market | \% of owner- Occupled Housing Unta | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | \% Aggregate | $\begin{array}{\|c} \text { \% of } \\ \text { owner- } \\ \text { Ocmupled } \\ \text { Housing } \\ \text { Units } \end{array}$ |  | $\stackrel{\%}{\text { Aggregate }}$ | \% of Owner- Occuplea Housing Units | $\begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | $\begin{array}{\|c\|} \hline \% \text { of } \\ \text { owner- } \\ \text { Occupled } \\ \text { Oousing } \\ \text { Units } \end{array}$ | $\begin{gathered} \% \\ \text { Bank } \\ \text { Loan } \end{gathered}$ | \% Aggregato | \% or owner- Occupled Housing Unts | $\begin{aligned} & \text { \% Bank } \\ & \text { Loans } \end{aligned}$ | \% Aggregate |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & 12540 \\ & \text { Bakersiekd, CA MSA } \\ & \text { (2017-2018) } \end{aligned}$ | 1.083 | 231,420 | 0.64 | 22,501 | 5.57 | 277 | 3.94 | 15.79 | 11.36 | 11.53 | 32.32 | 28.35 | 31.43 | 4621 | 57.53 | 52.35 | 0.12 | 0.00 | 0.74 |
| $\begin{aligned} & 12540 \\ & \text { Bakers fiekd, CA MSA } \\ & \text { (2019) } \end{aligned}$ | 529 | 117.277 | 0.31 | NA | 5.57 | 3.97 | NA | 15.79 | 11.72 | N/A | 32.32 | 27.98 | N/A | 4621 | 56.14 | N/A | 0.12 | 0.19 | NA |
| Los Angeles-Long Beach, CACSA (2017-2018) | 51,461 | 33,929,077 | 30.42 | 463,577 | 2.57 | 313 | 287 | 18.58 | ${ }^{18.18}$ | 18.89 | 30.83 | 25.76 | 31.13 | 4794 | 52.57 | 46.76 | 0.08 | 0.35 | 0.35 |
| Los Arggevers-Loryg Besscts <br> CA CSA (2019) | 28,496 | 20,824,213 | 16.84 | NA | 2.57 | 3.12 | NA | 18.58 | 18.44 | N/A | 30.83 | 25.25 | N/A | 47.94 | 52.80 | N/A | 0.08 | 0.39 | NA |
| San Jose-San Franciseo Oakland, CA CSA (2017 <br> 2018) | 30,769 | 21,297,096 | 18.19 | 249,106 | 3.94 | 4.44 | 4.84 | 16.99 | 16.35 | 18.34 | 37.38 | 34.85 | 37.07 | 41.61 | 44.19 | 39.59 | 0.08 | 0.17 | 0.15 |
| 99996 <br> San Joser Sian Francisces <br> Oakkand, CA CSA (2019) | 16.792 | 12.579.752 | 9.93 | NA | 3.94 | 4.95 | NA | 16.99 | 16.82 | N/A | 37.38 | 34.96 | N/A | 41.81 | 43.04 | N/A | 0.08 | 0.21 | NA |
| UmitedReview |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 17020 Chico. CA MSA (2017- 2018) <br> 2018) | 293 | 83.228 | 0.17 | 6.382 | 0.89 | 273 | 147 | 2025 | 16.38 | 15.51 | 51.64 | 43.34 | 4926 | 2722 | 37.54 | 33.75 | 0.00 | 0.00 | 0.00 |
| 17020, CA MSA (2019) | 279 | 74.434 | 0.16 | NA | 0.89 | 1.08 | NA | 2025 | 19.35 | N/A | 51.84 | 30.47 | N/A | 2722 | 49.10 | N/A | 0.00 | 0.00 | NA |
| El Contro, CA MSA (2017 <br> 2018) | 182 | 30,491 | 0.11 | 3.285 | 0.00 | 0.00 | 0.00 | 33.55 | 25.82 | 27.91 | 25.53 | 18.68 | 20.09 | 40.81 | 55.49 | 51.78 | 0.12 | 0.00 | 0.21 |
| 20960, | 99 | 18.038 | 0.06 | NA | 0.00 | 0.00 | NA | 33.55 | 2626 | N/ | 25.53 | 17.17 | N/A | 40.81 | 56.57 | N/A | 0.12 | 0.00 | NA |
| 99999 <br> Madera-Hanford. CA CSA (2017-2018) | 1.961 | 441,352 | 1.16 | 39,013 | 2.30 | 1.02 | 1.65 | 22.91 | 1826 | 19.79 | 26.00 | 24.07 | 24.82 | 48.78 | 56.65 | 53.73 | 0.00 | 0.00 | 0.02 |
| 9999 <br> Fesanc-Madeara-Hanford. CACSA (2019) | 1.055 | 255.748 | 0.62 | NA | 2.30 | 1.33 | NA | 22.91 | 17.63 | N/A | 26.00 | 20.28 | N/A | 48.78 | 60.76 | N/A | 0.00 | 0.00 | NA |
| 99999 Madesto-Mercesi, CA CSA (2017-2018) | 1.539 | 338,522 | 0.91 | 24.261 | 1.33 | 1.30 | 1.52 | 20.00 | 14.42 | 20.63 | 40.07 | 41.20 | 41.56 | 38.59 | 43.08 | 36.30 | 0.00 | 0.00 | 0.00 |
| Modersto-Merced, CA CSA <br> (2019) | 925 | 222.428 | 0.55 | NA | 1.33 | 1.51 | NA | 20.00 | 1524 | N/A | 40.07 | 39.89 | N/A | 38.59 | 43.35 | N/A | 0.00 | 0.00 | NA |
| Redding-Reed Bluff, CA CSA (2017-2018) | 374 | 77.505 | 0.22 | 7.610 | 0.00 | 0.00 | 0.00 | ${ }^{2086}$ | 17.85 | 18.40 | 58.39 | 54.28 | 59.05 | 20.75 | 28.07 | 22.55 | 0.00 | 0.00 | 0.00 |
| Redding-Red Bluff, CA $\operatorname{CSA}$ (2019) | 185 | 40.655 | 0.11 | NA | 0.00 | 0.00 | NA | 2086 | 20.00 | N/A | 58.39 | 58.92 | N/A | 20.75 | 21.08 | N/A | -.00 | 0.00 | N |
| 99999 <br> Sacramento Roseville, CA CSA (2017-2018) | 6.678 | 2.825.679 | 3.95 | 96,466 | 4.12 | 3.92 | 5.73 | 17.49 | 14.23 | 18.46 | 34.31 | 29.40 | 3283 | 44.05 | 52.40 | 42.95 | 0.04 | 0.06 | 0.04 |
| Siacrarmento-Rosevilles, CA CSA (2019) | 3.676 | 1,728.777 | 2.17 | NA | 4.12 | 4.11 | NA | 1749 | 12.98 | N/A | 34.31 | 28.92 | N/A | 44.05 | 53.94 | N/A | 0.04 | 0.05 | NA |
| 41500 Solime, CA MSA | 1.566 | 926,539 | 0.93 | 8,772 | 0.57 | 0.70 | 0.64 | 15.31 | 11.69 | 17.00 | 33.88 | 26.37 | 35.16 | 5022 | 61.17 | 47.04 | 0.02 | 0.06 | 0.17 |
| 41740 San Diego Chula Vista- Cartshad, CA MSA | 17.268 | 10.392.747 | 1021 | 94.818 | 2.79 | 4.13 | 3.43 | 15.14 | 15.00 | 16.07 | 35.45 | 29.84 | 34.48 | 46.62 | 51.03 | 46.03 | 0.00 | 0.00 | 0.00 |
| $\begin{array}{\|l} \hline 42020 \\ \text { San Luis Obispo Paso } \\ \text { Robllos, CA MSA } \\ \hline \end{array}$ | 1,358 | 632.754 | 0.80 | 8,438 | 0.00 | 0.00 | 0.00 | 9.26 | 9.65 | 10.64 | 71.74 | 68.56 | 73.65 | 18.51 | 21.28 | 15.47 | 0.48 | 0.52 | 0.24 |
| 42200 Maria Sants Bartara, CA MSA | 1.694 | 1299.236 | 1.00 | 9.327 | 3.09 | 268 | 4.41 | 15.58 | 14.46 | 19.49 | 34.11 | 23.02 | 35.53 | 4723 | 59.86 | 40.52 | 0.00 | 0.00 | 0.05 |
| 99999 <br> Visalia-Porterville-Harford, <br> CA CSA $(2017-2018)$ | 124 | 22,785 | 0.07 | 3,463 | 1.29 | 323 | 0.84 | 2286 | 15.32 | 14.87 | 25.81 | 29.84 | 31.56 | 50.04 | 51.61 | 52.73 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Visalia-Porterville-Hanford, <br> CA CSA (2019) | 57 | 10.625 | 0.03 | NA | 1.29 | 1.75 | NA | 2286 | 10.53 | N/A | 25.81 | 21.05 | N/A | 50.04 | 66.67 | N/A | 0.00 | 0.00 | NA |
| CA Non-Metro Roll-up (2017-2018) | 444 | 102,531 | 0.26 | 7.759 | 2.87 | 1.35 | 3.39 | 24.12 | 19.14 | 20.97 | 54.86 | 53.83 | 56.30 | 18.15 | 25.68 | 19.35 | 0.00 | 0.00 | 0.00 |
|  | 282 | 68.776 | 0.17 | NA | 2.87 | 1.77 | NA | 24.12 | 17.73 | N/A | 54.86 | 47.52 | N/A | 18.15 | 32.98 | N/A | 0.00 | 0.00 | NA |
| Total | 169.167 | 108,571.685 | 99.99 | 1,044.778 | 3.03 | 3.56 | 3.53 | 18.17 | 16.89 | 18.31 | 33.98 | 29.62 | 33.91 | 44.75 | 49.70 | 44.04 | 0.07 | 0.23 | 0.22 |

Due to rounding, totals may not equal 100.0

| Table P: | Assessment Area Distribution of Home Mortgage Loans By Income Category of the Borrower - California |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 017-2019 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Home Mortgage Loane |  |  |  | Low-Income Borrowers |  |  | Moderate income Borrowers |  |  | micale-Income Borro wers |  |  | Upper--income Borrowers |  |  | Not A vallable-income Borrowers |  |  |
| Assesament Area: | * | s | $\begin{aligned} & \text { \% or } \\ & \text { Total } \end{aligned}$ | overall Marke | \% Familles | $\begin{array}{\|c\|} \hline \% \\ \hline \text { Bank } \\ \text { Loans } \\ \hline \end{array}$ | \% Aggregate | $\%$ | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | Aggregate | \% Familles | $\begin{gathered} \% \\ \hline \text { Bank } \\ \text { Loans } \\ \hline \end{gathered}$ | \% Aggregate | \% Famules | $\left\|\begin{array}{c} \% \\ \text { Bank } \\ \text { Loans } \end{array}\right\|$ | \% Aggregate | \% Famulles | $\begin{gathered} \text { \% Bank } \\ \text { Loana } \end{gathered}$ | \% Aggregate |
| Full Revew: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 12540 Bakers field, CA MSA (2017-2018) | 1.083 | 231.420 | 0.64 | 22.501 | 24.82 | 3.79 | 3.48 | 16.42 | 10.53 | 1124 | 16.07 | 22.16 | 2126 | 42.69 | 53.74 | 42.19 | 0.00 | 9.79 | 21.83 |
| 12540 Bakers feld, CA MSA (2019) | 529 | 117.277 | 0.31 | N/A | 24.82 | 1.70 | NA | 16.42 | 12.10 | N/A | 16.07 | 17.39 | N/A | 42.69 | 6427 | NA | 0.00 | 4.54 | N/A |
| 99999 <br> Los Angeles-Long Beach. <br> CACSA (2017-2018) | 51.461 | 33,929,077 | 30.42 | 463,577 | 23.93 | 2.61 | 3.30 | 16.47 | 7.81 | 7.65 | 17.60 | 13.57 | 16.32 | 42.00 | 60.48 | 54.85 | 0.00 | 15.54 | 17.89 |
| 99999 <br> Los Angeles-Long Beach. CACSA (2019) | 28.496 | 20.824.213 | 16.84 | N/A | 23.93 | 2.19 | N/A | 16.47 | 7.82 | N/A | 17.60 | 15.08 | N/ | 42.00 | 59.36 | N/ | 0.00 | 15.56 | N/A |
| 99999 <br> San Jose-San FranciscoOsikland. CA CSA (2017. <br> 2018) | 30,769 | 21,297,096 | 18.19 | 249.106 | 23.89 | 2.77 | 3.74 | 16.19 | 8. 14 | 9.45 | 18.42 | 15.33 | 1825 | 41.50 | 66.47 | 56.29 | 0.00 | 730 | 1227 |
| 9999 <br> San Jose-San FranciscoOaklsand. CA CSA (2019) | 16.792 | 12.579.752 | 9.93 | N/A | 23.89 | 2.87 | N/A | 16.19 | 10.18 | N/A | 18.42 | 17.54 | N/A | 41.50 | 62.58 | N/A | 0.00 | 7.03 | N/A |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & 17020 \\ & \text { Chico. } \\ & 20 \mathrm{CA} \text { MSA }(2017-1 \\ & 2018) \end{aligned}$ | 293 | 83.228 | 0.17 | 6,382 | 22.86 | 4.44 | 4.40 | 16.75 | 8.87 | 12.00 | 19.02 | 19.45 | 20.03 | 41.38 | 58.02 | 50.25 | 0.00 | 922 | 13.32 |
| (17020 ${ }^{17}$ Chico, CA MSA (2019) | 279 | 74,434 | 0.16 | N/A | 2286 | 4.66 | N/ | 16.75 | 11.47 | N/A | 19.02 | 20.43 | N/A | 41.38 | 60.93 | N/A | 0.00 | 2.51 | N/A |
| $\begin{aligned} & 20940 \\ & \text { El Centro, CA MSA (2017- } \end{aligned}$ $2018)$ | 182 | 30.491 | 0.11 | 3.285 | 24.06 | 220 | 1.89 | 17.04 | 10.44 | 6.21 | 15.69 | 17.58 | 16.65 | 43.22 | 5220 | 52.63 | 0.00 | 17.58 | 22.62 |
| 20940 ${ }^{201 C o n t a . ~ C A ~ M S A ~(2019) ~}$ | 99 | 18,038 | 0.06 | N/A | 24.06 | 6.06 | N/A | 17.04 | 16.16 | N/A | 15.69 | 13.13 | N/A | 43.22 | 55.56 | N/A | 0.00 | 9.09 | N |
| Fresno Madera-Hankord. $\operatorname{CACSA}(2017-2018)$ | 1.961 | 441,352 | 1.16 | 39.013 | 24.45 | 3.16 | 278 | 16.52 | 11.17 | 8.79 | 16.72 | 16.11 | 1821 | 42.31 | 5926 | 48.97 | 0.00 | 10.30 | 2125 |
| Fres no-Madera-Hanford. CACSA (2019) | 1.055 | 255.748 | 0.62 | N/A | 24.45 | 284 | N/A | 16.52 | 11.47 | N/A | 16.72 | 17.16 | N/A | 42.31 | 64.08 | NA | 0.00 | 4.45 | N/A |
| 99999 <br> Modesto-Merced, CA CSA <br> (2017-2018) | 1.539 | 338.522 | 0.91 | 24.261 | 22.89 | 325 | 253 | 17.21 | 11.89 | 8.42 | 18.30 | 22.16 | 20.88 | 41.59 | 56.53 | 51.35 | 0.00 | 6.17 | 17.02 |
| $\begin{aligned} & \text { P999 } \\ & \text { Modesto Merced. CA CSA } \end{aligned}$ $12019$ | 925 | 222.428 | 0.55 | N/A | 2289 | 422 | N/A | 17.21 | 13.84 | N/A | 18.30 | 24.43 | N/ | 41.59 | 54.70 | N/A | 0.00 | 2.81 | N/A |
|  | 374 | 77.505 | 0.22 | 7.610 | 22.51 | 5.88 | 3.82 | 18.76 | 17.11 | 14.30 | 19.55 | 19.79 | 21.35 | 39.17 | 44.92 | 45.45 | 0.00 | 12.30 | 15.07 |
| 99999 Redding-Red Bluff, CA CSA (2019) | 185 | 40.655 | 0.11 | N/A | 22.51 | 3.78 | N/A | 18.76 | 10.81 | N/A | 19.55 | 25.95 | N/ | 39.17 | 51.35 | NA | 0.00 | 8.11 | N/A |
| 99999 <br> Rosevile, CA CSA (2017-2018) | 6.678 | 2.825.679 | 3.95 | 96,466 | 2327 | 3.82 | 4.15 | 16.24 | 12.52 | 13.16 | 18.33 | 17.95 | 21.97 | 42.16 | 58.66 | 46.56 | 0.00 | 7.05 | 14.16 |
| 99999 <br> CSA (2019) | 3.676 | 1,728,777 | 2.17 | N/A | 2327 | 3.48 | N/A | 16.24 | 12.19 | N/A | 18.33 | 19.48 | N/A | 42.16 | 58.38 | N/A | 0.00 | 6.47 | N/A |
| 4, 41500 | 1.566 | 926.539 | 0.93 | 8.772 | 21.55 | 128 | 228 | 17.89 | 6.26 | 5.86 | 18.66 | 12.77 | 14880 | 41.89 | 7120 | 62.04 | 0.00 | 8.49 | 15.03 |
| $\begin{array}{\|l\|} \hline 41740 \\ \text { San Diego-Chula Vista - } \\ \text { Carlsbad. CA MSA } \\ \hline \end{array}$ | 17,268 | 10,392,747 | 10.21 | 94.818 | 23.58 | 283 | 264 | 16.93 | 9.19 | 7.57 | 17.82 | 16.32 | 18.53 | 41.67 | 62.42 | 55.74 | 0.00 | 926 | 15.52 |
| $\begin{aligned} & 42020 \\ & \text { San Luis Obispo Paso } \end{aligned}$ <br> Robles, CA MSA | 1.358 | 632.754 | 0.80 | 8.438 | 21.03 | 2.72 | 2.95 | 18.20 | 8.17 | 7.94 | 20.17 | 17.53 | 19.08 | 40.59 | 64.06 | 57.64 | 0.00 | 7.51 | 12.38 |
| $\begin{aligned} & \text { 42200 } \\ & \text { Santa Maria Santa } \\ & \text { Barbara. CA MSA } \end{aligned}$ | 1.694 | 1299,236 | 1.00 | 9,327 | 23.39 | 2.07 | 3.14 | 16.80 | 5.79 | 9.91 | 1820 | 12.34 | 19.14 | 41.61 | 68.18 | 53.26 | 0.00 | 11.63 | 14.55 |
| 99999 <br> Visalis-Porterville-Hanford CACSA (2017-2018) | 124 | 22,785 | 0.07 | 3,463 | 2326 | 323 | 222 | 17.04 | 16.13 | 9.24 | 17.77 | 12.90 | 20.07 | 41.92 | 44.35 | ${ }^{41.73}$ | 0.00 | 23.39 | 26.74 |
| 99999 <br> Visalia-Porterville-Hanford. CACSA(2019) | 57 | 10.625 | 0.03 | N/A | 23.26 | 7.02 | N/ | 17.04 | 7.02 | N/A | 17.77 | 17.54 | N/A | 41.92 | 61.40 | N/A | 0.00 | 7.02 | N/A |
| $\begin{aligned} & 99999 \\ & \text { CANOMento Roll up } \\ & (2017-2018) \end{aligned}$ | 444 | 102.531 | 0.26 | 7.759 | 24.65 | 4.95 | 4.51 | 18.91 | 10.59 | 11.35 | 1924 | 19.37 | 21.70 | 37.20 | 55.41 | 49.50 | 0.00 | 9.68 | 12.93 |
| CA Non-Metro Roll-up <br> (2019) | 282 | 68.776 | 0.17 | N/A | 24.65 | 6.03 | N/A | 18.91 | 12.41 | N/A | 1924 | 20.92 | N/A | 37.20 | 57.80 | N/A | 0.00 | 2.84 | N/A |
| Total | 169.167 | 108.571.685 | 99.99 | 1.044.778 | 23.84 | 3.05 | 3.39 | 16.49 | 9.84 | 8.83 | 1785 | 1746 | 17.93 | 41.82 | 69.64 | 53.82 | 0.00 | 11.42 | 16.04 |

ove to rounding, tota/s may not equal 100.0

Charter Number: 8


Charter Number: 8

| Table R: | Assessment Area Distribution of Loans to Small Bus inesses Loans by Gross Annual Revenues - California |  |  |  |  |  |  |  |  | 2017-2019 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to s mall Busineeses |  |  |  | Businesses whth R evenues $<=1 \mathrm{~mm}$ |  |  | B usinesses with Revenues $>1 \mathrm{Mm}$ |  | Bualnessea whtr RevenuesNot Avala ple |  |
| As sosament Aroa: | * | s | \% or Total | Ovarall | \% or Buasnessas | \% Bankloans | \% Aggregato | \% or B uatnosses | \% BankLoans | \% or B uatinosses | \% BankLoans |
| Full Reviowe |  |  |  |  |  |  |  |  |  |  |  |
| 12540 Bakersfiekd, CA MSA (2017-2018) | 2,900 | 56.314 | 0.48 | 14.368 | 84.41 | 66.52 | 39.40 | 4.92 | 18.76 | 10.67 | 14.72 |
| $\begin{aligned} & 12540 \\ & \text { Bakersfiek. CA MSA } \\ & 12019) \end{aligned}$ | 1.957 | 34.996 | 0.32 | Na | 85.66 | 71.64 | N/A | 4.43 | 19.37 | 9.90 | 8.99 |
| 99999 <br> Los Angeles-Long Beach <br> CA CSA (2017-2018) | 180.075 | 3.422.776 | 29.84 | 591.433 | 86.64 | 69.09 | 46.84 | 5.95 | 17.00 | 7.51 | 13.91 |
| 99999 <br> Los Angolos-Long Beach. CACSA (2019) | 130.681 | 2.222.672 | 21.66 | Na | ${ }^{88.56}$ | 73.88 | N/A | 4.84 | 18.29 | 6.60 | 7.82 |
| 99999 <br> Se-San Francisco Oakland, CA CSA (20172018) | 99,887 | 1.541,475 | 16.55 | 260,985 | 85.88 | 70.61 | 46.59 | 5.98 | 13.76 | ${ }^{8.14}$ | 15.64 |
| 99999 <br> San kon-San Francisoc Oaklond. CA CSA (2019) | 71,366 | 1.017.173 | 11.83 | Na | 87.34 | 73.84 | N/A | 5.12 | 15.22 | 7.54 | 10.94 |
| Limitad Review. |  |  |  |  |  |  |  |  |  |  |  |
| 17020 Chico, CA MSA (20172018) | 945 | 18.690 | 0.16 | 4,304 | 85.43 | 65.82 | 48.37 | 4.47 | 18.31 | 10.10 | 15.87 |
| 17020 Chico CA MSA (2019) | 649 | 12.112 | 0.11 | Na | 86.32 | 64.10 | N/A | 4.21 | 21.42 | 9.47 | 14.48 |
| $\begin{aligned} & \begin{array}{l} \text { 2090 } \\ \text { no Contro, CA MSA (2017. } \\ \text { 2018) } \end{array} \end{aligned}$ | 292 | 5.255 | 0.05 | 2.258 | 75.40 | 67.81 | 46.55 | 6.46 | 15.07 | 18.14 | 17.12 |
| (1) | 220 | 4.209 | 0.04 | Na | 77.05 | 70.00 | N/A | 5.80 | 18.18 | 17.14 | 11.82 |
| Fressno-Madera-1Hariford, CA CSA (2017-2018) | 4.066 | 73.408 | 0.67 | 25.852 | 83.42 | 64.24 | 41.01 | 5.68 | 17.54 | 10.90 | 18.22 |
| Frasno-Madera-Hanford. <br> CACSA (2019) | 3.209 | 57 A70 | 0.53 | Na | 84.72 | 69.80 | N/A | 5.01 | 19.76 | 10.27 | 10.44 |
| Modersto-Merced, CA CSA (2017-2018) | 1.994 | 33.445 | 0.33 | 12.911 | 83.58 | 62.84 | 47.33 | 5.25 | 20.76 | 11.18 | 16.40 |
| 99999 Modesto-Meroed. CA CSA <br> (2019) | 1.554 | 21253 | 0.26 | NA | 85.08 | e6.02 | N/A | 4.70 | 21.75 | 10.24 | 12.23 |
| Redding-Red Bluff, CA CSA (2017-2018) | 944 | 11.718 | 0.16 | 4.521 | 84.88 | 67.58 | 50.06 | 4.82 | 16.63 | 10.32 | 15.78 |
| Rodding-Rod Bluff, CA CSA (2019) | 797 | 11.364 | 0.13 | NA | 85.97 | 69.39 | N/A | 4.26 | 19.82 | 9.78 | 10.79 |
| Sacramerto-Roseville, CA CSA (2017-2018) | 17.662 | 283.608 | 2.93 | 60.351 | 85.69 | 70.34 | 46.07 | 4.80 | 15.46 | 9.51 | 14.20 |
| arto Rovevillo, CA CSA (2019) | 13,279 | 183,090 | 2.20 | NA | 87.22 | 73.56 | N/A | 4.10 | 16.67 | 8.67 | 9.77 |
|  | 3,431 | 52.087 | 0.57 | 7.510 | 85.29 | 65.23 | 45.25 | 5.08 | 20.26 | 9.63 | 14.51 |
| 41740 San Diego Chuta VistaCarlsbard. CA MSA | 55,347 | 947.775 | 9.17 | 98.589 | 88.78 | 72.26 | 45.51 | 4.47 | 15.74 | 6.75 | 12.00 |
| 42020 <br> SanLuis Obispo-Paso <br> Robles. CA MSA | 4.075 | 66.577 | 0.68 | 8,824 | 87.38 | 68.71 | 41.70 | 4.54 | 17.13 | 8.08 | 14.16 |
| Sarta Maria-Sarta Bartara, CA MSA | 5.313 | 87 A28 | 0.88 | 11.059 | 84.87 | 67.04 | 40.38 | 6.03 | 18.39 | 9.31 | 14.57 |
| 99999 <br> Visalia Porke wille-Hankord. <br> CA CSA (2017-2018) | 129 | 2.135 | 0.02 | 1.493 | 81.13 | 67.44 | 46.15 | 4.75 | 19.38 | 14.12 | 13.18 |
| 99999 <br> Visalia-Porierville-Hanford. CA CSA (2019) | 164 | 3.362 | 0.03 | NA | 82.70 | 62.20 | N/A | 4.24 | 19.51 | 13.05 | 18.29 |
| CA Non-Metro Roll-up <br> (2017-2018) | 1,309 | 17,532 | 0.23 | 6,065 | 82.27 | 69.55 | 45.01 | 4.99 | 15.98 | 12.74 | 14.47 |
| 99999 <br> CANon-Metro Poll-up <br> (2019) | 1.055 | 13.814 | 0.17 | NA | 83.43 | 70.33 | N/A | 4.62 | 18.20 | 11.95 | 11.47 |
| Total | 603.380 | 10,181.736 | 100.00 | 1,110,523 | 37.09 | 71.25 | 46.29 | 5.23 | 16.47 | 7.68 | 12.28 |

Source: 2015 ACS; 01/01/2017-12/112010
oue to rounding, tota/s may not equal 100.0

Charter Number： 8

| Table S：Assessment Area Distribution of Loans to Farms By Income Category of the Geography－California |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Not Avallabio－Inoome ${ }^{\text {2017－2019 }}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loane to farme |  |  |  | Low－Inoome Traote |  |  | modorato inoomotraote |  |  | Mlasio－inoomo Trsote |  |  | Uppor－inoome Traote |  |  |  |  |  |
| Aceocemontares： | \＃ | ＊ | $\underset{\text { \％or }}{\text { \％otal }}$ | $\begin{aligned} & \text { Ovorall } \\ & \text { Markot } \end{aligned}$ | $\underset{\text { Farme }}{\substack{\text { or }}}$ |  | Accrogato | Farme |  | Acorocato | $\begin{aligned} & \text { \%or or } \\ & \text { farme } \end{aligned}$ | $\begin{array}{\|c\|c} \hline \text { Bank } \\ \text { Bank } \\ \text { Loanc } \end{array}$ | Acoregate | farme |  | Adorrosato | Farme | $\cdots$ | Accrosato |
| Full Roviow： |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 12540 Bakerntiekl．CA MSA （2017－2018） | 94 | 2.204 | 2.02 | 235 | 4.38 | 3.19 | 3.40 | 20.97 | 13.83 | 17.87 | 32.76 | 34.04 | 36.17 | 39.93 | 48.94 | 42.13 | 1.95 | o．oo | 0.43 |
| $\qquad$ （2019） | 61 | 866 | 1.31 | NA | 4.50 | 0.00 | NA | 20.90 | 24.59 | NA | 32.16 | 26.23 | NA | 40.30 | 49.18 | NA | 2.14 | 0.00 | NA |
| －on Angelon－Long <br> Baの日h．CA CSA（2017 <br> 2018） | 575 | 6.097 | 12.37 | 1.085 | 3.69 | 5.57 | 5.25 | 20.62 | 15.13 | 17.51 | 32.47 | 27.48 | 33.09 | 42.66 | 50.43 | 43.32 | 0.56 | 1.39 | 0.83 |
| 99999 <br> L○の AMの日lのス－Long <br> Boach，CA CSA（2019） | 433 | 5.280 | 9.31 | NA | 3.71 | 3.00 | NA | 20.69 | 15.70 | NA | ${ }^{31.70}$ | 29.33 | NA | 43.26 | 51.73 | NA | 0.64 | 0.23 | NA |
| S9999 San Jonesan Franciaco－ Oakland．CA CSA（2017－ Oakland．CA CSA（2017． 2018） | 652 | 6．588 | 14.02 | 1．669 | 4.30 | 1.38 | 1.20 | 17.24 | 12.73 | 11.98 | 40.11 | 43.10 | 40.38 | 38.28 | 42.48 | 46.38 | 0．08 | ${ }^{0.31}$ | 0.06 |
| 99999 <br> 3n Jone san Franclaco－ <br> Oakland．CA CSA（2019） | soo | 6.167 | 10.75 | NA | 4.86 | 2.40 | NA | 17.45 | 15.20 | NA | 35.63 | 43．80 | NA | 37.96 | 38.60 | NA | 0.10 | 0.00 | NA |
| Limitod Roviow： |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\qquad$ <br> Chico， 2018 ） | 43 | 557 | 0.92 | 174 | 0.63 | 0.00 | 0.57 | 17.02 | 20.93 | 14.37 | 42.33 | 30.23 | 44.25 | 40.02 | 48.84 | 40．80 | 0．00 | 0．oo | 0.00 |
| 17020 chico．CA MSA（2019） | 37 | 357 | －．80 | Na | 0.83 | 0．00 | NA | 17．88 | 16.22 | NA | 41.37 | 35.14 | Na | 39.92 | 48.65 | N／ | 0．00 | 0．00 | Na |
| 20940 E Centro．CA MSA（2017－ <br> 2018） | 19 | 189 | 0.41 | 115 | 0.00 | 0.00 | 0.00 | 23.90 | 31.58 | 20.00 | 26.75 | 10.53 | 26.09 | 48.31 | 57.89 | 53.91 | 1.04 | 0.00 | 0.00 |
| \％${ }^{20340}$ Centro．CA MSA（2019） | 18 | 265 | 0.35 | NA | 0.00 | 0．00 | NA | 22.03 | 5.56 | NA | ${ }^{26.84}$ | 27．78 | NA | 50.38 | 66.67 | NA | 0.76 | 0.00 | NA |
| Fres no－Maciera－Hantord． CA CSA（2017－2018） | 325 | 4．625 | 6.99 | 1.185 | 2.42 | 0.92 | 1.69 | 28.99 | 27.69 | 32.57 | ${ }^{31.60}$ | ${ }^{31.38}$ | 29.45 | 36.92 | 40.00 | 36.29 | ${ }^{0.07}$ | 0．00 | 0.00 |
| Freano－Madera－Hanf ord CA CBA（2019） | 227 | 3.075 | 4．88 | NA | 2.64 | 0.00 | NA | 29.28 | 30.40 | NA | 30.10 | 25.95 | NA | 37.93 | 43.61 | NA | 0.05 | 0．00 | NA |
| 99999 <br> Mociasto <br> CSA（2017－2018 | 194 | 2.281 | 4.17 | 862 | 0.37 | 0.00 | 0.93 | 17.29 | 6.19 | 13.69 | 42.12 | 44.33 | 44.32 | 40.22 | 49.48 | 41.07 | 0.00 | 0．00 | 0.00 |
| 99999 Modes to－Marced，CA $\operatorname{css}(2019)$ | 153 | 1.714 | 3.29 | Na | 0.33 | 0.00 | NA | 17.51 | 6.54 | NA | 41.85 | 43.79 | Na | 40.31 | 49.67 | NA | 0．00 | 0.00 | NA |
| Fedding－Fand Bluft ．CA CSA（2017－2018） | ${ }^{38}$ | 258 | 0.82 | 142 | 0．oo | 0．00 | 0．00 | 26.67 | 21.05 | 30.28 | 61．86 | 63.16 | 66.20 | 11.48 | 15.79 | 3.52 | 0．00 | 0．00 | 0.00 |
| Redding－Rad Bluff．CA CSA（2019） | 22 | 247 | 0.47 | Na | 0．00 | 0．00 | NA | 26.42 | 13.64 | NA | 62.03 | 59.09 | NA | 11.55 | 27.27 | Na | 0．00 | 0．00 | NA |
| Sacramento－Roneville． CA CSA（2017－201B） | 238 | 2.221 | 5.12 | 720 | 3.97 | 1.68 | 1.81 | 15.40 | 12.61 | 8.89 | 36.15 | 31.93 | 34.03 | 44.11 | 52.94 | 55.14 | 0.37 | 0．84 | 0.14 |
| Sacrament○－Roseville． <br> CA CSA（2019） | 183 | 1．804 | 3.94 | NA | 4.21 | 1.09 | NA | 15.95 | 14.21 | NA | 34.23 | 31.15 | NA | 45.26 | 53.55 | NA | 0.36 | 0.00 | NA |
|  | so | 1.167 | 1.94 | 159 | 1.01 | 0.00 | 1.26 | 16.31 | 12.22 | 14.47 | 41.20 | 53.33 | 53.46 | 41.01 | 34.44 | 30.82 | 0.46 | 0.00 | 0.00 |
| San Diego－Chula Vista－ Carlabed．CA MSA | 324 | ${ }^{3.345}$ | 6.97 | 288 | 3.93 | 1.85 | 1.04 | 17.66 | 9.57 | 13.89 | 37.69 | 41.05 | 39.24 | 40.71 | 46.91 | 45.49 | 0．00 | 0.62 | 0.35 |
| San Luis Obis po－Paso Robles．CA MSA | 110 | 1．160 | 2.37 | 206 | 0．oo | 0．oo | －．oo | 10.07 | 15.45 | 8.74 | 71.73 | 57.27 | 70.87 | 16.69 | 27.27 | 19.42 | 1.51 | 0．00 | 0.97 |
| a－Santa Barbara．CA MSA | 123 | 1，604 | 2.65 | 200 | 4.43 | o．oo | 5.50 | 17.87 | 15.45 | 16.50 | 24.34 | 22.76 | 29.00 | 53.03 | 61.79 | 48.50 | 0． 33 | 0．oo | 0.50 |
| Porterville－ <br> 2018） <br> 2018） | 24 | 262 | 0.52 | 131 | 2.28 | 0.00 | 0．00 | 17.91 | ${ }^{8.33}$ | 9.16 | 25.04 | 25.00 | 22.14 | 54.63 | 66.67 | 68.70 | 0.15 | 0.00 | 0.00 |
| V ia alie－Porterville－ <br> Hantord．CA CesA（2019） | 33 | 496 | 0.71 | NA | 2.27 | 0.00 | NA | 16.79 | 12.12 | NA | 26.32 | 33.33 | NA | 54.46 | 54.55 | NA | 0.15 | 0．00 | NA |
| 99999 CA Non－Matro Roll－up $(2017-2018)$ | 69 | 732 | ${ }^{1.48}$ | 229 | 1.36 | 2.90 | 2.18 | 26.31 | 36.23 | 27.51 | 57.39 | 53.62 | 59.83 | 14.94 | 7.25 | 10.48 | 0．00 | 0．oo | 0.00 |
| CA Non－Matro Roll－up （2019） | 65 | 849 | 1.40 | N／ | 1.22 | 1.54 | n／ | 28.07 | ${ }^{33.85}$ | NA | 56.07 | 56.92 | NA | 14.64 | 7.69 | NA | o．oo | 0．00 | NA |
| Total | 4.650 | 54.411 | 100.02 | 7.400 | 3.44 | 1.87 | 2.00 | 18.80 | 16.88 | 17.30 | 3 e .64 | $3 \mathrm{e.84}$ | 38.68 | 38.78 | 44．80 | 41.80 | 0.36 | 0.32 | 0.22 |

$\frac{(2019)}{70 t a 1}$
 Source： 2016 Aes；01／01／2017－12／31／2010
oue to rounding，totals may not equal 100.0

Charter Number: 8


Due to rounding, totals may not equal 100.0

| Table O: | Assessment Area Distribution of Home Mortgage Loans By Income Category of the Geography - Colorado |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Home Mortgage Loans |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \% \text { of } \\ & \text { Total } \end{aligned}$ | Overall Market |  | $\begin{gathered} \% \\ \begin{array}{c} \text { Bank } \\ \text { Loans } \end{array} \end{gathered}$ | \% Aggregate |  | $\begin{gathered} \% \\ \begin{array}{c} \text { Bank } \\ \text { Loans } \end{array} \end{gathered}$ | $\stackrel{\%}{\text { Aggregate }}$ |  | $\begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate |  | $\begin{gathered} \% \\ \begin{array}{c} \text { Bank } \\ \text { Loans } \end{array} \end{gathered}$ | \% Aggregate |  | $\begin{gathered} \text { \% Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 Denver-Aurora, CO CSA (2017-2018) | 19,226 | 6,881,084 | 55.18 | 187,342 | 4.32 | 4.97 | 4.51 | 18.74 | 19.02 | 18.97 | 36.01 | 31.92 | 35.46 | 40.93 | 44.09 | 41.04 | 0.00 | 0.01 | 0.02 |
| $\qquad$ | 10,296 | 4,231,999 | 29.55 | N/A | 4.32 | 4.14 | N/A | 18.74 | 16.89 | N/A | 36.01 | 31.52 | N/A | 40.93 | 47.46 | N/A | 0.00 | 0.00 | N/A |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & \text { 17820 } \\ & \text { Colorado Springs, CO MSA } \\ & \text { (2017-2018) } \\ & \hline 170020 \end{aligned}$ | 1,937 | 513,917 | 5.56 | 38,032 | 3.31 | 1.50 | 2.67 | 20.67 | 14.20 | 19.40 | 42.22 | 39.24 | 44.37 | 33.81 | 45.07 | 33.55 | 0.00 | 0.00 | 0.00 |
| 17820 Colorado Springs, CO MSA (2019) | 970 | 273,770 | 2.78 | N/A | 3.31 | 2.78 | N/A | 20.67 | 14.64 | N/A | 42.22 | 35.26 | N/A | 33.81 | 47.32 | N/A | 0.00 | 0.00 | N/A |
| 99999 <br> Edwards-Glenwood Springs, CO CSA (2017- <br> 2018) | 117 | 255,184 | 0.34 | 849 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 | 100.00 | 100.00 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Edwards-Glenwood <br> Springs, CO CSA (2019) | 64 | 215,566 | 0.18 | N/A | 0.00 | 0.00 | N/A | 0.00 | 0.00 | N/A | 0.00 | 0.00 | N/A | 100.00 | 100.00 | N/A | 0.00 | 0.00 | N/A |
| 22660 <br> (2017-2018) | 1,424 | 422,064 | 4.09 | 17,554 | 1.51 | 0.56 | 1.31 | 20.52 | 20.86 | 21.43 | 52.73 | 43.12 | 47.36 | 25.24 | 35.46 | 29.90 | 0.00 | 0.00 | 0.00 |
| 22660 <br> Fort Collins, CO MSA (2019) | 808 | 268,914 | 2.32 | N/A | 1.51 | 0.62 | N/A | 20.52 | 19.31 | N/A | 52.73 | 42.95 | N/A | 25.24 | 37.13 | N/A | 0.00 | 0.00 | N/A |
| Total | 34,842 | 13,062,498 | 100.00 | 243,777 | 3.93 | 4.16 | 3.97 | 19.08 | 17.98 | 19.15 | 38.05 | 32.85 | 37.59 | 38.94 | 45.00 | 39.28 | 0.00 | 0.01 | 0.01 |

Due to rounding, totals may not equal 100.0

| Table P: <br> Assessment Area: | Assessment Area Distribution of Home Mortgage Loans By Income Category of the Borrower - Colorado |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Not Available-Income Borrowers |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Home Mortgage Loans |  |  |  | Low-Income Borrowers |  |  | Moderate Income Borrowers |  |  | Middle-Income Borrowers |  |  | Upper-Income Borrowers |  |  |  |  |  |
|  | \# | \$ | $\begin{aligned} & \text { \% of } \\ & \text { Total } \end{aligned}$ | $\begin{aligned} & \text { Overall } \\ & \text { Market } \end{aligned}$ | \% Families | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | \% Aggregate | $\begin{gathered} \% \\ \text { Families } \end{gathered}$ | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | $\stackrel{\%}{\text { Aggregate }}$ | \% Families | $\begin{array}{\|c} \hline \% \\ \hline \text { Bank } \\ \text { Loans } \end{array}$ | \% Aggregate | \% Families | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | \% Aggregate | \% Families | $\begin{gathered} \text { \% Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Denver-Aurora, CO CSA (2017-2018) | 19,226 | 6,881,084 | 55.18 | 187,342 | 21.32 | 6.05 | 6.20 | 17.51 | 21.58 | 18.45 | 20.45 | 20.94 | 23.47 | 40.71 | 48.09 | 36.56 | 0.00 | 3.33 | 15.33 |
| 99999 Denver-Aurora, CO CSA (2019) | 10,296 | 4,231,999 | 29.55 | N/A | 21.32 | 5.96 | N/A | 17.51 | 21.63 | N/A | 20.45 | 19.49 | N/A | 40.71 | 49.37 | N/A | 0.00 | 3.55 | N/A |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & 17820 \\ & \text { Colorado Springs, CO MSA } \\ & (201-2018) \end{aligned}$ | 1,937 | 513,917 | 5.56 | 38,032 | 20.37 | 5.52 | 5.36 | 18.47 | 17.55 | 19.95 | 20.32 | 26.28 | 23.69 | 40.84 | 45.64 | 33.14 | 0.00 | 5.01 | 17.86 |
| $\begin{aligned} & 17820 \\ & \text { Colorado Springs, CO MSA } \\ & (2019) \end{aligned}$ | 970 | 273,770 | 2.78 | N/A | 20.37 | 6.60 | N/A | 18.47 | 16.19 | N/A | 20.32 | 24.23 | N/A | 40.84 | 51.24 | N/A | 0.00 | 1.75 | N/A |
| 99999 <br> Edwards-Glenwood <br> Springs, CO CSA (2017- <br> 2018) | 117 | 255,184 | 0.34 | 849 | 9.36 | 0.00 | 2.36 | 9.72 | 3.42 | 4.83 | 11.84 | 10.26 | 12.01 | 69.08 | 57.26 | 62.54 | 0.00 | 29.06 | 18.26 |
| 99999 <br> Edwards-Glenwood <br> Springs, CO CSA (2019) | 64 | 215,566 | 0.18 | N/A | 9.36 | 0.00 | N/A | 9.72 | 0.00 | N/A | 11.84 | 6.25 | N/A | 69.08 | 50.00 | N/A | 0.00 | 43.75 | N/A |
| 22660 Fort Collins, CO MSA (2017-2018) | 1,424 | 422,064 | 4.09 | 17,554 | 20.52 | 5.20 | 6.11 | 17.23 | 17.84 | 17.04 | 22.62 | 23.46 | 23.62 | 39.64 | 50.28 | 39.07 | 0.00 | 3.23 | 14.16 |
| 22660 <br> Fort Collins, CO MSA (2019) | 808 | 268,914 | 2.32 | N/A | 20.52 | 4.95 | N/A | 17.23 | 17.20 | N/A | 22.62 | 21.66 | N/A | 39.64 | 53.47 | N/A | 0.00 | 2.72 | N/A |
| Total | 34,842 | 13,062,498 | 100.00 | 243,777 | 21.07 | 6.14 | 6.05 | 17.62 | 21.64 | 18.53 | 20.57 | 21.74 | 23.48 | 40.74 | 50.48 | 36.29 | 0.00 | 3.59 | 15.65 |

Due to rounding, totals may not equal 100.0

Charter Number: 8

| Table Q: | Assessment Area Distribution of Loans to Small Businesses By Income Category of the Geography - Colorado |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Small Businesses |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \% \text { of } \\ & \text { Total } \end{aligned}$ | Overall Market | $\begin{gathered} \hline \text { \% of } \\ \text { Busines- } \\ \text { ses } \end{gathered}$ | $\begin{gathered} \% \\ \begin{array}{c} \text { Bank } \\ \text { Baans } \end{array} \\ \hline \end{gathered}$ | \% Aggregate | $\begin{array}{\|c\|} \hline \% \text { of } \\ \text { Busines- } \\ \text { ses } \end{array}$ | $\begin{gathered} \% \\ \text { Bank } \\ \text { Boans } \end{gathered}$ | \% Aggregate | $\begin{gathered} \text { \% of } \\ \text { Busines- } \\ \text { ses } \end{gathered}$ | $\begin{array}{\|c\|} \hline \% \\ \hline \text { Bank } \\ \text { Loans } \end{array}$ | \% Aggregate | $\begin{gathered} \text { \% of } \\ \text { Busines- } \\ \text { ses } \end{gathered}$ | $\begin{array}{c\|} \hline \% \\ \hline \text { Bank } \\ \text { Loans } \end{array}$ | \% Aggregate | $\begin{gathered} \text { \% of } \\ \text { Busines- } \\ \text { ses } \end{gathered}$ | $\begin{gathered} \text { \% Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Denver-Aurora, CO CSA <br> (2017-2018) (2017-2018) | 41,425 | 647,813 | 47.74 | 101,557 | 6.23 | 5.60 | 7.15 | 19.17 | 17.00 | 19.78 | 33.48 | 31.15 | 32.23 | 40.84 | 46.02 | 40.54 | 0.29 | 0.24 | 0.30 |
| 99999 Denver-Aurora, CO CSA <br> Denver- <br> (2019) | 30,736 | 467,137 | 35.42 | N/A | 6.18 | 5.60 | N/A | 19.11 | 17.03 | N/A | 33.35 | 31.32 | N/A | 41.10 | 45.85 | N/A | 0.27 | 0.20 | N/A |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 17820 <br> Colorado Springs, CO MSA <br> (2017-2018) | 3,988 | 58,792 | 4.60 | 14,605 | 7.39 | 7.32 | 7.56 | 23.32 | 19.28 | 22.67 | 33.14 | 28.69 | 33.19 | 35.98 | 44.66 | 36.51 | 0.18 | 0.05 | 0.07 |
| 17820 <br> Colorado Springs, CO MSA <br> (2019) | 3,154 | 40,304 | 3.63 | N/A | 7.18 | 6.88 | N/A | 23.19 | 19.28 | N/A | 33.04 | 27.62 | N/A | 36.43 | 46.23 | N/A | 0.17 | 0.00 | N/A |
| 99999 <br> Edwards-Glenwood <br> Springs, CO CSA (2017- <br> 2018) | 382 | 5,333 | 0.44 | 1,256 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 | 100.00 | 100.00 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Edwards-Glenwood Springs, CO CSA (2019) | 339 | 4,064 | 0.39 | N/A | 0.00 | 0.00 | N/A | 0.00 | 0.00 | N/A | 0.00 | 0.00 | N/A | 100.00 | 100.00 | N/A | 0.00 | 0.00 | N/A |
| 22660 <br> Fort Collins, CO MSA <br> (2017-2018) | 3,956 | 58,892 | 4.56 | 10,180 | 3.11 | 3.67 | 4.69 | 28.49 | 25.91 | 27.36 | 42.88 | 38.68 | 40.56 | 25.51 | 31.75 | 27.40 | 0.01 | 0.00 | 0.00 |
| $\begin{aligned} & 2660 \\ & \text { Fort Collins, CO MSA } \\ & \text { (2019) } \end{aligned}$ | 2,800 | 41,278 | 3.23 | N/A | 2.97 | 3.96 | N/A | 27.81 | 27.00 | N/A | 42.69 | 38.93 | N/A | 26.52 | 30.11 | N/A | 0.01 | 0.00 | N/A |
| Total | 86,780 | 1,323,613 | 100.01 | 127,598 | 6.04 | 5.54 | 6.93 | 20.18 | 17.78 | 20.52 | 33.82 | 31.30 | 32.69 | 39.72 | 45.19 | 39.62 | 0.24 | 0.19 | 0.24 |


Due to rounding, totals may not equal 100.0

| Table R: <br>  <br> Assessment Area: <br> 俋 | Assessment Area Distribution of Loans to Small Businesses Loans by Gross Annual Revenues - Colorado |  |  |  |  |  |  |  |  | 2017-2019 <br> Businesses with Revenues Not Available |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Small Businesses |  |  |  | Businesses with Revenues <= 1 MM |  |  | Businesses with Revenues > 1 MM |  |  |  |
|  | \# | \$ | \% of Total | Overall | \% of Businesses | \% Bank Loans | \% Aggregate | \% of Businesses | \% Bank Loans | \% of Businesses | \% Bank Loans |
|  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Denver-Aurora, CO CSA <br> (2017-2018) | 41,425 | 647,813 | 47.74 | 101,557 | 88.66 | 71.62 | 48.14 | 4.23 | 15.24 | 7.12 | 13.13 |
| 99999 <br> Denver-Aurora, CO CSA <br> (2019) | 30,736 | 467,137 | 35.42 | N/A | 90.13 | 74.36 | N/A | 3.46 | 16.77 | 6.41 | 8.88 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{array}{\|l\|} \hline 17820 \\ \text { Colorado Springs, CO MSA } \\ (2017-2018) \end{array}$ | 3,988 | 58,792 | 4.60 | 14,605 | 88.69 | 71.11 | 52.49 | 3.44 | 15.70 | 7.87 | 13.19 |
| 17820 Colorado Springs, CO MSA (2019) | 3,154 | 40,304 | 3.63 | N/A | 90.20 | 74.32 | N/A | 2.84 | 17.15 | 6.95 | 8.53 |
| 99999 <br> Edwards-Glenwood <br> Springs, CO CSA (2017- <br> 2018) | 382 | 5,333 | 0.44 | 1,256 | 87.05 | 66.75 | 44.82 | 4.94 | 18.32 | 8.00 | 14.92 |
| 99999 <br> Edwards-Glenwood <br> Springs, CO CSA (2019) <br> 22660 | 339 | 4,064 | 0.39 | N/A | 87.99 | 75.81 | N/A | 4.09 | 14.75 | 7.92 | 9.44 |
| 22660 <br> Fort Collins, CO MSA <br> (2017-2018) | 3,956 | 58,892 | 4.56 | 10,180 | 89.09 | 72.70 | 47.33 | 3.56 | 14.46 | 7.35 | 12.84 |
| Fort Collins, CO MSA <br> (2019) | 2,800 | 41,278 | 3.23 | N/A | 90.49 | 72.96 | N/A | 2.94 | 18.71 | 6.57 | 8.32 |
| Total | 86,780 | 1,323,613 | 100.01 | 127,598 | 89.48 | 72.75 | 48.54 | 3.68 | 15.96 | 6.84 | 11.29 |

Source: 2015 ACS; 0101/2017-12/31/2019 Bank Data, 2019 HMDA Aggregate Data, 'N/A' data not available.
Due to rounding, totals may not equal 100.0

| Table S: | Assessment Area Distribution of Loans to Farms By Income Category of the Geography - Colorado |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Farms |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \text { \% of } \\ & \text { Total } \end{aligned}$ | Overall Market | $\%$ of Farms | $\begin{array}{\|c\|} \hline \% \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | $\begin{array}{\|c\|} \hline \text { \% } \\ \text { Aggregate } \end{array}$ | \% of Farms | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | $\begin{gathered} \text { \% } \\ \text { Aggregate } \end{gathered}$ | $\begin{aligned} & \text { \% of } \\ & \text { Farms } \end{aligned}$ | $\begin{array}{\|c\|} \hline \% \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | $\stackrel{\%}{\text { Agregate }}$ | $\%$ of Farms | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | $\begin{array}{\|c\|} \hline \text { \% } \\ \text { Aggregate } \end{array}$ | \% of Farms | $\begin{gathered} \text { \% Bank } \\ \text { Loans } \end{gathered}$ | $\begin{gathered} \text { \% } \\ \text { Aggregate } \end{gathered}$ |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 Denver-Aurora, CO CSA (2017-2018) | 336 | 4,053 | 40.73 | 974 | 5.98 | 1.19 | 1.75 | 18.21 | 11.90 | 11.19 | 38.28 | 45.83 | 54.41 | 37.32 | 41.07 | 32.65 | 0.21 | 0.00 | 0.00 |
| Den999 <br> Denver-Aurora, CO CSA <br> (2019) | 287 | 3,569 | 34.79 | N/A | 6.29 | 6.27 | NA | 18.32 | 8.71 | N/A | 37.03 | 42.16 | N/A | 38.04 | 42.86 | N/A | 0.32 | 0.00 | N/A |
| Limited Review : |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 17820 <br> Colorado Springs, CO MSA (2017-2018) | 34 | 256 | 4.12 | 73 | 5.93 | 2.94 | 1.37 | 20.99 | 2.94 | 10.96 | 43.03 | 26.47 | 32.88 | 29.92 | 67.65 | 54.79 | 0.14 | 0.00 | 0.00 |
| $\begin{aligned} & \text { 17820 } \\ & \text { Colorado Springs, co } \\ & \text { MSA (2019) } \end{aligned}$ | 34 | 324 | 4.12 | N/A | 6.97 | 2.94 | N/A | 20.67 | 0.00 | N/A | 42.13 | 41.18 | N/A | 30.17 | 55.88 | N/A | 0.06 | 0.00 | N/A |
| 99999 <br> Edw ards-Glenw ood Springs, CO CSA (20172018) | 7 | 61 | 0.85 | 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 | 100.00 | 100.00 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Edw ards-Glenw ood <br> Springs, CO CSA (2019) | 4 | 63 | 0.48 | N/A | 0.00 | 0.00 | NA | 0.00 | 0.00 | N/A | 0.00 | 0.00 | N/A | 100.00 | 100.00 | N/A | 0.00 | 0.00 | N/A |
| 22660 <br> Fort Collins, CO MSA <br> (2017-2018) | 75 | 576 | 9.09 | 154 | 4.08 | 1.33 | 1.30 | 19.35 | 12.00 | 7.14 | 46.64 | 44.00 | 51.95 | 29.86 | 42.67 | 39.61 | 0.08 | 0.00 | 0.00 |
| Fort Collins, CO MSA (2019) | 48 | 541 | 5.82 | N/A | 4.22 | 4.17 | N/A | 19.01 | 6.25 | N/A | 46.39 | 41.67 | N/A | 30.32 | 47.92 | N/A | 0.07 | 0.00 | N/A |
| Total | 825 | 9,443 | 100.00 | 1,209 | 5.90 | 3.27 | 1.65 | 18.51 | 9.45 | 10.59 | 38.88 | 42.55 | 52.44 | 36.49 | 44.73 | 35.32 | 0.22 | 0.00 | 0.00 |

Source: 2015 ACS; 01/01/2017-12/31/2019
Due to rounding, totals may not equal 100.0


[^130]Charter Number: 8

| ( Assessment Area Distribution of Home Mortgage Loans By Income Category of the Geography - Florida $20.2017-2019$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Home Mortgage Loans |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \% \text { of } \\ & \text { Total } \end{aligned}$ | Overall Market | \% of OwnerOccupied Housing Units | $\begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | \% of <br> Owner- <br> Occupied <br> Housing <br> Units | $\begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% <br> Aggregate | \% of OwnerOccupied Housing Units | $\begin{aligned} & \% \\ & \text { Bank } \\ & \text { Loans } \end{aligned}$ | \% Aggregate | \% of Owner- Occupied Housing Units | $\begin{array}{\|l} \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | \% Aggregate | \% of OwnerOccupied Housing Units | $\begin{aligned} & \text { \% Bank } \\ & \text { Loans } \end{aligned}$ | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Miami-Port St. Lucie-Fort Lauderdale, FL CSA (20172018) | 12,554 | 3,922,572 | 22.76 | 182,420 | 2.48 | 1.47 | 2.00 | 21.98 | 17.65 | 19.73 | 35.42 | 32.68 | 37.06 | 39.99 | 48.00 | 40.96 | 0.14 | 0.20 | 0.26 |
| 99999 <br> Miami-Port St. Lucie-Fort Lauderdale, FL CSA (2019) | 7,369 | 2,537,185 | 13.36 | N/A | 2.48 | 1.78 | N/A | 21.98 | 18.35 | N/A | 35.42 | 30.59 | N/A | 39.99 | 48.91 | N/A | 0.14 | 0.38 | N/A |
| 99999 <br> Orlando-Lakeland-Deltona, <br> FL CSA (2017-2018) | 6,386 | 1,309,049 | 11.58 | 117,597 | 0.88 | 0.67 | 0.78 | 19.13 | 16.14 | 16.38 | 47.06 | 43.08 | 47.46 | 32.91 | 40.10 | 35.33 | 0.02 | 0.00 | 0.05 |
| 99999 <br> Orlando-Lakeland-Deltona, <br> FL CSA (2019) | 3,605 | 900,156 | 6.54 | N/A | 0.88 | 0.39 | N/A | 19.13 | 14.15 | N/A | 47.06 | 40.97 | N/A | 32.91 | 44.44 | N/A | 0.02 | 0.06 | N/A |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Naples, FL CSA (20172018) | 2,361 | 717,752 | 4.28 | 45,270 | 2.15 | 0.51 | 1.51 | 17.79 | 16.73 | 18.83 | 43.20 | 36.93 | 44.16 | 36.86 | 45.83 | 35.50 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Cape Coral-Fort MyersNaples, FL CSA (2019) | 1,377 | 475,805 | 2.50 | N/A | 2.15 | 0.87 | N/A | 17.79 | 13.07 | N/A | 43.20 | 40.23 | N/A | 36.86 | 45.82 | N/A | 0.00 | 0.00 | N/A |
|  | 335 | 68,132 | 0.61 | 6,453 | 2.42 | 2.99 | 3.86 | 14.90 | 8.06 | 11.85 | 37.49 | 31.64 | 35.21 | 44.58 | 55.52 | 48.38 | 0.62 | 1.79 | 0.70 |
| 99999 <br> Jacksonville-St. MarysPalatka, FL-GA CSA | 3,260 | 798,581 | 5.91 | 57,817 | 3.42 | 0.64 | 1.29 | 19.67 | 11.50 | 15.72 | 41.26 | 31.44 | 40.74 | 35.65 | 56.41 | 42.24 | 0.00 | 0.00 | 0.00 |
| 29460 <br> Lakeland-Winter Haven, FL MSA | 1,321 | 199,962 | 2.39 | 24,443 | 1.31 | 0.30 | 0.53 | 17.30 | 10.98 | 13.71 | 58.80 | 63.21 | 62.35 | 22.57 | 25.51 | 23.41 | 0.01 | 0.00 | 0.00 |
| 99999 North Port-Sarasota, FL CSA (2017-2018) | 2,472 | 610,957 | 4.48 | 41,824 | 0.83 | 0.32 | 0.45 | 16.81 | 8.54 | 13.36 | 54.75 | 48.06 | 51.57 | 27.61 | 43.08 | 34.62 | 0.00 | 0.00 | 0.00 |
| 99999 <br> North Port-Sarasota, FL <br> CSA (2019) | 1,435 | 373,753 | 2.60 | N/A | 0.83 | 0.14 | N/A | 16.81 | 11.08 | N/A | 54.75 | 45.37 | N/A | 27.61 | 43.41 | N/A | 0.00 | 0.00 | N/A |
| 36100 <br> Ocala, FL MSA | 736 | 107,403 | 1.33 | 12,017 | 0.63 | 0.00 | 0.12 | 14.48 | 8.83 | 11.32 | 69.61 | 75.14 | 70.52 | 15.28 | 16.03 | 18.05 | 0.00 | 0.00 | 0.00 |
| $37340$ <br> Palm Bay-MelbourneTitusville, FL MSA | 2,048 | 423,815 | 3.71 | 24,399 | 1.60 | 0.93 | 0.80 | 21.09 | 14.40 | 21.56 | 43.47 | 39.26 | 43.19 | 33.84 | 45.41 | 34.46 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Tallahassee-Bainbridge, FLGA CSA | 443 | 92,658 | 0.80 | 7,109 | 5.03 | 3.16 | 4.47 | 14.31 | 8.13 | 12.72 | 30.66 | 29.80 | 30.54 | 49.18 | 57.56 | 51.05 | 0.81 | 1.35 | 1.22 |
| 45300 <br> Tampa-St. PetersburgClearwater, FL MSA | 9,458 | 2,181,896 | 17.15 | 114,768 | 1.91 | 1.41 | 1.58 | 21.87 | 15.60 | 18.20 | 39.66 | 34.80 | 38.87 | 36.51 | 48.14 | 41.30 | 0.06 | 0.06 | 0.05 |
| Total | 55,160 | 14,719,676 | 100.00 | 634,117 | 1.93 | 1.10 | 1.40 | 20.19 | 15.36 | 17.50 | 41.83 | 37.34 | 42.87 | 35.97 | 46.07 | 38.11 | 0.08 | 0.13 | 0.12 |

Source: 2015 ACS ; 01s mat
Due to rounding, totals may not equal 100.0

Charter Number: 8

| Assessment Area Distribution of Home Mortgage Loans By Income Category of the Borrower - Florida |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Home Mortgage Loans |  |  |  | Low-Income Borrowers |  |  | Moderate Income Borrowers |  |  | Middle-Income Borrowers |  |  | Upper-Income Borrowers |  |  | Not Available-Income Borrowers |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \% \text { of } \\ & \text { Total } \end{aligned}$ | Overall Market | \% Families | $\begin{array}{\|c} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | \% Aggregate | - <br> Families | $\begin{array}{c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \\ \hline \end{array}$ | \% Aggregate | \% Families | $\begin{gathered} \hline \% \\ \text { Bank } \\ \text { Boans } \\ \hline \end{gathered}$ | \% Aggregate | \% Families | $\begin{array}{\|c} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | \% Aggregate | \% Families | $\begin{aligned} & \text { \% Bank } \\ & \text { Loans } \end{aligned}$ | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Miami-Port St. Lucie-Fort Lauderdale, FL CSA (20172018) | 12,554 | 3,922,572 | 22.76 | 182,420 | 22.83 | 3.64 | 3.30 | 17.16 | 12.08 | 11.03 | 17.89 | 16.27 | 18.91 | 42.12 | 54.75 | 49.15 | 0.00 | 13.25 | 17.61 |
| 99999 <br> Miami-Port St. Lucie-Fort Lauderdale, FL CSA (2019) | 7,369 | 2,537,185 | 13.36 | N/A | 22.83 | 2.74 | N/A | 17.16 | 11.59 | N/A | 17.89 | 18.74 | N/A | 42.12 | 61.92 | N/A | 0.00 | 5.01 | N/A |
| 99999 <br> Orlando-Lakeland-Deltona, FL CSA (2017-2018) | 6,386 | 1,309,049 | 11.58 | 117,597 | 20.73 | 4.67 | 4.32 | 18.41 | 14.23 | 14.11 | 19.83 | 18.38 | 21.12 | 41.03 | 45.30 | 44.12 | 0.00 | 17.41 | 16.33 |
| 99999 <br> Orlando-Lakeland-Deltona, <br> FL CSA (2019) | 3,605 | 900,156 | 6.54 | N/A | 20.73 | 4.55 | N/A | 18.41 | 15.92 | N/A | 19.83 | 20.75 | N/A | 41.03 | 54.87 | N/A | 0.00 | 3.91 | N/A |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 2,361 | 717,752 | 4.28 | 45,270 | 20.78 | 3.05 | 3.95 | 18.20 | 10.42 | 14.67 | 19.53 | 14.65 | 20.47 | 41.49 | 57.35 | 44.69 | 0.00 | 14.53 | 16.22 |
| 99999 <br> Cape Coral-Fort MyersNaples, FL CSA (2019) | 1,377 | 475,805 | 2.50 | N/A | 20.78 | 2.54 | N/A | 18.20 | 13.29 | N/A | 19.53 | 17.28 | N/A | 41.49 | 61.87 | N/A | 0.00 | 5.01 | N/A |
| 99999 <br> Gainesville-Lake City, FL CSA | 335 | 68,132 | 0.61 | 6,453 | 23.41 | 2.99 | 6.93 | 15.40 | 11.64 | 18.39 | 18.20 | 16.72 | 18.97 | 42.99 | 53.73 | 41.05 | 0.00 | 14.93 | 14.66 |
| 99999 <br> Jacksonville-St. MarysPalatka, FL-GA CSA | 3,260 | 798,581 | 5.91 | 57,817 | 21.75 | 4.33 | 5.50 | 17.38 | 11.99 | 16.51 | 19.97 | 14.72 | 21.01 | 40.90 | 50.25 | 39.03 | 0.00 | 18.71 | 17.95 |
| 29460 <br> Lakeland-Winter Haven, FL MSA | 1,321 | 199,962 | 2.39 | 24,443 | 20.42 | 2.57 | 2.99 | 18.35 | 9.69 | 13.06 | 21.44 | 17.71 | 24.80 | 39.79 | 40.35 | 38.85 | 0.00 | 29.67 | 20.30 |
| 99999 <br> North Port-Sarasota, FL CSA (2017-2018) | 2,472 | 610,957 | 4.48 | 41,824 | 19.00 | 4.61 | 5.52 | 19.40 | 13.47 | 16.56 | 21.15 | 20.71 | 21.52 | 40.45 | 53.28 | 43.59 | 0.00 | 7.93 | 12.82 |
| 99999 <br> North Port-Sarasota, FL CSA (2019) | 1,435 | 373,753 | 2.60 | N/A | 19.00 | 3.76 | N/A | 19.40 | 16.03 | N/A | 21.15 | 21.67 | N/A | 40.45 | 54.77 | N/A | 0.00 | 3.76 | N/A |
| $\begin{array}{\|l\|} \hline 36100 \\ \text { Ocala, FL MSA } \\ \hline \end{array}$ | 736 | 107,403 | 1.33 | 12,017 | 19.26 | 3.67 | 5.54 | 19.46 | 11.14 | 16.93 | 21.56 | 17.80 | 23.49 | 39.72 | 41.44 | 35.34 | 0.00 | 25.95 | 18.70 |
| 37340 <br> Palm Bay-MelbourneTitusville, FL MSA | 2,048 | 423,815 | 3.71 | 24,399 | 20.22 | 5.66 | 6.33 | 18.61 | 14.50 | 15.80 | 20.58 | 18.80 | 21.14 | 40.60 | 53.32 | 40.26 | 0.00 | 7.71 | 16.46 |
| 99999 <br> Tallahassee-Bainbridge, FL- <br> GA CSA | 443 | 92,658 | 0.80 | 7,109 | 21.11 | 4.97 | 4.29 | 15.57 | 12.19 | 15.73 | 18.35 | 17.16 | 17.88 | 44.97 | 52.82 | 41.26 | 0.00 | 12.87 | 20.85 |
| 45300 <br> Tampa-St. PetersburgClearwater, FL MSA | 9,458 | 2,181,896 | 17.15 | 114,768 | 21.59 | 4.54 | 5.01 | 17.90 | 15.23 | 16.12 | 19.12 | 17.74 | 19.91 | 41.39 | 49.63 | 41.79 | 0.00 | 12.87 | 17.18 |
| Total | 55,160 | 14,719,676 | 100.00 | 634,117 | 21.64 | 4.48 | 4.39 | 17.79 | 14.99 | 14.15 | 19.06 | 20.18 | 20.37 | 41.51 | 60.35 | 44.11 | 0.00 | 12.01 | 17.00 |

Source: 2015 ACS; 01/01/2017-12/31/2019
Due to rounding, totals may not equal 100.0

Charter Number: 8

## Table Q:

Assessment Area Distribution of Loans to Small Businesses By Income Category of the Geography - Florida
2017-2019


Due to rounding, totals may not equal 100.0

Charter Number: 8

| A R: Assessment Area Distribution of Loans to Small Businesses Loans by Gross Annual Revenues - Florida |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Small Businesses |  |  |  | Businesses with Revenues <= 1 MM |  |  | Businesses with Revenues > 1 MM |  | Businesses with Revenues Not Available |  |
| Assessment Area: | \# | \$ | \% of Total | Overall Market | \% of Businesses | \% Bank Loans | \% Aggregate | \% of Businesses | \% Bank Loans | \% of Businesses | \% Bank Loans |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Miami-Port St. Lucie-Fort Lauderdale, FL CSA (20172018) | 60,316 | 1,170,945 | 27.93 | 274,100 | 90.98 | 74.86 | 46.32 | 3.81 | 14.80 | 5.21 | 10.34 |
| 99999 <br> Miami-Port St. Lucie-Fort Lauderdale, FL CSA (2019) | 45,829 | 794,452 | 21.22 | N/A | 91.94 | 77.62 | N/A | 3.26 | 16.56 | 4.80 | 5.83 |
| 99999 <br> Orlando-Lakeland-Deltona, <br> FL CSA (2017-2018) | 19,414 | 319,805 | 8.99 | 83,192 | 89.82 | 74.13 | 47.76 | 3.47 | 14.98 | 6.71 | 10.88 |
| 99999 <br> Orlando-Lakeland-Deltona, <br> FL CSA (2019) | 14,895 | 230,099 | 6.90 | N/A | 91.05 | 75.82 | N/A | 2.90 | 17.28 | 6.05 | 6.90 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Cape Coral-Fort MyersNaples, FL CSA (20172018) | 6,103 | 102,304 | 2.83 | 32,715 | 90.37 | 71.69 | 45.61 | 3.55 | 15.39 | 6.07 | 12.93 |
| 99999 <br> Cape Coral-Fort Myers- <br> Naples, FL CSA (2019) | 4,670 | 69,715 | 2.16 | N/A | 91.38 | 72.91 | N/A | 3.07 | 17.82 | 5.55 | 9.27 |
| 99999 <br> Gainesville-Lake City, FL CSA | 1,609 | 18,755 | 0.74 | 5,108 | 87.53 | 73.28 | 46.28 | 3.68 | 15.60 | 8.79 | 11.12 |
| 99999 <br> Jacksonville-St. Marys- <br> Palatka, FL-GA CSA | 10,414 | 161,961 | 4.82 | 33,369 | 88.10 | 72.54 | 45.23 | 4.10 | 16.30 | 7.81 | 11.16 |
| $\begin{aligned} & 29460 \\ & \text { Lakeland-Winter Haven, FL } \\ & \text { MSA } \end{aligned}$ | 2,812 | 39,447 | 1.30 | 11,186 | 89.65 | 74.04 | 45.14 | 3.25 | 14.83 | 7.09 | 11.13 |
| 99999 <br> North Port-Sarasota, FL CSA (2017-2018) | 5,904 | 99,289 | 2.73 | 27,986 | 90.53 | 71.66 | 49.34 | 3.50 | 16.29 | 5.97 | 12.04 |
| 99999 North Port-Sarasota, FL CSA (2019) | 4,664 | 68,801 | 2.16 | N/A | 91.40 | 75.15 | N/A | 3.07 | 16.60 | 5.53 | 8.25 |
| $\begin{aligned} & 36100 \\ & \text { Ocala, FL MSA } \\ & \hline \end{aligned}$ | 1,514 | 19,807 | 0.70 | 6,838 | 89.03 | 71.40 | 46.72 | 3.67 | 19.48 | 7.31 | 9.11 |
| 37340 <br> Palm Bay-MelbourneTitusville, FL MSA | 5,214 | 87,483 | 2.41 | 12,893 | 88.83 | 73.78 | 48.46 | 3.77 | 15.61 | 7.40 | 10.61 |
| 99999 <br> Tallahassee-Bainbridge, FLGA CSA | 1,293 | 15,241 | 0.60 | 5,773 | 86.75 | 74.86 | 49.70 | 3.87 | 16.32 | 9.38 | 8.82 |
| 45300 <br> Tampa-St. PetersburgClearwater, FL MSA | 31,323 | 519,216 | 14.50 | 81,431 | 89.29 | 74.54 | 47.69 | 3.91 | 16.00 | 6.80 | 9.46 |
| Total | 215,974 | 3,717,320 | 99.99 | 574,591 | 90.79 | 75.00 | 46.83 | 3.47 | 15.84 | 5.74 | 9.16 |

Source: 2015 ACS; 01/01/2017-12/31/2019 Bank Data, 2019 HMDA Aggregate Data, 'N/A' data not available.
Due to rounding, totals may not equal 100.0

Charter Number: 8

| Table S: Assessment Area Distribution of Loans to Farms By Income Category of the Geography - Florida |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Farms |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \text { \% of } \\ & \text { Total } \end{aligned}$ | Overall Market | $\%$ of Farms | \% Bank Loans | \% <br> Aggregate | $\%$ of Farms |  | \% Aggregate | $\%$ of Farms |  | \% <br> Aggregate | \% of Farms |  | \% Aggregate | $\%$ of Farms | \% Bank Loans | \% Aggregate |
| Full Review : |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Miami-Port St. Lucie-Fort Lauderdale, FL CSA <br> (2017-2018) | 354 | 4,167 | 22.35 | 680 | 4.35 | 1.69 | 2.21 | 23.68 | 10.17 | 15.88 | 32.63 | 33.62 | 26.18 | 38.99 | 54.24 | 55.29 | 0.34 | 0.28 | 0.44 |
| 99999 <br> Miami-Port St. Lucie-Fort <br> Lauderdale, FL CSA <br> (2019) <br> 9 | 297 | 3,811 | 18.75 | N/A | 4.32 | 1.68 | N/A | 24.07 | 11.11 | N/A | 32.58 | 25.93 | N/A | 38.69 | 61.28 | NA | 0.34 | 0.00 | N/A |
| 99999 <br> Orlando-Lakeland- <br> Deltona, FL CSA (2017- <br> 2018) | 145 | 1,429 | 9.15 | 289 | 1.03 | 0.00 | 0.69 | 22.99 | 11.03 | 18.69 | 45.59 | 45.52 | 46.02 | 30.30 | 43.45 | 34.26 | 0.09 | 0.00 | 0.35 |
| 99999 <br> Orlando-LakelandDeltona, FL CSA (2019) | 113 | 1,402 | 7.13 | N/A | 1.03 | 0.00 | N/A | 23.19 | 12.39 | N/A | 45.55 | 46.02 | N/A | 30.13 | 41.59 | N/A | 0.11 | 0.00 | N/A |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Cape Coral-Fort MyersNaples, FL CSA (20172018) | 61 | 576 | 3.85 | 149 | 3.79 | 1.64 | 11.41 | 23.51 | 11.48 | 23.49 | 45.50 | 42.62 | 41.61 | 27.17 | 44.26 | 23.49 | 0.03 | 0.00 | 0.00 |
| 99999 <br> Cape Coral-Fort MyersNaples, FL CSA (2019) | 40 | 363 | 2.53 | N/A | 3.82 | 0.00 | N/A | 23.76 | 20.00 | N/A | 45.51 | 45.00 | NA | 26.89 | 35.00 | NA | 0.02 | 0.00 | N/A |
| 99999 <br> Gainesville-Lake City, FL CSA | 30 | 279 | 1.89 | 81 | 3.30 | 0.00 | 0.00 | 12.77 | 10.00 | 12.35 | 50.64 | 56.67 | 56.79 | 33.19 | 33.33 | 30.86 | 0.11 | 0.00 | 0.00 |
| 99999 <br> Jacksonville-St. MarysPalatka, FL-GA CSA | 64 | 738 | 4.04 | 117 | 2.91 | 3.13 | 2.56 | 20.12 | 21.88 | 21.37 | 45.57 | 42.19 | 49.57 | 31.40 | 32.81 | 26.50 | 0.00 | 0.00 | 0.00 |
| 29460 Lakeland-Winter Haven, FL MSA | 62 | 2,376 | 3.91 | 83 | 2.17 | 3.23 | 4.82 | 17.35 | 4.84 | 15.66 | 58.60 | 59.68 | 63.86 | 21.88 | 32.26 | 15.66 | 0.00 | 0.00 | 0.00 |
| 99999 <br> North Port-Sarasota, FL CSA (2017-2018) | 45 | 632 | 2.84 | 122 | 1.52 | 0.00 | 0.82 | 20.72 | 28.89 | 25.41 | 47.86 | 26.67 | 26.23 | 29.89 | 44.44 | 47.54 | 0.00 | 0.00 | 0.00 |
| 99999 <br> North Port-Sarasota, FL CSA (2019) | 39 | 566 | 2.46 | NA | 1.73 | 0.00 | NA | 20.69 | 2.56 | N/A | 48.24 | 30.77 | N/A | 29.34 | 66.67 | NA | 0.00 | 0.00 | N/A |
| $\begin{aligned} & 36100 \\ & \text { Ocala, FL MSA } \end{aligned}$ | 69 | 772 | 4.36 | 89 | 0.92 | 0.00 | 0.00 | 17.57 | 21.74 | 17.98 | 68.17 | 62.32 | 64.04 | 13.34 | 15.94 | 17.98 | 0.00 | 0.00 | 0.00 |
| 37340 <br> Palm Bay-MelbourneTitusville, FL MSA | 37 | 360 | 2.34 | 32 | 2.39 | 0.00 | 0.00 | 25.53 | 18.92 | 21.88 | 42.29 | 51.35 | 31.25 | 29.79 | 29.73 | 46.88 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Tallahassee-Bainbridge, <br> FL-GA CSA | 8 | 71 | 0.51 | 15 | 4.96 | 0.00 | 13.33 | 15.76 | 0.00 | 6.67 | 31.00 | 25.00 | 13.33 | 47.78 | 75.00 | 66.67 | 0.51 | 0.00 | 0.00 |
| 45300 <br> Tampa-St. PetersburgClearw ater, FL MSA | 220 | 2,383 | 13.89 | 226 | 2.48 | 3.18 | 1.77 | 24.41 | 15.45 | 22.12 | 39.80 | 35.91 | 38.50 | 33.20 | 45.45 | 37.61 | 0.11 | 0.00 | 0.00 |
| Total | 1,584 | 19,925 | 100.00 | 1,883 | 2.91 | 1.45 | 2.55 | 22.85 | 12.88 | 18.59 | 41.00 | 38.26 | 38.13 | 33.06 | 47.35 | 40.52 | 0.17 | 0.06 | 0.21 |

Source: 2015 ACS; 01/01/2017 - 12/31/2019 Bank Data, 2019 HMDA Aggregate Data, 'N/A' data not available.
Due to rounding, totals may not equal 100.0

Charter Number: 8 Table T: $\quad$ Assessment Area Distribution of Loans to Farms by Gross Annual Revenues - Florida

| Assessment Area Distribution of Loans to Farms by Gross Annual Revenues - Florida |  |  |  |  |  |  |  | Farms with Revenues $\mathbf{>} \mathbf{1 M M}$ |  | Farms with Revenues Not Available |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Farms |  |  |  | Farms with Revenues <= 1mm |  |  |  |  |  |  |
| Assessment Area: | \# | \$ | \% of Total | Overall Market | $\begin{gathered} \text { \% of } \\ \text { Businesses } \\ \hline \end{gathered}$ | \% Bank Loans | \% Aggregate | $\begin{gathered} \text { \% of } \\ \text { Businesses } \\ \hline \end{gathered}$ | \% Bank Loans | $\begin{gathered} \% \text { of } \\ \text { Businesses } \end{gathered}$ | \% Bank Loans |
| Full Review : |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Miami-Port St. Lucie-Fort Lauderdale, FL CSA <br> (2017-2018) | 354 | 4,167 | 22.35 | 680.00 | 95.96 | 76.55 | 51.18 | 2.80 | 12.71 | 1.24 | 10.73 |
| 99999 <br> Miami-Port St. Lucie-Fort Lauderdale, FL CSA (2019) | 297 | 3,811 | 18.75 | 0.00 | 96.47 | 77.44 | N/A | 2.35 | 13.47 | 1.17 | 9.09 |
| 99999 <br> Orlando-Lakeland- <br> Deltona, FL CSA (2017- <br> 2018) | 145 | 1,429 | 9.15 | 289.00 | 96.10 | 73.79 | 52.94 | 2.43 | 10.34 | 1.47 | 15.86 |
| 99999 <br> Orlando-Lakeland- <br> Deltona, FL CSA (2019) | 113 | 1,402 | 7.13 | 0.00 | 96.51 | 82.30 | N/A | 2.13 | 10.62 | 1.36 | 7.08 |
| Limited Review : |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Cape Coral-Fort MyersNaples, FL CSA (2017- 2018) | 61 | 576 | 3.85 | 149.00 | 96.07 | 80.33 | 49.66 | 2.51 | 13.11 | 1.42 | 6.56 |
| 99999 <br> Cape Coral-Fort Myers- <br> Naples, FL CSA (2019) | 40 | 363 | 2.53 | 0.00 | 96.46 | 70.00 | N/A | 2.26 | 22.50 | 1.27 | 7.50 |
| 99999 <br> Gaines ville-Lake City, FL <br> CSA | 30 | 279 | 1.89 | 81.00 | 95.11 | 76.67 | 59.26 | 2.66 | 6.67 | 2.23 | 16.67 |
| 99999 <br> Jacksonville-St. Marys- <br> Palatka, FL-GA CSA | 64 | 738 | 4.04 | 117.00 | 96.56 | 79.69 | 49.57 | 2.16 | 7.81 | 1.27 | 12.50 |
| 29460 <br> Lakeland-Winter Haven, FL MSA | 62 | 2,376 | 3.91 | 83.00 | 95.61 | 61.29 | 60.24 | 3.18 | 24.19 | 1.20 | 14.52 |
| 99999 <br> North Port-Sarasota, FL CSA (2017-2018) | 45 | 632 | 2.84 | 122.00 | 96.19 | 77.78 | 56.56 | 2.57 | 13.33 | 1.24 | 8.89 |
| 99999 <br> North Port-Sarasota, FL CSA (2019) | 39 | 566 | 2.46 | 0.00 | 96.76 | 84.62 | N/A | 2.11 | 12.82 | 1.13 | 2.56 |
| $\begin{aligned} & 36100 \\ & \text { Ocala, FL MSA } \end{aligned}$ | 69 | 772 | 4.36 | 89.00 | 97.31 | 81.16 | 55.06 | 1.77 | 11.59 | 0.92 | 7.25 |
| 37340 <br> Palm Bay-MelbourneTitusville, FL MSA | 37 | 360 | 2.34 | 32.00 | 97.61 | 70.27 | 59.38 | 1.64 | 8.11 | 0.76 | 21.62 |
| $\begin{aligned} & 99999 \\ & \text { Tallahassee-Bainbridge, } \\ & \text { FL-GA CSA } \end{aligned}$ | 8 | 71 | 0.51 | 15.00 | 96.95 | 100.00 | 73.33 | 1.65 | 0.00 | 1.40 | 0.00 |
| $\begin{aligned} & 45300 \\ & \text { Tampa-St. Petersburg- } \end{aligned}$ Clearw ater, FL MSA | 220 | 2,383 | 13.89 | 226.00 | 96.31 | 79.09 | 54.87 | 2.30 | 12.27 | 1.39 | 8.64 |
| Total | 1,584 | 19,925 | 100.00 | 1,883 | 96.33 | 77.15 | 53.27 | 2.39 | 12.63 | 1.28 | 10.23 |

[^131]Charter Number: 8



| Table P: | Assessment Area Distribution of Home Mortgage Loans By Income Category of the Borrower - Georgia |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Home Mortgage Loans |  |  |  | Low-Income Borrowers |  |  | Moderate Income Borrowers |  |  | Middle-Income Borrowers |  |  | Upper-Income Borrowers |  |  | Not Available-Income Borrowers |  |  |
| Assessment Area: | \# | \$ | $\%$ of Total | Overall Market | \% Families | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | \% Aggregate | $\begin{gathered} \% \\ \text { Families } \end{gathered}$ | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \\ \hline \end{array}$ | $\begin{gathered} \text { \% } \\ \text { Aggregate } \end{gathered}$ | \% Families | $\begin{array}{\|c\|} \hline \begin{array}{c} \% \\ \text { Bank } \\ \text { Loans } \end{array} \\ \hline \end{array}$ | \% Aggregate | \% Families | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | \% Aggregate | \% Families | \% Bank Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Atlanta--Athens-Clarke County--Sandy Springs, GA CSA (2017-2018) | 11,414 | 2,991,732 | 65.48 | 195,787 | 22.25 | 7.39 | 6.37 | 16.20 | 17.88 | 16.11 | 17.91 | 15.45 | 20.08 | 43.64 | 46.91 | 40.10 | 0.00 | 12.37 | 17.33 |
| 99999 <br> Atlanta--Athens-Clarke County--Sandy Springs, GA CSA (2019) | 6,018 | 1,750,150 | 34.52 | N/A | 22.25 | 7.10 | N/A | 16.20 | 19.62 | N/A | 17.91 | 19.16 | N/A | 43.64 | 50.13 | N/A | 0.00 | 3.99 | N/A |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total | 17,432 | 4,741,882 | 100.00 | 195,787 | 22.25 | 8.05 | 6.37 | 16.20 | 20.42 | 16.11 | 17.91 | 18.48 | 20.08 | 43.64 | 53.05 | 40.10 | 0.00 | 9.48 | 17.33 |




| e O: Assessment Area Distribution of Home Mortgage Loans By Income Category of the Geography - Idaho |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Home Mortgage Loans |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\%$ of Total | Overall Market |  | $\begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | \% of <br> Owner- <br> Occupied <br> Housing <br> Units | $\begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | \% OwnerOccupied Housing Units | $\begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | \% of OwnerOccupied Housing Units | $\begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | \% o OwnerOccupied Housing Units | \% Bank Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Boise City-Mountain HomeOntario, ID-OR CSA | 2,445 | 589,376 | 64.12 | 35,499 | 1.53 | 1.72 | 1.71 | 22.16 | 19.14 | 20.04 | 46.43 | 41.10 | 47.14 | 29.89 | 38.04 | 31.11 | 0.00 | 0.00 | 0.00 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Idaho Falls-RexburgBlackfoot, ID CSA | 242 | 43,692 | 6.35 | 5,167 | 0.00 | 0.00 | 0.00 | 16.32 | 19.42 | 16.26 | 48.67 | 42.15 | 48.23 | 35.01 | 38.43 | 35.51 | 0.00 | 0.00 | 0.00 |
| 38540 <br> Pocatello, ID MSA | 134 | 20,751 | 3.51 | 3,087 | 1.76 | 2.24 | 4.15 | 16.07 | 18.66 | 12.57 | 49.37 | 46.27 | 45.12 | 32.80 | 32.84 | 38.16 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Spokane-Spokane ValleyCoeur d'Alene, WA-ID CSA | 771 | 205,256 | 20.22 | 9,410 | 0.00 | 0.00 | 0.00 | 12.77 | 19.46 | 15.24 | 71.96 | 65.89 | 72.60 | 15.27 | 14.66 | 12.16 | 0.00 | 0.00 | 0.00 |
| 46300 <br> Twin Falls, ID MSA | 109 | 19,195 | 2.86 | 3,165 | 0.00 | 0.00 | 0.00 | 2.63 | 3.67 | 3.03 | 84.66 | 82.57 | 86.64 | 12.71 | 13.76 | 10.33 | 0.00 | 0.00 | 0.00 |
| 99999 <br> ID Non-Metro Roll-up | 112 | 19,962 | 2.94 | 1,990 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 72.24 | 82.14 | 79.60 | 27.76 | 17.86 | 20.40 | 0.00 | 0.00 | 0.00 |
| Total | 3,813 | 898,232 | 100.00 | 58,318 | 0.99 | 1.18 | 1.26 | 17.23 | 18.20 | 16.93 | 54.65 | 48.75 | 54.49 | 27.13 | 31.86 | 27.32 | 0.00 | 0.00 | 0.00 |

Source: 2015 ACS; 01/01/2017-12/31/2019 Bank Data, 2019 HMDA Aggregate Data, 'N/A' data not available.
Due to rounding, totals may not equal 100.0

| Table P: Assessment Area Distribution of Home Mortgage Loans By Income Category of the Borrower - Idaho |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Home Mortgage Loans |  |  |  | Low-Income Borrowers |  |  | Moderate Income Borrowers |  |  | Middle-Income Borrowers |  |  | Upper-Income Borrowers |  |  | Not Available-Income Borrowers |  |  |
| Assessment Area: | \# | \$ | $\%$ of Total | Overall Market | \% Families | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \\ \hline \end{array}$ | \% Aggregate | Families | $\begin{array}{c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | \% Aggregate | \% Families | $\begin{array}{c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \\ \hline \end{array}$ | \% Aggregate | \% Families | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \\ \hline \end{array}$ | \% Aggregate | \% Families | \% Bank <br> Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Boise City-Mountain HomeOntario, ID-OR CSA | 2,445 | 589,376 | 64.12 | 35,499 | 18.86 | 5.69 | 6.12 | 18.64 | 19.30 | 19.87 | 21.77 | 20.74 | 24.91 | 40.73 | 49.98 | 40.56 | 0.00 | 4.29 | 8.55 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Idaho Falls-Rexburg Blackfoot, ID CSA | 242 | 43,692 | 6.35 | 5,167 | 18.83 | 10.33 | 6.72 | 18.74 | 20.25 | 18.44 | 20.64 | 20.66 | 23.11 | 41.80 | 39.67 | 39.79 | 0.00 | 9.09 | 11.94 |
| 38540 <br> Pocatello, ID MSA | 134 | 20,751 | 3.51 | 3,087 | 21.16 | 2.24 | 5.18 | 19.21 | 12.69 | 17.01 | 19.52 | 17.91 | 22.38 | 40.11 | 52.99 | 44.31 | 0.00 | 14.18 | 11.11 |
| 99999 <br> Spokane-Spokane ValleyCoeur d'Alene, WA-ID CSA | 771 | 205,256 | 20.22 | 9,410 | 18.03 | 4.93 | 3.56 | 20.26 | 18.16 | 13.63 | 22.71 | 19.71 | 25.02 | 39.00 | 54.09 | 44.97 | 0.00 | 3.11 | 12.82 |
| $\begin{array}{\|l\|} \hline 46300 \\ \text { Twin Falls, ID MSA } \\ \hline \end{array}$ | 109 | 19,195 | 2.86 | 3,165 | 19.19 | 5.50 | 4.20 | 18.55 | 13.76 | 18.36 | 22.38 | 22.94 | 24.20 | 39.88 | 44.04 | 41.48 | 0.00 | 13.76 | 11.75 |
| 99999 <br> ID Non-Metro Roll-up | 112 | 19,962 | 2.94 | 1,990 | 17.97 | 0.00 | 3.42 | 15.19 | 14.29 | 13.52 | 20.69 | 12.50 | 22.86 | 46.16 | 62.50 | 46.03 | 0.00 | 10.71 | 14.17 |
| Total | 3,813 | 898,232 | 100.00 | 58,318 | 18.88 | 5.84 | 5.51 | 18.73 | 19.61 | 18.28 | 21.61 | 21.35 | 24.52 | 40.78 | 53.21 | 41.64 | 0.00 | 5.17 | 10.04 |

Due to rounding, totals may not equal 100.0

| le Q: Assessment Area Distribution of Loans to Small Businesses By Income Category of the Geography - Idaho 20. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Small Businesses |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\%$ of Total | Overall Market | $\begin{array}{\|c} \hline \% \text { of } \\ \begin{array}{c} \text { Busines- } \\ \text { ses } \end{array} \\ \hline \end{array}$ | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \\ \hline \end{array}$ | \% Aggregate | $\begin{array}{\|c\|} \hline \% \text { of } \\ \text { Busines- } \\ \text { ses } \\ \hline \end{array}$ | $\begin{array}{\|c\|} \hline \begin{array}{c} \% \\ \text { Bank } \\ \text { Loans } \end{array} \\ \hline \end{array}$ | \% Aggregate | $\begin{gathered} \hline \% \text { of } \\ \text { Busines- } \\ \text { ses } \end{gathered}$ | $\begin{array}{\|c\|} \hline \begin{array}{c} \% \\ \text { Bank } \\ \text { Loans } \end{array} \\ \hline \end{array}$ | \% Aggregate | $\begin{gathered} \text { \% of } \\ \text { Busines- } \\ \text { ses } \end{gathered}$ | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \\ \hline \end{array}$ | \% Aggregate | $\begin{gathered} \% \text { \% of } \\ \text { Busines- } \\ \text { ses } \end{gathered}$ | \% Bank Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Boise City-Mountain HomeOntario, ID-OR CSA | 6,883 | 94,887 | 67.71 | 13,599 | 9.81 | 8.18 | 10.09 | 22.98 | 15.65 | 21.29 | 37.36 | 38.86 | 37.36 | 29.85 | 37.31 | 31.27 | 0.00 | 0.00 | 0.00 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 Idaho Falls-RexburgBlackfoot, ID CSA | 947 | 11,545 | 9.32 | 2,542 | 0.00 | 0.00 | 0.00 | 26.90 | 19.43 | 22.31 | 34.40 | 37.80 | 37.80 | 38.71 | 42.77 | 39.89 | 0.00 | 0.00 | 0.00 |
| 38540 <br> Pocatello, ID MSA | 373 | 4,332 | 3.67 | 1,230 | 11.64 | 9.65 | 4.80 | 19.98 | 20.91 | 23.50 | 45.55 | 42.90 | 43.66 | 22.83 | 26.54 | 28.05 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Spokane-Spokane ValleyCoeur d'Alene, WA-ID CSA | 1,255 | 13,999 | 12.35 | 3,562 | 0.00 | 0.00 | 0.00 | 22.26 | 18.17 | 18.78 | 65.01 | 66.29 | 68.25 | 12.73 | 15.54 | 12.97 | 0.00 | 0.00 | 0.00 |
| 46300 <br> Twin Falls, ID MSA | 428 | 5,509 | 4.21 | 1,466 | 0.00 | 0.00 | 0.00 | 10.75 | 5.61 | 8.59 | 75.86 | 77.80 | 76.94 | 13.39 | 16.59 | 14.46 | 0.00 | 0.00 | 0.00 |
| 99999 <br> ID Non-Metro Roll-up | 279 | 3,199 | 2.74 | 889 | 0.00 | 0.00 | 0.00 | 2.48 | 1.43 | 0.45 | 78.85 | 81.00 | 77.84 | 18.67 | 17.56 | 21.71 | 0.00 | 0.00 | 0.00 |
| Total | 10,165 | 133,471 | 100.00 | 23,288 | 6.96 | 5.89 | 6.14 | 21.53 | 15.69 | 19.54 | 44.69 | 45.10 | 46.50 | 26.82 | 33.32 | 27.82 | 0.00 | 0.00 | 0.00 |

Source: Due to rounding, totals may not equal 100.0

| Table R: $\quad$ Assessment Area Distribution of Loans to Small Businesses Loans by Gross Annual Revenues - Idaho |  |  |  |  |  |  |  | Businesses with Revenues > 1 MM |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Small Businesses |  |  |  | Businesses with Revenues <= 19M |  |  |  |  | Businesses with Revenues Not Available |  |
| Assessment Area: | \# | \$ | \% of Total | Overall Market | \% of Businesses | \% Bank Loans | \% Aggregate | \% of Businesses | \% Bank Loans | \% of Businesses | \% Bank Loans |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Boise City-Mountain HomeOntario, ID-OR CSA | 6,883 | 94,887 | 67.71 | 13,599 | 88.08 | 71.13 | 48.03 | 3.93 | 14.96 | 7.99 | 13.90 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Idaho Falls-RexburgBlackfoot, ID CSA | 947 | 11,545 | 9.32 | 2,542 | 80.73 | 71.17 | 45.44 | 6.71 | 17.42 | 12.56 | 11.40 |
| 38540 <br> Pocatello, ID MSA | 373 | 4,332 | 3.67 | 1,230 | 79.57 | 69.44 | 51.71 | 5.53 | 20.38 | 14.90 | 10.19 |
| 99999 <br> Spokane-Spokane ValleyCoeur d'Alene, WA-ID CSA | 1,255 | 13,999 | 12.35 | 3,562 | 86.21 | 68.13 | 50.79 | 5.48 | 19.04 | 8.30 | 12.83 |
| $\begin{aligned} & 46300 \\ & \text { Twin Falls, ID MSA } \end{aligned}$ | 428 | 5,509 | 4.21 | 1,466 | 80.69 | 68.93 | 49.45 | 5.66 | 15.19 | 13.65 | 15.89 |
| 99999 <br> ID Non-Metro Roll-up | 279 | 3,199 | 2.74 | 889 | 80.42 | 71.68 | 54.33 | 4.55 | 17.56 | 15.03 | 10.75 |
| Total | 10,165 | 133,471 | 100.00 | 23,288 | 86.07 | 70.62 | 48.69 | 4.55 | 15.98 | 9.38 | 13.40 |

Due to rounding, totals may not equal 100.0

| Table S: Assessment Area Distribution of Loans to Farms By Income Category of the Geography - Idaho |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Farms |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \text { \% of } \\ & \text { Total } \end{aligned}$ | Overall Market | $\%$ of Farms | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | \% Aggregate | $\%$ of Farms | $\begin{aligned} & \text { Bank } \\ & \text { Loans } \end{aligned}$ | \% Aggregate | \% of Farms | \% Bank Loans | \% <br> Aggregate | \% of Farms |  | \% Aggregate | \% of Farms | \% Bank Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Boise City-Mountain Home-Ontario, ID-OR CSA | 168 | 2,022 | 59.57 | 356 | 4.31 | 0.00 | 1.69 | 22.85 | 14.88 | 22.47 | 46.86 | 55.95 | 50.84 | 25.98 | 29.17 | 25.00 | 0.00 | 0.00 | 0.00 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Idaho Falls-RexburgBlackfoot, ID CSA | 19 | 215 | 6.74 | 130 | 0.00 | 0.00 | 0.00 | 14.24 | 5.26 | 2.31 | 45.45 | 78.95 | 55.38 | 40.30 | 15.79 | 42.31 | 0.00 | 0.00 | 0.00 |
| 38540 <br> Pocatello, ID MSA | 8 | 77 | 2.84 | 45 | 2.72 | 0.00 | 2.22 | 13.59 | 0.00 | 2.22 | 55.43 | 87.50 | 73.33 | 28.26 | 12.50 | 22.22 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Spokane-Spokane ValleyCoeur d'Alene, WA-ID CSA | 18 | 203 | 6.38 | 39 | 0.00 | 0.00 | 0.00 | 14.52 | 16.67 | 5.13 | 72.05 | 72.22 | 87.18 | 13.42 | 11.11 | 7.69 | 0.00 | 0.00 | 0.00 |
| $\begin{aligned} & \hline 46300 \\ & \text { Tw in Falls, ID MSA } \end{aligned}$ | 48 | 480 | 17.02 | 204 | 0.00 | 0.00 | 0.00 | 2.01 | 0.00 | 0.49 | 85.74 | 77.08 | 90.69 | 12.25 | 22.92 | 8.82 | 0.00 | 0.00 | 0.00 |
| 99999 ID Non-Metro Roll-up | 21 | 194 | 7.45 | 141 | 0.00 | 0.00 | 0.00 | 0.28 | 0.00 | 0.00 | 62.32 | 90.48 | 48.23 | 37.39 | 9.52 | 51.77 | 0.00 | 0.00 | 0.00 |
| Total | 282 | 3,191 | 100.00 | 915 | 2.53 | 0.00 | 0.77 | 16.22 | 10.28 | 9.51 | 55.85 | 65.60 | 62.62 | 25.40 | 24.11 | 27.10 | 0.00 | 0.00 | 0.00 |

Due to rounding, totals may not equal 100.0


Due to rounding, totals may not equal 100.0

| ble O: Assessment Area Distribution of Home Mortgage Loans By Income Category of the Geography - Illinois |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Home Mortgage Loans |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \% \text { of } \\ & \text { Total } \end{aligned}$ | Overall Market |  | \% <br> Bank <br> Loans | \% Aggregate | \% of OwnerOccupied Housing Units | $\begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | \% of OwnerOccupied Housing Units | $\begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | \% OwnerOccupied Housing Units | $\begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | \% of OwnerOccupied Housing Units | \% Bank Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 16580 <br> Champaign-Urbana, IL MSA | 396 | 63,607 | 15.66 | 5,119 | 4.85 | 4.04 | 4.96 | 10.78 | 12.37 | 11.99 | 58.11 | 55.56 | 55.71 | 26.14 | 28.03 | 27.08 | 0.11 | 0.00 | 0.25 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 Bloomington-Pontiac, IL CSA | 336 | 55,874 | 13.29 | 4,770 | 2.27 | 1.49 | 3.14 | 14.29 | 10.71 | 11.34 | 53.92 | 42.86 | 52.83 | 29.52 | 44.94 | 32.68 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Davenport-Moline, IA-IL (part) CSA | 170 | 18,363 | 6.72 | 5,760 | 0.82 | 0.59 | 0.69 | 23.32 | 17.06 | 20.63 | 65.77 | 70.59 | 67.43 | 10.09 | 11.76 | 11.25 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Peoria-Canton, IL CSA | 452 | 64,501 | 17.88 | 9,528 | 3.55 | 1.77 | 1.86 | 12.63 | 9.96 | 16.05 | 53.08 | 52.65 | 49.66 | 30.74 | 35.62 | 32.43 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Rockford-Freeport- <br> Rochelle, IL CSA | 965 | 120,245 | 38.17 | 9,269 | 5.11 | 2.59 | 2.76 | 15.89 | 8.60 | 13.58 | 33.53 | 30.26 | 36.10 | 45.43 | 58.45 | 47.49 | 0.04 | 0.10 | 0.06 |
| $\begin{aligned} & 99999 \\ & \text { Springfield-Jacksonville- } \end{aligned}$ Lincoln, IL CSA | 209 | 26,127 | 8.27 | 5,626 | 9.24 | 8.13 | 6.11 | 12.43 | 11.96 | 12.78 | 45.95 | 46.41 | 47.32 | 32.39 | 33.49 | 33.79 | 0.00 | 0.00 | 0.00 |
| Total | 2,528 | 348,717 | 99.99 | 40,072 | 4.39 | 2.85 | 3.05 | 14.77 | 10.56 | 14.60 | 50.19 | 43.95 | 49.90 | 30.63 | 42.60 | 32.41 | 0.02 | 0.04 | 0.05 |

Due to rounding, totals may not equal 100.0

| Table P: Assessment Area Distribution of Home Mortgage Loans By Income Category of the Borrower - Illinois |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Home Mortgage Loans |  |  |  | Low-Income Borrowers |  |  | Moderate Income Borrowers |  |  | Middle-Income Borrowers |  |  | Upper-Income Borrowers |  |  | Not Available-Income Borrowers |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \% \text { of } \\ & \text { Total } \end{aligned}$ | Overall Market | \% Families | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \\ \hline \end{array}$ | \% Aggregate | $\begin{gathered} \% \\ \text { Families } \end{gathered}$ | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \\ \hline \end{array}$ | \% <br> Aggregate | \% Families | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | \% Aggregate | \% Families | $\begin{gathered} \hline \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | \% Families | \% Bank Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 16580 <br> Champaign-Urbana, IL MSA | 396 | 63,607 | 15.66 | 5,119 | 21.79 | 6.57 | 10.29 | 16.51 | 17.68 | 19.16 | 20.68 | 22.73 | 21.14 | 41.02 | 35.61 | 32.33 | 0.00 | 17.42 | 17.07 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Bloomington-Pontiac, IL CSA | 336 | 55,874 | 13.29 | 4,770 | 19.36 | 9.23 | 13.86 | 17.30 | 16.67 | 21.11 | 22.24 | 24.40 | 20.13 | 41.10 | 40.18 | 26.02 | 0.00 | 9.52 | 18.89 |
| 99999 <br> Davenport-Moline, IA-IL (part) CSA | 170 | 18,363 | 6.72 | 5,760 | 21.36 | 8.82 | 14.08 | 19.36 | 19.41 | 21.89 | 22.18 | 24.71 | 22.07 | 37.10 | 24.12 | 25.10 | 0.00 | 22.94 | 16.86 |
| 99999 <br> Peoria-Canton, IL CSA | 452 | 64,501 | 17.88 | 9,528 | 20.58 | 7.30 | 13.69 | 17.96 | 12.17 | 20.32 | 21.35 | 17.92 | 19.71 | 40.11 | 33.85 | 28.30 | 0.00 | 28.76 | 17.99 |
| 99999 <br> Rockford-Freeport- <br> Rochelle, IL CSA | 965 | 120,245 | 38.17 | 9,269 | 21.89 | 6.32 | 9.94 | 17.03 | 16.37 | 19.51 | 20.36 | 23.11 | 21.81 | 40.73 | 41.14 | 26.68 | 0.00 | 13.06 | 22.06 |
| 99999 <br> Springfield-JacksonvilleLincoln, IL CSA | 209 | 26,127 | 8.27 | 5,626 | 22.49 | 11.48 | 12.02 | 16.23 | 22.49 | 20.16 | 20.71 | 14.83 | 21.53 | 40.57 | 31.10 | 30.47 | 0.00 | 20.10 | 15.84 |
| Total | 2,528 | 348,717 | 99.99 | 40,072 | 21.28 | 9.09 | 12.23 | 17.43 | 20.05 | 20.28 | 21.15 | 26.27 | 21.02 | 40.13 | 44.59 | 28.01 | 0.00 | 17.33 | 18.46 |

Source: 2015 ACS; 01/01/2017-12/31/201
Due to rounding, totals may not equal 100.0


Due to rounding, totals may not equal 100.0

| Table R: $\quad$ Assessment Area Distribution of Loans to Small Businesses Loans by Gross Annual Revenues - Illinois |  |  |  |  |  |  |  | 2017-2019 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Small Businesses |  |  |  | Businesses with Revenues <= 19M |  |  | Businesses with Revenues > 1 MM |  | Businesses with Revenues Not Available |  |
| Assessment Area: | \# | \$ | \% of Total | Overall Market | \% of Businesses | \% Bank Loans | \% Aggregate | \% of Businesses | \% Bank Loans | \% of Businesses | \% Bank Loans |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |
| 16580 Champaign-Urbana, IL MSA | 1,590 | 20,521 | 18.48 | 2,680 | 78.46 | 71.19 | 44.25 | 5.26 | 15.60 | 16.28 | 13.21 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Bloomington-Pontiac, IL <br> CSA | 1,004 | 15,633 | 11.67 | 2,443 | 76.60 | 68.82 | 42.16 | 6.58 | 17.33 | 16.82 | 13.84 |
| 99999 <br> Davenport-Moline, IA-IL <br> (part) CSA | 760 | 14,404 | 8.83 | 2,240 | 74.91 | 67.24 | 52.14 | 7.56 | 21.18 | 17.53 | 11.58 |
| 99999 Peoria-Canton, IL CSA | 1,727 | 35,004 | 20.07 | 5,208 | 75.09 | 59.29 | 44.05 | 7.68 | 27.16 | 17.24 | 13.55 |
| 99999 <br> Rockford-Freeport- <br> Rochelle, IL CSA | 2,277 | 44,420 | 26.47 | 4,292 | 80.00 | 62.14 | 43.55 | 7.21 | 22.75 | 12.78 | 15.11 |
| 99999 <br> Springfield-Jacksonville- <br> Lincoln, IL CSA | 1,245 | 27,315 | 14.47 | 2,538 | 75.21 | 62.01 | 44.48 | 7.13 | 22.01 | 17.66 | 15.98 |
| Total | 8,603 | 157,297 | 99.99 | 19,401 | 76.91 | 64.45 | 44.72 | 6.98 | 21.43 | 16.11 | 14.11 |

Source: 2015 ACS; 01/01/2017-12/31/2019 Bank Data, 2019 HMDA Aggregate Data, 'N/A' data not available.
Due to rounding, totals may not equal 100.0
Due to rounding, totals may not equal 100.0

| Table S: Assessment Area Distribution of Loans to Farms By Income Category of the Geography - Illinois |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Farms |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \text { \% of } \\ & \text { Total } \end{aligned}$ | Overall Market | $\%$ of Farms |  | \% Aggregate | \% of Farms |  | \% Aggregate | \% of Farms |  | \% Aggregate | $\%$ of Farms |  | \% Aggregate | \% of Farms | \% Bank Loans | \% <br> Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & 16580 \\ & \text { Champaign-Urbana, IL } \end{aligned}$ MSA | 49 | 456 | 14.37 | 235 | 2.77 | 0.00 | 0.00 | 5.26 | 0.00 | 0.85 | 71.19 | 81.63 | 79.15 | 20.78 | 18.37 | 20.00 | 0.00 | 0.00 | 0.00 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Bloomington-Pontiac, IL <br> CSA | 39 | 305 | 11.44 | 411 | 1.10 | 2.56 | 0.24 | 4.59 | 0.00 | 1.95 | 73.03 | 71.79 | 81.27 | 21.28 | 25.64 | 16.55 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Davenport-Moline, IA-IL <br> (part) CSA | 50 | 407 | 14.66 | 206 | 0.00 | 0.00 | 0.00 | 9.75 | 2.00 | 5.83 | 80.24 | 82.00 | 79.61 | 10.01 | 16.00 | 14.56 | 0.00 | 0.00 | 0.00 |
| 99999 Peoria-Canton, IL CSA | 113 | 1,141 | 33.14 | 921 | 1.48 | 0.00 | 0.22 | 6.98 | 1.77 | 0.43 | 61.90 | 60.18 | 80.02 | 29.64 | 38.05 | 19.33 | 0.00 | 0.00 | 0.00 |
| Rockford-FreeportRochelle, IL CSA | 40 | 306 | 11.73 | 131 | 3.22 | 0.00 | 0.00 | 10.91 | 0.00 | 0.76 | 33.01 | 35.00 | 29.01 | 52.31 | 65.00 | 70.23 | 0.56 | 0.00 | 0.00 |
| 99999 <br> Springfield-Jacksonville- Lincoln, IL CSA | 50 | 1,632 | 14.66 | 163 | 5.46 | 6.00 | 1.23 | 6.55 | 0.00 | 0.61 | 60.37 | 66.00 | 74.85 | 27.61 | 28.00 | 23.31 | 0.00 | 0.00 | 0.00 |
| Total | 341 | 4,247 | 100.00 | 2,067 | 2.22 | 1.17 | 0.24 | 7.43 | 0.88 | 1.35 | 62.96 | 65.69 | 76.49 | 27.30 | 32.26 | 21.92 | 0.09 | 0.00 | 0.00 |

Due to rounding, totals may not equal 100.0


[^132]Charter Number: 8

| Table O: Assessment Area Distribution of Home Mortgage Loans By Income Category of the Geography - Indiana |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Home Mortgage Loans |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \% \text { of } \\ & \text { Total } \end{aligned}$ | Overall Market | \% of OwnerOccupied Housing Units | \% Bank Loans | \% Aggregate | \% of OwnerOccupied Housing Units | \% <br> Bank Loans | \% <br> Aggregate | \% of OwnerOccupied Housing Units | \% <br> Bank <br> Loans | \% Aggregate |  | \% <br> Bank <br> Loans | \% Aggregate | \% of OwnerOccupied Housing Units | \% Bank Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Indianapolis-Carmel- <br> Muncie, IN CSA (2017- <br> 2018) | 7,211 | 1,215,027 | 44.34 | 76,071 | 6.11 | 3.30 | 4.14 | 16.43 | 14.46 | 14.11 | 35.00 | 30.47 | 33.80 | 42.35 | 51.71 | 47.86 | 0.11 | 0.06 | 0.09 |
| 99999 <br> Indianapolis-CarmelMuncie, IN CSA (2019) | 4,008 | 774,275 | 24.65 | N/A | 6.11 | 3.04 | N/A | 16.43 | 10.70 | N/A | 35.00 | 29.62 | N/A | 42.35 | 56.61 | N/A | 0.11 | 0.02 | N/A |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Bloomington-Bedford, $\mathbb{I N}$ CSA (2017-2018) | 451 | 71,937 | 2.77 | 5,038 | 2.11 | 1.55 | 1.81 | 8.54 | 9.76 | 11.12 | 59.56 | 48.56 | 54.62 | 29.78 | 40.13 | 32.41 | 0.01 | 0.00 | 0.04 |
| Bloomington-Bedford, $\mathbb{I N}$ CSA (2019) | 217 | 36,406 | 1.33 | N/A | 2.11 | 2.30 | N/A | 8.54 | 11.06 | N/A | 59.56 | 46.54 | N/A | 29.78 | 40.09 | N/A | 0.01 | 0.00 | N/A |
| Fort Wayne-HuntingtonAuburn, IN CSA (20172018) | 1,444 | 193,532 | 8.88 | 15,887 | 5.37 | 1.04 | 1.76 | 13.15 | 12.67 | 11.81 | 49.91 | 42.94 | 47.76 | 31.48 | 43.35 | 38.62 | 0.09 | 0.00 | 0.04 |
| 99999 <br> Fort Wayne-HuntingtonAuburn, IN CSA (2019) | 737 | 110,489 | 4.53 | N/A | 5.37 | 1.22 | N/A | 13.15 | 9.91 | N/A | 49.91 | 40.71 | N/A | 31.48 | 48.17 | N/A | 0.09 | 0.00 | N/A |
| 99999 <br> Lafayette-West Lafayette- <br> Frankfort, IN CSA | 595 | 83,242 | 3.66 | 5,715 | 1.15 | 1.18 | 1.35 | 16.19 | 13.78 | 16.48 | 35.25 | 33.11 | 33.44 | 47.29 | 51.93 | 48.42 | 0.12 | 0.00 | 0.31 |
| 99999 <br> Richmond-Connersville, IN <br> CSA <br> 最 | 117 | 10,519 | 0.72 | 1,313 | 2.11 | 1.71 | 1.29 | 30.92 | 29.91 | 28.56 | 59.85 | 58.97 | 64.36 | 7.12 | 9.40 | 5.79 | 0.00 | 0.00 | 0.00 |
| 99999 <br> South Bend-EIkhart- <br> Mishawaka, IN-MI CSA <br> (2017-2018) | 919 | 125,444 | 5.65 | 14,048 | 3.03 | 0.87 | 1.95 | 13.90 | 10.45 | 10.24 | 52.36 | 58.98 | 56.26 | 30.71 | 29.71 | 31.56 | 0.00 | 0.00 | 0.00 |
| South Bend-ElkhartMishawaka, IN-MI CSA (2019) | 518 | 561,388 | 3.19 | N/A | 3.03 | 2.12 | N/A | 13.90 | 11.20 | N/A | 52.36 | 52.51 | N/A | 30.71 | 34.17 | N/A | 0.00 | 0.00 | N/A |
| 99999 IN Non-Metro Roll-up | 45 | 5,031 | 0.28 | 671 | 0.00 | 0.00 | 0.00 | 15.73 | 17.78 | 34.72 | 84.27 | 82.22 | 65.28 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 16,262 | 3,187,290 | 100.00 | 118,743 | 5.13 | 2.61 | 3.28 | 15.27 | 12.76 | 13.61 | 41.77 | 35.30 | 39.71 | 37.75 | 49.30 | 43.33 | 0.08 | 0.03 | 0.08 |

Source: 2015 ACS; 01/01/2017 - 12/31/2019 Bank Data, 2019 HMDA Aggregate Data, 'N/A' data not available.
Due to rounding, totals may not equal 100.0

Charter Number: 8

| Table P: | Assessment Area Distribution of Home Mortgage Loans By Income Category of the Borrower - Indiana |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Home Mortgage Loans |  |  |  | Low-Income Borrowers |  |  | Moderate Income Borrowers |  |  | Middle-Income Borrowers |  |  | Upper-Income Borrowers |  |  | Not Available-Income Borrowers |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \% \text { of } \\ & \text { Total } \end{aligned}$ | Overall Market | \% Families | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | \% Aggregate | $\begin{gathered} \% \\ \text { Families } \end{gathered}$ | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | \% <br> Aggregate | \% Families | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | \% Aggregate | \% Families | $\%$ <br> Bank <br> Loans | \% Aggregate | \% Families | \% Bank Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Indianapolis-Carmel- <br> Muncie, IN CSA (2017- <br> 2018) | 7,211 | 1,215,027 | 44.34 | 76,071 | 21.53 | 9.55 | 9.83 | 16.90 | 21.72 | 20.24 | 19.43 | 20.47 | 20.53 | 42.14 | 38.41 | 34.37 | 0.00 | 9.85 | 15.03 |
| Indianapolis-CarmelMuncie, IN CSA (2019) | 4,008 | 774,275 | 24.65 | N/A | 21.53 | 9.28 | N/A | 16.90 | 21.61 | N/A | 19.43 | 21.51 | N/A | 42.14 | 43.04 | N/A | 0.00 | 4.57 | N/A |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 451 | 71,937 | 2.77 | 5,038 | 21.25 | 6.65 | 9.17 | 16.85 | 20.40 | 20.68 | 20.55 | 21.73 | 21.54 | 41.36 | 43.46 | 33.17 | 0.00 | 7.76 | 15.44 |
| 99999 <br> Bloomington-Bedford, IN CSA (2019) | 217 | 36,406 | 1.33 | N/A | 21.25 | 7.37 | N/A | 16.85 | 18.89 | N/A | 20.55 | 27.19 | N/A | 41.36 | 41.47 | N/A | 0.00 | 5.07 | N/A |
|  | 1,444 | 193,532 | 8.88 | 15,887 | 19.81 | 11.50 | 10.18 | 18.05 | 29.36 | 22.28 | 21.99 | 19.39 | 21.26 | 40.16 | 28.39 | 30.92 | 0.00 | 11.36 | 15.36 |
| 99999 <br> Fort Wayne-HuntingtonAuburn, IN CSA (2019) | 737 | 110,489 | 4.53 | N/A | 19.81 | 11.40 | N/A | 18.05 | 23.34 | N/A | 21.99 | 22.93 | N/A | 40.16 | 37.31 | N/A | 0.00 | 5.02 | N/A |
| 99999 <br> Lafayette-West Lafayette- <br> Frankfort, IN CSA | 595 | 83,242 | 3.66 | 5,715 | 20.52 | 8.74 | 9.66 | 15.69 | 25.71 | 21.73 | 22.97 | 24.03 | 21.05 | 40.82 | 31.26 | 32.20 | 0.00 | 10.25 | 15.36 |
| 99999 <br> Richmond-Connersville, $\mathbb{I N}$ CSA | 117 | 10,519 | 0.72 | 1,313 | 25.44 | 11.11 | 14.24 | 19.82 | 23.08 | 25.74 | 19.61 | 24.79 | 22.09 | 35.13 | 17.95 | 23.23 | 0.00 | 23.08 | 14.70 |
| South Bend-Elkhart- <br> Mishawaka, IN-MI CSA <br> (2017-2018) | 919 | 125,444 | 5.65 | 14,048 | 20.72 | 8.27 | 8.35 | 17.32 | 23.50 | 20.86 | 21.53 | 23.29 | 23.43 | 40.43 | 32.75 | 33.30 | 0.00 | 12.19 | 14.07 |
| 99999 <br> South Bend-Elkhart- <br> Mishawaka, IN-MI CSA <br> (2019) | 518 | 561,388 | 3.19 | N/A | 20.72 | 15.06 | N/A | 17.32 | 23.36 | N/A | 21.53 | 23.17 | N/A | 40.43 | 34.94 | N/A | 0.00 | 3.47 | N/A |
| 99999 <br> IN Non-Metro Roll-up | 45 | 5,031 | 0.28 | 671 | 26.60 | 8.89 | 19.08 | 24.61 | 24.44 | 24.29 | 24.27 | 13.33 | 19.67 | 24.52 | 11.11 | 18.48 | 0.00 | 42.22 | 18.48 |
| Total | 16,262 | 3,187,290 | 100.00 | 118,743 | 21.18 | 10.61 | 9.77 | 17.17 | 24.78 | 20.76 | 20.29 | 23.22 | 21.05 | 41.36 | 41.38 | 33.41 | 0.00 | 8.47 | 15.01 |
| Source: 2015 ACS; 01/01/2017-12/31/2019 Bank Data, 2019 HMDA Aggregate Data, 'N/A' data not available. Due to rounding, totals may not equal 100.0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

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| Table R: $\quad$ Assessment Area Distribution of Loans to Small Businesses Loans by Gross Annual Revenues - Indiana |  |  |  |  |  |  |  | Businesses with Revenues > 1 Mm |  | 2017-2019 <br> Businesses with Revenues <br> Not Available |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Assessment Area: | \# | \$ | \% of Total | Overall Market | \% of Businesses | \% Bank Loans | \% Aggregate | \% of Businesses | \% Bank Loans | \% of Businesses | \% Bank Loans |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Indianapolis-CarmelMuncie, IN CSA (20172018) | 13,086 | 280,015 | 39.56 | 33,656 | 81.82 | 68.16 | 41.88 | 6.41 | 18.26 | 11.77 | 13.58 |
| 99999 Indianapolis-CarmelMuncie, IN CSA (2019) | 9,799 | 170,965 | 29.63 | N/A | 84.87 | 70.30 | N/A | 5.21 | 19.55 | 9.92 | 10.14 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Bloomington-Bedford, IN <br> CSA (2017-2018) | 976 | 20,212 | 2.95 | 2,416 | 81.92 | 67.01 | 35.68 | 5.45 | 18.14 | 12.63 | 14.86 |
| 99999 Bloomington-Bedford, $\mathbb{I N}$ CSA (2019) | 692 | 9,977 | 2.09 | N/A | 83.74 | 71.68 | N/A | 4.86 | 20.66 | 11.41 | 7.66 |
| 99999 <br> Fort Wayne-HuntingtonAuburn, IN CSA (20172018) | 2,082 | 53,470 | 6.29 | 7,232 | 79.58 | 67.00 | 43.42 | 7.29 | 22.00 | 13.12 | 11.00 |
| 99999 <br> Fort Wayne-HuntingtonAuburn, IN CSA (2019) | 1,745 | 36,911 | 5.28 | N/A | 81.88 | 66.48 | N/A | 6.22 | 24.36 | 11.90 | 9.17 |
| 99999 <br> Lafayette-West Lafayette- <br> Frankfort, IN CSA | 1,227 | 20,267 | 3.71 | 1,995 | 82.34 | 69.68 | 43.66 | 4.78 | 18.34 | 12.88 | 11.98 |
| 99999 <br> Richmond-Connersville, IN CSA | 285 | 3,855 | 0.86 | 817 | 77.79 | 70.88 | 52.02 | 6.96 | 18.95 | 15.25 | 10.18 |
| 99999 <br> South Bend-ElkhartMishawaka, IN-MI CSA (2017-2018) | 1,722 | 45,450 | 5.21 | 6,446 | 78.37 | 63.47 | 39.09 | 8.05 | 26.07 | 13.58 | 10.45 |
| 99999 <br> South Bend-ElkhartMishawaka, IN-MI CSA (2019) | 1,347 | 31,213 | 4.07 | N/A | 80.74 | 62.73 | N/A | 6.96 | 28.36 | 12.31 | 8.91 |
| 99999 <br> IN Non-Metro Roll-up | 114 | 1,114 | 0.34 | 209 | 81.32 | 58.77 | 35.41 | 3.91 | 31.58 | 14.77 | 9.65 |
| Total | 33,075 | 673,449 | 99.99 | 52,771 | 82.52 | 68.26 | 41.67 | 6.06 | 20.12 | 11.42 | 11.63 |

Due to rounding, totals may not equal 100.0

Charter Number: 8

Table S: Assessment Area Distribution of Loans to Farms By Income Category of the Geography - Indiana

|  | Total Loans to Farms |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area: | \# | \$ | $\begin{aligned} & \text { \% of } \\ & \text { Total } \end{aligned}$ | Overall Market | $\begin{aligned} & \% \text { of } \\ & \text { Farms } \end{aligned}$ | $\begin{array}{\|c} \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | $\begin{array}{\|c} \% \\ \text { Aggregate } \end{array}$ | $\begin{aligned} & \% \text { of } \\ & \text { Farms } \end{aligned}$ | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | $\begin{array}{c\|} \% \\ \text { Aggregate } \end{array}$ | $\begin{aligned} & \% \text { of } \\ & \text { Farms } \end{aligned}$ | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | Aggregate | $\begin{aligned} & \% \text { of } \\ & \text { Farms } \end{aligned}$ | $\begin{array}{\|c} \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | $\begin{gathered} \% \\ \text { Aggregate } \end{gathered}$ | $\begin{gathered} \% \text { of } \\ \text { Farms } \end{gathered}$ | $\begin{gathered} \text { \% Bank } \\ \text { Loans } \end{gathered}$ | $\begin{gathered} \% \\ \text { Aggregate } \end{gathered}$ |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 999999 Indianapolis-Carmel- Muncie, IN CSA (2017- 2018) | 185 | 10,845 | 30.88 | 648 | 3.66 | 3.24 | 0.62 | 10.52 | 0.00 | 1.85 | 47.36 | 59.46 | 64.97 | 38.34 | 37.30 | 32.25 | 0.12 | 0.00 | 0.31 |
| 99999 <br> Indianapolis-Carmel- Muncie, IN CSA (2019) | 165 | 4,641 | 27.55 | NA | 4.45 | 4.24 | NA | 11.28 | 2.42 | NA | 45.08 | 60.00 | NA | 39.08 | 33.33 | NA | 0.11 | 0.00 | NA |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 Bloomington-Bedford, IN CSA (2017-2018) | 34 | 433 | 5.68 | 64 | 1.05 | 2.94 | 1.56 | 6.30 | 0.00 | 0.00 | 69.82 | 85.29 | 76.56 | 22.83 | 11.76 | 21.88 | 0.00 | 0.00 | 0.00 |
| $\begin{aligned} & 99999 \\ & \text { Bloomington-Bedford, IN } \\ & \text { CSA (2019) } \end{aligned}$ | 12 | 124 | 2.00 | NA | 1.45 | 0.00 | NA | 6.30 | 0.00 | NA | 66.59 | 58.33 | NA | 25.67 | 41.67 | NA | 0.00 | 0.00 | NA |
| 99999 Fort Wayne-Huntington- Auburn, IN CSA (2017- 2018) | 32 | 673 | 5.34 | 337 | 1.89 | 0.00 | 0.30 | 6.67 | 3.13 | 0.59 | 60.96 | 71.88 | 75.96 | 29.98 | 25.00 | 22.85 | 0.49 | 0.00 | 0.30 |
| Fort Wayne-HuntingtonAuburn, IN CSA (2019) | 24 | 310 | 4.01 | NA | 2.10 | 0.00 | NA | 7.40 | 0.00 | NA | 60.87 | 70.83 | NA | 28.92 | 29.17 | NA | 0.70 | 0.00 | NA |
| 99999 <br> Lafayette-West <br> Lafayette-Frankfort, IN <br> CSA | 65 | 3,803 | 10.85 | 89 | 1.26 | 0.00 | 0.00 | 10.74 | 4.62 | 4.49 | 37.26 | 60.00 | 51.69 | 50.74 | 35.38 | 43.82 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Richmond-Connersville, | 23 | 294 | 3.84 | 192 | 0.35 | 0.00 | 0.52 | 8.39 | 0.00 | 0.52 | 71.33 | 82.61 | 87.50 | 19.93 | 17.39 | 11.46 | 0.00 | 0.00 | 0.00 |
| $\begin{array}{\|l} \hline 99999 \\ \text { South Bend-Ekhart- } \\ \text { Mishaw aka, IN-MI CSA } \\ \text { (2017-2018) } \\ \hline \end{array}$ | 26 | 462 | 4.34 | 199 | 1.38 | 0.00 | 0.00 | 6.03 | 3.85 | 2.01 | 53.31 | 69.23 | 47.24 | 39.27 | 26.92 | 50.75 | 0.00 | 0.00 | 0.00 |
| 99999 <br> South Bend-Ekhart- <br> Mishaw aka, $\mathbb{N}-$ MI CSA <br> (2019) | 32 | 570 | 5.34 | NA | 1.83 | 0.00 | NA | 7.14 | 12.50 | NA | 54.58 | 53.13 | NA | 36.45 | 34.38 | NA | 0.00 | 0.00 | NA |
| 99999 <br> IN Non-Metro Roll-up | 1 | 12 | 0.17 | 11 | 0.00 | 0.00 | 0.00 | 10.29 | 0.00 | 0.00 | 89.71 | 100.00 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 599 | 22,167 | 100.00 | 1,540 | 3.08 | 2.34 | 0.45 | 9.39 | 2.17 | 1.49 | 51.21 | 63.27 | 67.86 | 36.16 | 32.22 | 30.00 | 0.17 | 0.00 | 0.19 |

Due to rounding, totals may not equal 100.0

Charter Number: 8

Table T: $\quad$ Assessment Area Distribution of Loans to Farms by Gross Annual Revenues - Indiana
2017-2019

|  | Total Loans to Farms |  |  |  | Farms with Revenues <= 1MM |  |  | Farms with Revenues > 1MM |  | Farms with Revenues Not Available |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area: | \# | \$ | \% of Total | Overall Market | \% of Businesses | \% Bank Loans | \% Aggregate | \% of <br> Businesses | \% Bank Loans | \% of Businesses | \% Bank Loans |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Indianapolis-Carmel- <br> Muncie, IN CSA (2017- <br> 2018) | 185 | 10,845 | 30.88 | 648.00 | 95.67 | 81.62 | 48.92 | 2.48 | 10.27 | 1.86 | 8.11 |
| 99999 <br> Indianapolis-Carmel- <br> Muncie, IN CSA (2019) | 165 | 4,641 | 27.55 | 0.00 | 95.93 | 71.52 | NA | 2.35 | 18.79 | 1.72 | 9.70 |
| Limited Review : |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Bloomington-Bedford, $\mathbb{I N}$ CSA (2017-2018) | 34 | 433 | 5.68 | 64.00 | 98.16 | 88.24 | 48.44 | 1.31 | 0.00 | 0.52 | 11.76 |
| 99999 <br> Bloomington-Bedford, $\mathbb{I N}$ CSA (2019) | 12 | 124 | 2.00 | 0.00 | 97.82 | 58.33 | NA | 1.69 | 16.67 | 0.48 | 25.00 |
| 99999 <br> Fort Wayne-Huntington- <br> Auburn, IN CSA (2017- <br> 2018) | 32 | 673 | 5.34 | 337.00 | 96.71 | 62.50 | 63.20 | 1.98 | 9.38 | 1.32 | 28.13 |
| 99999 <br> Fort Wayne-Huntington- <br> Auburn, IN CSA (2019) | 24 | 310 | 4.01 | 0.00 | 96.80 | 50.00 | NA | 1.87 | 12.50 | 1.33 | 37.50 |
| 99999 Lafayette-West Lafayette-Frankfort, IN CSA | 65 | 3,803 | 10.85 | 89.00 | 96.21 | 72.31 | 37.08 | 1.68 | 23.08 | 2.11 | 4.62 |
| 99999 <br> Richmond-Connersville, IN CSA | 23 | 294 | 3.84 | 192.00 | 98.60 | 78.26 | 85.94 | 0.70 | 13.04 | 0.70 | 8.70 |
| 99999 <br> South Bend-Ekhart- <br> Mishaw aka, $\operatorname{IN}-\mathrm{Ml} \mathrm{CSA}$ <br> (2017-2018) | 26 | 462 | 4.34 | 199.00 | 96.74 | 76.92 | 57.79 | 2.47 | 19.23 | 0.79 | 3.85 |
| 99999 <br> South Bend-Ekhart- <br> Mishaw aka, IN-MI CSA (2019) | 32 | 570 | 5.34 | 0.00 | 96.82 | 68.75 | NA | 2.31 | 25.00 | 0.87 | 6.25 |
| 99999 IN Non-Metro Roll-up | 1 | 12 | 0.17 | 11.00 | 100.00 | 100.00 | 45.45 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 599 | 22,167 | 100.00 | 1,540 | 96.30 | 74.46 | 57.08 | 2.21 | 14.86 | 1.49 | 10.68 |

Source: 2015 ACS; 01/01/2017-12/31/2019 Bank Data, 2019 HMDA Aggregate Data, 'N/A' data not available.
Due to rounding, totals may not equal 100.0

Charter Number: 8

| Table O: | ess | Area | ribut | Hom | gage | ans | ncome | gory | the G | graphy | ntucky |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Home Mortgage Loans |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\%$ of Total | Overall Market | \% of OwnerOccupied Housing Units | $\begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | $\qquad$ | $\begin{array}{\|l\|} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | \% Aggregate | \% of OwnerOccupied Housing Units | \% <br> Bank <br> Loans | \% Aggregate | \% of OwnerOccupied Housing Units | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | \% Aggregate | \% of OwnerOccupied Housing Units | $\begin{gathered} \text { \% Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Lexington-Fayette-- <br> Richmond--Frankfort, KY <br> CSA (2017-2018) | 1,361 | 271,169 | 53.73 | 14,662 | 4.34 | 3.16 | 3.48 | 17.45 | 16.97 | 17.61 | 36.60 | 31.23 | 34.14 | 41.62 | 48.64 | 44.77 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Lexington-Fayette-- <br> Richmond---Frankfort, KY <br> CSA (2019) | 763 | 145,070 | 30.12 | N/A | 4.34 | 4.33 | N/A | 17.45 | 17.96 | N/A | 36.60 | 31.45 | N/A | 41.62 | 46.26 | N/A | 0.00 | 0.00 | N/A |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Bowling Green-Glasgow, KYCSA | 147 | 27,849 | 5.80 | 3,982 | 2.80 | 0.68 | 3.54 | 11.37 | 10.20 | 11.07 | 34.13 | 28.57 | 31.04 | 51.31 | 60.54 | 53.52 | 0.40 | 0.00 | 0.83 |
| 36980 Owensboro, KY MSA | 164 | 20,339 | 6.47 | 2,844 | 1.83 | 0.61 | 1.16 | 18.05 | 17.68 | 17.79 | 50.94 | 46.34 | 51.16 | 29.18 | 35.37 | 29.89 | 0.00 | 0.00 | 0.00 |
| 99999 <br> KY Non-Metro Roll-up | 98 | 12,509 | 3.87 | 680 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 56.01 | 52.04 | 56.76 | 43.99 | 47.96 | 43.24 | 0.00 | 0.00 | 0.00 |
| Total | 2,533 | 476,936 | 99.99 | 22,168 | 3.80 | 3.08 | 3.09 | 16.40 | 16.27 | 15.92 | 38.37 | 32.93 | 36.46 | 41.38 | 47.73 | 44.38 | 0.04 | 0.00 | 0.15 |

Source: 2015 ACS; 01/01/2017 - 12/31/2019 Bank Data, 2019 HMDA Aggregate Data, 'N/A' data not available.
Due to rounding, totals may not equal 100.0

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Home Mortgage Loans |  |  |  | Low-Income Borrowers |  |  | Moderate Income Borrowers |  |  | Middle-Income Borrowers |  |  | Upper-Income Borrowers |  |  | Not Available-Income Borrowers |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \% \text { of } \\ & \text { Total } \end{aligned}$ | Overall Market | \% Families | $\begin{array}{\|c} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | \% Aggregate | Families | $\begin{array}{c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | \% Aggregate | \% Families | $\begin{array}{c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \\ \hline \end{array}$ | \% Aggregate | \% Families | $\begin{array}{\|c} \hline \% \\ \text { Bank } \\ \text { Loans } \\ \hline \end{array}$ | \% Aggregate | \% Families | \% Bank <br> Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Lexington-Fayette-- <br> Richmond--Frankfort, KY <br> CSA (2017-2018) | 1,361 | 271,169 | 53.73 | 14,662 | 23.09 | 9.70 | 8.61 | 15.24 | 18.88 | 15.13 | 18.26 | 21.31 | 18.76 | 43.42 | 41.07 | 38.66 | 0.00 | 9.04 | 18.84 |
| 99999 <br> Lexington-Fayette-- <br> Richmond--Frankfort, KY <br> CSA (2019) | 763 | 145,070 | 30.12 | N/A | 23.09 | 12.45 | N/A | 15.24 | 21.76 | N/A | 18.26 | 22.67 | N/A | 43.42 | 40.10 | N/A | 0.00 | 3.01 | N/A |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Bowling Green-Glasgow, KYCSA | 147 | 27,849 | 5.80 | 3,982 | 19.72 | 4.76 | 6.25 | 16.64 | 14.29 | 14.69 | 19.66 | 19.73 | 18.56 | 43.98 | 49.66 | 40.81 | 0.00 | 11.56 | 19.69 |
| 36980 <br> Owensboro, KYMSA | 164 | 20,339 | 6.47 | 2,844 | 21.81 | 12.80 | 8.09 | 17.66 | 22.56 | 20.01 | 19.69 | 19.51 | 23.31 | 40.84 | 35.37 | 31.19 | 0.00 | 9.76 | 17.41 |
| 99999 <br> KY Non-Metro Roll-up | 98 | 12,509 | 3.87 | 680 | 19.09 | 4.08 | 4.71 | 15.08 | 5.10 | 11.18 | 17.31 | 21.43 | 20.59 | 48.52 | 51.02 | 45.44 | 0.00 | 18.37 | 18.09 |
| Total | 2,533 | 476,936 | 99.99 | 22,168 | 22.50 | 11.09 | 8.00 | 15.61 | 20.80 | 15.56 | 18.52 | 23.33 | 19.36 | 43.36 | 44.78 | 38.30 | 0.00 | 7.78 | 18.78 |

Source: 2015 ACS; 01/01/2017-12/31/2019 Bank Data, 2019 HMDA Aggregate Data, 'N/A' data not available.
Due to rounding, totals may not equal 100.0

| Q: Assessment Area Distribution of Loans to Small Businesses By Income Category of the Geography - Kentucky 2017-2019 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Small Businesses |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \% \text { of } \\ & \text { Total } \end{aligned}$ | Overall Market | $\begin{gathered} \hline \% \text { of } \\ \text { Busines- } \end{gathered}$ ses | $\begin{array}{\|c} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | \% Aggregate | $\begin{array}{c\|} \hline \% \text { of } \\ \text { Busines- } \\ \text { ses } \end{array}$ | $\begin{gathered} \hline \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | $\begin{gathered} \text { \% of } \\ \text { Busines- } \end{gathered}$ ses | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | \% Aggregate | $\begin{gathered} \hline \% \text { of } \\ \text { Busines- } \\ \text { ses } \end{gathered}$ | $\begin{array}{\|c\|} \hline \begin{array}{c} \% \\ \text { Bank } \\ \text { Loans } \end{array} \\ \hline \end{array}$ | \% Aggregate | $\begin{gathered} \hline \% \text { of } \\ \text { Busines- } \end{gathered}$ ses | \% Bank Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Lexington-Fayette--Richmond--Frankfort, KY CSA (2017-2018) | 2,486 | 60,087 | 41.97 | 9,306 | 5.80 | 4.30 | 5.33 | 18.06 | 16.37 | 19.59 | 40.67 | 34.71 | 38.86 | 35.46 | 44.61 | 36.22 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Lexington-Fayette--Richmond--Frankfort, KY CSA (2019) | 1,850 | 37,354 | 31.23 | N/A | 5.81 | 5.30 | N/A | 17.84 | 17.14 | N/A | 40.35 | 35.73 | N/A | 35.99 | 41.84 | N/A | 0.00 | 0.00 | N/A |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Bowling Green-Glasgow, KY CSA | 843 | 14,405 | 14.23 | 2,393 | 7.40 | 3.56 | 5.98 | 20.10 | 15.54 | 19.47 | 31.75 | 34.05 | 28.33 | 35.03 | 41.99 | 43.13 | 5.71 | 4.86 | 3.09 |
| 36980 Owensboro, KY MSA | 566 | 8,594 | 9.56 | 1,757 | 3.01 | 2.30 | 2.56 | 30.58 | 24.20 | 28.57 | 40.57 | 35.16 | 39.90 | 25.83 | 38.34 | 28.97 | 0.00 | 0.00 | 0.00 |
| 99999 <br> KY Non-Metro Roll-up | 178 | 2,582 | 3.01 | 385 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 60.75 | 48.31 | 55.32 | 39.25 | 51.69 | 44.68 | 0.00 | 0.00 | 0.00 |
| Total | 5,923 | 123,022 | 100.00 | 13,841 | 5.62 | 4.19 | 4.94 | 18.69 | 16.75 | 20.16 | 40.15 | 35.39 | 37.63 | 35.01 | 42.98 | 36.73 | 0.53 | 0.69 | 0.53 |

Source: 2015 ACS; 01/01/2017-12/31/2019 Bank Data, 2019 HMDA Aggregate Data, 'N/A' data not available.
Due to rounding, totals may not equal 100.0

|  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Small Businesses |  |  |  | Businesses with Revenues <= 1MM |  |  | Businesses with Revenues > 1 MM |  | Businesses with Revenues Not Available |  |
| Assessment Area: | \# | \$ | \% of Total | Overall Market | \% of Businesses | \% Bank Loans | \% Aggregate | \% of Businesses | \% Bank Loans | \% of Businesses | \% Bank Loans |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Lexington-Fayette-- <br> Richmond--Frankfort, KY <br> CSA (2017-2018) | 2,486 | 60,087 | 41.97 | 9,306 | 82.49 | 69.63 | 42.95 | 5.78 | 19.63 | 11.72 | 10.74 |
| 99999 <br> Lexington-Fayette-- <br> Richmond--Frankfort, KY <br> CSA (2019) | 1,850 | 37,354 | 31.23 | N/A | 83.98 | 69.78 | N/A | 5.08 | 21.95 | 10.93 | 8.27 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Bowling Green-Glasgow, KY CSA | 843 | 14,405 | 14.23 | 2,393 | 80.72 | 66.79 | 48.52 | 6.01 | 24.67 | 13.27 | 8.54 |
| 36980 <br> Owensboro, KY MSA | 566 | 8,594 | 9.56 | 1,757 | 80.80 | 71.55 | 50.09 | 5.91 | 16.96 | 13.29 | 11.48 |
| 99999 <br> KY Non-Metro Roll-up | 178 | 2,582 | 3.01 | 385 | 79.25 | 70.22 | 41.82 | 5.12 | 20.79 | 15.63 | 8.99 |
| Total | 5,923 | 123,022 | 100.00 | 13,841 | 82.77 | 69.47 | 44.79 | 5.50 | 20.85 | 11.73 | 9.67 |

Due to rounding, totals may not equal 100.0

| Table S: Assessment Area Distribution of Loans to Farms By Income Category of the Geography - Kentucky |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Farms |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \text { \% of } \\ & \text { Total } \end{aligned}$ | Overall Market | \% of Farms |  | \% <br> Aggregate | $\begin{gathered} \% \text { of } \\ \text { Farms } \end{gathered}$ |  | \% Aggregate | $\%$ of Farms |  | \% <br> Aggregate | $\% \text { of }$ Farms |  | \% Aggregate | \% of Farms | \% Bank Loans | \% <br> Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Lexington-Fayette-- <br> Richmond--Frankfort, KY <br> CSA (2017-2018) | 110 | 8,103 | 53.92 | 193 | 4.05 | 5.45 | 2.59 | 13.20 | 2.73 | 7.77 | 39.35 | 50.91 | 46.11 | 43.40 | 40.91 | 43.52 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Lexington-Fayette-- <br> Richmond--Frankfort, KY <br> CSA (2019) | 61 | 3,411 | 29.90 | N/A | 4.55 | 9.84 | N/A | 13.58 | 3.28 | NA | 39.63 | 59.02 | NA | 42.24 | 27.87 | N/A | 0.00 | 0.00 | NA |
| Limited Review : |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Bow ling Green-Glasgow, <br> KY CSA | 6 | 34 | 2.94 | 83 | 1.54 | 0.00 | 1.20 | 5.13 | 0.00 | 3.61 | 34.36 | 0.00 | 31.33 | 57.69 | 100.00 | 63.86 | 1.28 | 0.00 | 0.00 |
| 36980 Ow ensboro, KY MSA | 24 | 1,470 | 11.76 | 216 | 0.00 | 0.00 | 0.00 | 10.71 | 0.00 | 4.17 | 50.00 | 58.33 | 53.70 | 39.29 | 41.67 | 42.13 | 0.00 | 0.00 | 0.00 |
| 99999 KY Non-Metro Roll-up | 3 | 28 | 1.47 | 15 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 35.65 | 33.33 | 6.67 | 64.35 | 66.67 | 93.33 | 0.00 | 0.00 | 0.00 |
| Total | 204 | 13,046 | 99.99 | 507 | 3.43 | 5.88 | 1.18 | 11.74 | 2.45 | 5.33 | 39.81 | 52.45 | 45.76 | 44.88 | 39.22 | 47.73 | 0.15 | 0.00 | 0.00 |

Due to rounding, totals may not equal 100.0


Due to rounding, totals may not equal 100.0

Charter Number: 8

| ble O: Assessment Area Distribution of Home Mortgage Loans By Income Category of the Geography - Louisiana |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | $\begin{array}{\|l\|} \hline \text { 2017-2019 } \\ \hline \text { ne Tracts } \\ \hline \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Home Mortgage Loans |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | \% of Total | Overall Market |  | $\begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | \% of <br> Owner- <br> Occupied <br> Housing <br> Units | $\begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% <br> Aggregate | \% of OwnerOccupied Housing Units | $\begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | \% of Owner- Occupied Housing Units | $\begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | \% of Owner- Occupied Housing Units | \% Bank Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 12940 <br> Baton Rouge, LA MSA | 2,684 | 572,180 | 23.36 | 21,389 | 4.01 | 1.08 | 1.80 | 18.60 | 12.93 | 14.37 | 37.68 | 27.01 | 36.81 | 39.71 | 58.98 | 47.01 | 0.00 | 0.00 | 0.00 |
|  | 276 | 41,287 | 2.40 | 4,623 | 8.47 | 2.17 | 3.98 | 11.45 | 5.43 | 7.33 | 21.94 | 28.99 | 27.71 | 58.13 | 63.04 | 60.93 | 0.00 | 0.36 | 0.04 |
| 99999 <br> Monroe-Ruston, LA CSA (2019) | 107 | 15,848 | 0.93 | N/A | 8.47 | 0.93 | N/A | 11.45 | 8.41 | N/A | 21.94 | 21.50 | N/A | 58.13 | 69.16 | N/A | 0.00 | 0.00 | N/A |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 10780 <br> Alexandria, LA MSA | 171 | 22,100 | 1.49 | 2,833 | 4.49 | 1.17 | 2.08 | 8.49 | 4.09 | 6.57 | 45.02 | 46.78 | 42.78 | 41.99 | 47.95 | 48.57 | 0.01 | 0.00 | 0.00 |
| 99999 <br> DeRidder-Fort Polk South, LA CSA | 72 | 9,727 | 0.63 | 933 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 35.86 | 22.22 | 35.16 | 64.14 | 77.78 | 64.84 | 0.00 | 0.00 | 0.00 |
| 26380 <br> Houma-Thibodaux, LA MSA | 898 | 130,253 | 7.82 | 4,223 | 0.00 | 0.00 | 0.00 | 13.97 | 9.91 | 13.00 | 64.48 | 56.24 | 61.00 | 21.55 | 33.85 | 26.00 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Lafayette-OpelousasMorgan City, LA CSA (2017-2018) | 861 | 137,218 | 7.49 | 11,746 | 3.55 | 1.97 | 2.83 | 21.03 | 11.50 | 13.55 | 48.01 | 43.44 | 43.60 | 27.41 | 43.09 | 40.03 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Lafayette-OpelousasMorgan City, LA CSA (2019) | 417 | 73,416 | 3.63 | N/A | 3.55 | 1.44 | N/A | 21.03 | 12.95 | N/A | 48.01 | 36.45 | N/A | 27.41 | 49.16 | N/A | 0.00 | 0.00 | N/A |
| 99999 <br> Lake Charles-Jennings, LA <br> CSA | 618 | 100,815 | 5.38 | 5,462 | 2.88 | 2.10 | 2.44 | 18.74 | 12.46 | 17.12 | 41.50 | 33.82 | 39.29 | 36.88 | 51.62 | 41.14 | 0.00 | 0.00 | 0.02 |
| 99999 <br> New Orleans-MetairieHammond, LA-MS (part) CSA (2017-2018) | 3,027 | 602,269 | 26.35 | 34,717 | 5.06 | 4.10 | 5.28 | 19.57 | 14.57 | 16.36 | 39.44 | 35.22 | 37.46 | 35.49 | 45.42 | 40.16 | 0.44 | 0.69 | 0.73 |
| 99999 <br> New Orleans-MetairieHammond, LA-MS (part) CSA (2019) | 1,812 | 423,786 | 15.77 | N/A | 5.06 | 5.41 | N/A | 19.57 | 14.35 | N/A | 39.44 | 33.00 | N/A | 35.49 | 46.41 | N/A | 0.44 | 0.83 | N/A |
| 43340 <br> Shreveport-Bossier City, LA MSA | 546 | 82,466 | 4.75 | 9,538 | 7.23 | 2.20 | 2.33 | 15.94 | 9.16 | 9.65 | 36.00 | 31.68 | 30.77 | 40.84 | 56.96 | 57.26 | 0.00 | 0.00 | 0.00 |
| Total | 11,489 | 2,211,365 | 100.00 | 95,464 | 4.65 | 2.68 | 3.30 | 18.38 | 12.60 | 13.91 | 40.78 | 34.82 | 38.21 | 36.00 | 49.57 | 44.31 | 0.19 | 0.32 | 0.27 |

Source: 2015 ACS; 01/01/2017-12/31/2019
Due to rounding, totals may not equal 100.0

Charter Number: 8

| Table P: Assessment Area Distribution of Home Mortgage Loans By Income Category of the Borrower - Louisiana |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Home Mortgage Loans |  |  |  | Low-Income Borrowers |  |  | Moderate Income Borrowers |  |  | Middle-Income Borrowers |  |  | Upper-Income Borrowers |  |  | Not Available-Income Borrowers |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \% \text { of } \\ & \text { Total } \end{aligned}$ | Overall Market | \% Families | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \\ \hline \end{array}$ | \% Aggregate | $\begin{gathered} \% \\ \text { Families } \end{gathered}$ | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | \% <br> Aggregate | \% Families | $\begin{array}{\|c\|} \hline \begin{array}{c} \% \\ \text { Bank } \\ \text { Loans } \end{array} \\ \hline \end{array}$ | \% Aggregate | \% Families | $\begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | \% Families | \% Bank Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 12940 <br> Baton Rouge, LA MSA | 2,684 | 572,180 | 23.36 | 21,389 | 23.67 | 4.92 | 6.52 | 16.08 | 15.69 | 18.01 | 17.96 | 15.31 | 19.90 | 42.29 | 47.06 | 34.47 | 0.00 | 17.03 | 21.10 |
| 99999 <br> Monroe-Ruston, LA CSA (2017-2018) | 276 | 41,287 | 2.40 | 4,623 | 25.00 | 3.99 | 2.99 | 15.66 | 6.52 | 8.48 | 15.25 | 14.13 | 16.79 | 44.09 | 35.14 | 48.93 | 0.00 | 40.22 | 22.82 |
|  | 107 | 15,848 | 0.93 | N/A | 25.00 | 0.93 | N/A | 15.66 | 7.48 | N/A | 15.25 | 16.82 | N/A | 44.09 | 49.53 | N/A | 0.00 | 25.23 | N/A |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 10780 <br> Alexandria, LA MSA | 171 | 22,100 | 1.49 | 2,833 | 23.76 | 4.09 | 4.13 | 16.40 | 10.53 | 13.45 | 17.90 | 14.62 | 17.90 | 41.94 | 35.67 | 42.29 | 0.00 | 35.09 | 22.24 |
| 99999 <br> DeRidder-Fort Polk South, LA CSA | 72 | 9,727 | 0.63 | 933 | 17.63 | 4.17 | 2.79 | 13.95 | 6.94 | 9.75 | 15.89 | 18.06 | 15.86 | 52.54 | 52.78 | 53.48 | 0.00 | 18.06 | 18.11 |
| 26380 <br> Houma-Thibodaux, LA MSA | 898 | 130,253 | 7.82 | 4,223 | 22.66 | 6.12 | 6.01 | 16.22 | 13.25 | 15.58 | 18.74 | 22.38 | 19.70 | 42.38 | 46.33 | 36.94 | 0.00 | 11.92 | 21.76 |
| 99999 <br> Lafayette-Opelousas- <br> Morgan City, LA CSA <br> (2017-2018) | 861 | 137,218 | 7.49 | 11,746 | 25.35 | 4.99 | 6.33 | 15.98 | 12.66 | 16.29 | 16.73 | 14.87 | 19.81 | 41.95 | 39.14 | 36.79 | 0.00 | 28.34 | 20.78 |
|  | 417 | 73,416 | 3.63 | N/A | 25.35 | 3.12 | N/A | 15.98 | 14.15 | N/A | 16.73 | 20.14 | N/A | 41.95 | 49.16 | N/A | 0.00 | 13.43 | N/A |
| 99999 <br> Lake Charles-Jennings, LA CSA | 618 | 100,815 | 5.38 | 5,462 | 23.69 | 3.40 | 3.28 | 16.81 | 11.00 | 10.47 | 17.93 | 16.67 | 19.04 | 41.57 | 53.40 | 45.17 | 0.00 | 15.53 | 22.04 |
| 99999 <br> New Orleans-MetairieHammond, LA-MS (part) CSA (2017-2018) | 3,027 | 602,269 | 26.35 | 34,717 | 25.09 | 5.58 | 5.05 | 15.75 | 14.40 | 15.06 | 17.27 | 16.85 | 18.50 | 41.88 | 48.20 | 41.56 | 0.00 | 14.97 | 19.82 |
| 99999 <br> New Orleans-MetairieHammond, LA-MS (part) CSA (2019) | 1,812 | 423,786 | 15.77 | N/A | 25.09 | 5.52 | N/A | 15.75 | 17.60 | N/A | 17.27 | 18.21 | N/A | 41.88 | 53.48 | N/A | 0.00 | 5.19 | N/A |
| 43340 <br> Shreveport-Bossier City, LA MSA | 546 | 82,466 | 4.75 | 9,538 | 24.39 | 6.23 | 4.91 | 15.28 | 12.27 | 14.12 | 16.78 | 16.48 | 19.84 | 43.54 | 38.28 | 37.89 | 0.00 | 26.74 | 23.24 |
| Total | 11,489 | 2,211,365 | 100.00 | 95,464 | 24.68 | 6.12 | 5.32 | 15.86 | 17.11 | 15.12 | 17.17 | 20.28 | 19.06 | 42.29 | 56.49 | 39.52 | 0.00 | 16.22 | 20.98 |

Due to rounding, totals may not equal 100.0

| Q: Assessment Area Distribution of Loans to Small Businesses By Income Category of the Geography - Louisiana |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Small Businesses |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \% \text { of } \\ & \text { Total } \end{aligned}$ | Overall Market | $\qquad$ | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \\ \hline \end{array}$ | \% Aggregate | $\begin{array}{\|c\|} \hline \% \text { of } \\ \text { Busines- } \\ \text { ses } \end{array}$ | $\begin{gathered} \hline \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | $\begin{array}{c\|} \hline \% \text { of } \\ \text { Busines- } \\ \text { ses } \end{array}$ | $\begin{gathered} \hline \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | $\qquad$ | $\begin{gathered} \hline \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | $\begin{array}{c\|} \hline \% \text { of } \\ \text { Busines- } \\ \text { ses } \end{array}$ | \% Bank Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 12940 <br> Baton Rouge, LA MSA | 7,101 | 198,998 | 18.00 | 15,963 | 6.49 | 2.92 | 4.95 | 21.29 | 14.65 | 18.92 | 30.76 | 28.31 | 30.87 | 41.40 | 54.13 | 45.21 | 0.05 | 0.00 | 0.06 |
| 99999 <br> Monroe-Ruston, LA CSA <br> (2017-2018) | 660 | 19,216 | 1.67 | 4,863 | 16.43 | 8.79 | 15.83 | 12.88 | 10.00 | 11.72 | 25.08 | 22.12 | 17.85 | 45.44 | 58.94 | 54.39 | 0.17 | 0.15 | 0.21 |
| 99999 <br> Monroe-Ruston, LA CSA <br> (2019) | 614 | 9,456 | 1.56 | N/A | 15.83 | 9.93 | N/A | 12.59 | 7.65 | N/A | 21.09 | 21.66 | N/A | 50.34 | 60.75 | N/A | 0.15 | 0.00 | N/A |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 10780 <br> Alexandria, LA MSA | 669 | 11,000 | 1.70 | 2,466 | 10.81 | 5.98 | 10.46 | 11.61 | 8.37 | 10.38 | 45.30 | 46.49 | 46.23 | 31.94 | 38.57 | 32.64 | 0.34 | 0.60 | 0.28 |
| 99999 <br> DeRidder-Fort Polk South, LA CSA | 183 | 2,054 | 0.46 | 534 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 46.15 | 37.70 | 44.19 | 53.85 | 62.30 | 55.81 | 0.00 | 0.00 | 0.00 |
| $\begin{aligned} & 26380 \\ & \text { Houma-Thibodaux, LA MSA } \end{aligned}$ | 1,553 | 35,529 | 3.94 | 4,130 | 0.00 | 0.00 | 0.00 | 19.46 | 14.68 | 23.66 | 57.69 | 48.68 | 50.77 | 22.84 | 36.64 | 25.57 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Lafayette-OpelousasMorgan City, LA CSA (2017-2018) | 3,295 | 94,167 | 8.35 | 12,953 | 6.88 | 4.22 | 6.22 | 23.12 | 14.36 | 19.52 | 42.27 | 40.52 | 44.07 | 27.63 | 40.91 | 30.15 | 0.10 | 0.00 | 0.04 |
| 99999 <br> Lafayette-OpelousasMorgan City, LA CSA (2019) | 2,367 | 50,865 | 6.00 | N/A | 6.60 | 3.97 | N/A | 22.44 | 15.63 | N/A | 42.32 | 41.49 | N/A | 28.54 | 38.87 | N/A | 0.10 | 0.04 | N/A |
| 99999 <br> Lake Charles-Jennings, LA CSA | 1,831 | 39,253 | 4.64 | 4,314 | 5.59 | 6.06 | 6.58 | 28.58 | 19.55 | 26.70 | 33.86 | 28.84 | 31.06 | 31.75 | 45.28 | 35.56 | 0.22 | 0.27 | 0.09 |
| 99999 <br> New Orleans-MetairieHammond, LA-MS (part) CSA (2017-2018) | 10,822 | 284,668 | 27.43 | 33,025 | 7.66 | 6.02 | 7.62 | 20.24 | 15.62 | 18.46 | 31.97 | 26.68 | 28.73 | 39.04 | 50.55 | 43.95 | 1.09 | 1.14 | 1.24 |
| 99999 <br> New Orleans-MetairieHammond, LA-MS (part) CSA (2019) | 8,122 | 158,213 | 20.59 | N/A | 7.99 | 6.59 | N/A | 20.40 | 15.81 | N/A | 31.61 | 27.22 | N/A | 38.87 | 49.04 | N/A | 1.12 | 1.34 | N/A |
| 43340 <br> Shreveport-Bossier City, LA MSA | 2,232 | 54,218 | 5.66 | 7,142 | 15.51 | 9.18 | 15.33 | 21.78 | 17.70 | 21.93 | 26.62 | 27.87 | 27.57 | 35.98 | 45.21 | 35.10 | 0.10 | 0.04 | 0.07 |
| Total | 39,449 | 957,637 | 100.00 | 85,390 | 8.20 | 5.33 | 7.64 | 20.47 | 15.23 | 18.93 | 33.87 | 30.39 | 32.53 | 36.89 | 48.43 | 40.38 | 0.57 | 0.62 | 0.52 |

Due to rounding, totals may not equal 100.0

Charter Number: 8

| Assessment Area Distribution of Loans to Small Businesses Loans by Gross Annual Revenues - Louisiana |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Small Businesses |  |  |  | Businesses with Revenues <= 19M |  |  | Businesses with Revenues > 1 MM |  | Businesses with Revenues Not Available |  |
| Assessment Area: | \# | \$ | \% of Total | Overall Market | \% of Businesses | \% Bank Loans | \% Aggregate | \% of Businesses | \% Bank Loans | \% of Businesses | \% Bank Loans |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |
| 12940 <br> Baton Rouge, LA MSA | 7,101 | 198,998 | 18.00 | 15,963 | 87.85 | 65.57 | 34.50 | 3.73 | 20.29 | 8.42 | 14.14 |
| 99999 <br> Monroe-Ruston, LA CSA (2017-2018) | 660 | 19,216 | 1.67 | 4,863 | 86.73 | 63.64 | 31.54 | 4.48 | 19.24 | 8.79 | 17.12 |
| 99999 <br> Monroe-Ruston, LA CSA <br> (2019) | 614 | 9,456 | 1.56 | N/A | 86.66 | 62.21 | N/A | 4.38 | 26.55 | 8.96 | 11.24 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |
| 10780 <br> Alexandria, LA MSA | 669 | 11,000 | 1.70 | 2,466 | 83.47 | 66.37 | 36.25 | 4.60 | 19.28 | 11.94 | 14.35 |
| 99999 <br> DeRidder-Fort Polk South, LA CSA | 183 | 2,054 | 0.46 | 534 | 89.60 | 69.95 | 20.60 | 2.09 | 8.20 | 8.31 | 21.86 |
| 26380 <br> Houma-Thibodaux, LA MSA | 1,553 | 35,529 | 3.94 | 4,130 | 86.30 | 62.33 | 22.59 | 4.76 | 18.67 | 8.94 | 19.00 |
| 99999 <br> Lafayette-OpelousasMorgan City, LA CSA (2017-2018) | 3,295 | 94,167 | 8.35 | 12,953 | 86.91 | 64.86 | 30.43 | 4.57 | 16.75 | 8.52 | 18.39 |
|  | 2,367 | 50,865 | 6.00 | N/A | 87.61 | 64.77 | N/A | 4.28 | 21.46 | 8.11 | 13.77 |
| 99999 <br> Lake Charles-Jennings, LA <br> CSA | 1,831 | 39,253 | 4.64 | 4,314 | 86.79 | 63.30 | 25.92 | 3.69 | 22.77 | 9.52 | 13.93 |
| 99999 <br> New Orleans-MetairieHammond, LA-MS (part) CSA (2017-2018) | 10,822 | 284,668 | 27.43 | 33,025 | 88.72 | 68.90 | 34.85 | 3.96 | 16.64 | 7.32 | 14.46 |
| 99999 <br> New Orleans-MetairieHammond, LA-MS (part) CSA (2019) | 8,122 | 158,213 | 20.59 | N/A | 89.67 | 70.60 | N/A | 3.55 | 18.32 | 6.79 | 11.08 |
| 43340 <br> Shreveport-Bossier City, LA MSA | 2,232 | 54,218 | 5.66 | 7,142 | 87.58 | 65.41 | 33.67 | 3.73 | 19.58 | 8.69 | 15.01 |
| Total | 39,449 | 957,637 | 100.00 | 85,390 | 88.14 | 67.12 | 32.73 | 3.95 | 18.68 | 7.91 | 14.21 |

Due to rounding, totals may not equal 100.0

Charter Number: 8

| Assessment Area Distribution of Loans to Farms By Income Category of the Geography - Louisiana |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | $\begin{array}{\|l} \hline \text { 2017-2019 } \\ \hline \text { ne Tracts } \\ \hline \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Farms |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \text { \% of } \\ & \text { Total } \end{aligned}$ | Overall Market | $\%$ of Farms | $\begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% <br> Aggregate | \% of Farm s | $\begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | $\%$ of Farms |  | \% <br> Aggregate | $\%$ of Farms | $\begin{array}{\|l\|} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | \% <br> Aggregate | $\begin{gathered} \text { \% of } \\ \text { Farms } \end{gathered}$ | \% Bank <br> Loans | \% <br> Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 12940 <br> Baton Rouge, LA MSA | 56 | 855 | 10.33 | 67 | 3.57 | 3.57 | 1.49 | 14.23 | 1.79 | 14.93 | 36.65 | 44.64 | 52.24 | 45.55 | 50.00 | 31.34 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Monroe-Ruston, LA CSA <br> (2017-2018) | 26 | 2,142 | 4.80 | 78 | 3.40 | 0.00 | 2.56 | 7.94 | 3.85 | 12.82 | 29.48 | 42.31 | 11.54 | 58.96 | 53.85 | 73.08 | 0.23 | 0.00 | 0.00 |
| 99999 <br> Monroe-Ruston, LA CSA <br> (2019) | 19 | 249 | 3.51 | N/A | 5.46 | 0.00 | NA | 7.14 | 0.00 | N/A | 24.58 | 31.58 | N/A | 62.61 | 68.42 | N/A | 0.21 | 0.00 | N/A |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 10780 <br> Alexandria, LA MSA | 20 | 216 | 3.69 | 61 | 1.56 | 0.00 | 1.64 | 3.74 | 0.00 | 1.64 | 47.35 | 75.00 | 59.02 | 47.35 | 25.00 | 37.70 | 0.00 | 0.00 | 0.00 |
| 99999 DeRidder-Fort Polk South, LA CSA | 4 | 35 | 0.74 | 27 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 39.47 | 0.00 | 59.26 | 60.53 | 100.00 | 40.74 | 0.00 | 0.00 | 0.00 |
| 26380 <br> Houma-Thibodaux, LA MSA | 40 | 348 | 7.38 | 42 | 0.00 | 0.00 | 0.00 | 9.18 | 5.00 | 14.29 | 65.31 | 62.50 | 59.52 | 25.51 | 32.50 | 26.19 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Lafayette-Opelousas- <br> Morgan City, LA CSA <br> $(2017-2018)$ | 88 | 1,479 | 16.24 | 317 | 2.53 | 0.00 | 0.63 | 17.31 | 14.77 | 14.51 | 54.47 | 64.77 | 74.45 | 25.69 | 20.45 | 10.41 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Lafayette-Opelousas- <br> Morgan City, LA CSA <br> (2019) | 64 | 1,236 | 11.81 | N/A | 2.34 | 1.56 | NA | 16.96 | 12.50 | N/A | 53.80 | 60.94 | NA | 26.90 | 25.00 | N/A | 0.00 | 0.00 | N/A |
| 99999 <br> Lake Charles-Jennings, | 29 | 1,268 | 5.35 | 61 | 3.01 | 0.00 | 0.00 | 15.34 | 13.79 | 3.28 | 41.37 | 41.38 | 72.13 | 40.27 | 44.83 | 24.59 | 0.00 | 0.00 | 0.00 |
| 99999 <br> New Orleans-MetairieHammond, LA-MS (part) CSA (2017-2018) | 88 | 881 | 16.24 | 137 | 4.89 | 4.55 | 2.92 | 17.89 | 12.50 | 24.09 | 41.79 | 43.18 | 40.88 | 34.89 | 39.77 | 32.12 | 0.53 | 0.00 | 0.00 |
| 99999 <br> New Orleans-Metairie- <br> Hammond, LA-MS (part) <br> CSA (2019) | 68 | 665 | 12.55 | N/A | 4.73 | 1.47 | NA | 17.77 | 16.18 | N/A | 41.43 | 27.94 | N/A | 35.44 | 54.41 | N/A | 0.63 | 0.00 | N/A |
| $\begin{aligned} & 43340 \\ & \text { Shreveport-Bossier City, } \\ & \text { LA MSA } \end{aligned}$ | 40 | 1,067 | 7.38 | 77 | 6.79 | 0.00 | 1.30 | 14.09 | 15.00 | 16.88 | 32.96 | 40.00 | 59.74 | 46.16 | 45.00 | 22.08 | 0.00 | 0.00 | 0.00 |
| Total | 542 | 10,441 | 100.02 | 867 | 3.73 | 1.48 | 1.27 | 15.19 | 10.52 | 13.96 | 43.76 | 48.52 | 58.02 | 37.10 | 39.48 | 26.76 | 0.21 | 0.00 | 0.00 |

Due to rounding, totals may not equal 100.0

Charter Number: 8

| Assessment Area Distribution of Loans to Farms by Gross Annual Revenues - Louisiana |  |  |  |  |  |  |  |  |  | 2017-2019 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Farms |  |  |  | Farms with Revenues <= 1MM |  |  | Farms with Revenues > 1MM |  | Farms with Revenues Not Available |  |
| Assessment Area: | \# | \$ | \% of Total | Overall Market | \% of Businesses | \% Bank Loans | \% Aggregate | \% of Businesses | \% Bank Loans | \% of Businesses | \% Bank Loans |
| Full Review : |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{array}{\|l} \hline 12940 \\ \text { Baton Rouge, LA MSA } \end{array}$ | 56 | 855 | 10.33 | 67.00 | 97.06 | 82.14 | 34.33 | 1.96 | 8.93 | 0.98 | 8.93 |
| 99999 <br> Monroe-Ruston, LA CSA <br> $(2017-2018)$ | 26 | 2,142 | 4.80 | 78.00 | 96.37 | 80.77 | 28.21 | 1.59 | 15.38 | 2.04 | 3.85 |
| $\begin{aligned} & \begin{array}{l} 99999 \\ \text { Monroe-Ruston, LA CSA } \\ (2019) \end{array} \\ & \hline \end{aligned}$ | 19 | 249 | 3.51 | 0.00 | 96.64 | 68.42 | N/A | 1.68 | 26.32 | 1.68 | 5.26 |
| Limited Review : |  |  |  |  |  |  |  |  |  |  |  |
| 10780 <br> Alexandria, LA MSA | 20 | 216 | 3.69 | 61.00 | 93.46 | 85.00 | 54.10 | 4.36 | 15.00 | 2.18 | 0.00 |
| $\begin{aligned} & \text { 99999 } \\ & \text { DeRidder-Fort Polk South, } \\ & \text { LA CSA } \\ & \hline \end{aligned}$ | 4 | 35 | 0.74 | 27.00 | 96.49 | 25.00 | 3.70 | 0.88 | 0.00 | 2.63 | 75.00 |
| $\begin{aligned} & 26380 \\ & \text { Houma-Thibodaux, LA } \\ & \text { MSA } \\ & \hline \end{aligned}$ | 40 | 348 | 7.38 | 42.00 | 95.15 | 75.00 | 28.57 | 3.06 | 12.50 | 1.79 | 12.50 |
| 99999 <br> Lafayette-Opelousas- <br> Morgan City, LA CSA <br> $(2017-2018)$ | 88 | 1,479 | 16.24 | 317.00 | 97.41 | 68.18 | 34.38 | 1.79 | 11.36 | 0.80 | 20.45 |
| 99999 Lafayette-Opelousas- Morgan City, LA CSA (2019) | 64 | 1,236 | 11.81 | 0.00 | 97.60 | 57.81 | NA | 1.75 | 21.88 | 0.64 | 20.31 |
| 99999 <br> Lake Charles-Jennings, <br> LA CSA | 29 | 1,268 | 5.35 | 61.00 | 97.53 | 72.41 | 63.93 | 0.55 | 13.79 | 1.92 | 13.79 |
| 99999 <br> New Orleans-Metairie- <br> Hammond, LA-MS (part) <br> CSA (2017-2018) | 88 | 881 | 16.24 | 137.00 | 95.42 | 78.41 | 50.36 | 2.47 | 3.41 | 2.11 | 18.18 |
| 99999 <br> New Orleans-Metairie- <br> Hammond, LA-MS (part) <br> CSA (2019) | 68 | 665 | 12.55 | 0.00 | 96.04 | 79.41 | N/A | 2.08 | 7.35 | 1.88 | 13.24 |
| $\begin{aligned} & \hline 43340 \\ & \text { Shreveport-Bossier City, } \\ & \text { LA MSA } \end{aligned}$ | 40 | 1,067 | 7.38 | 77.00 | 96.86 | 70.00 | 51.95 | 1.64 | 5.00 | 1.51 | 25.00 |
| Total | 542 | 10,441 | 100.02 | 867 | 96.53 | 73.25 | 40.14 | 2.01 | 11.07 | 1.46 | 15.68 |

Source: 2015 ACS; 01/01/2017-12/31/2019 Bank Data, 2019 HMDA Aggregate Data, 'N/A' data not available.
Due to rounding, totals may not equal 100.0

Charter Number: 8

| Table O: Assessment Area Distribution of Home Mortgage Loans By Income Category of the Geography - Massachusetts |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 <br> me Tracts |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Home Mortgage Loans |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \% \text { of } \\ & \text { Total } \end{aligned}$ | Overall Market |  | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | \% Aggregate | \% of <br> Owner- <br> Occupied <br> Housing <br> Units | $\begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | \% of Owner- Occupied Housing Units | \% <br> Bank Loans | \% Aggregate | \% of Owner- Occupied Housing Units | $\begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | \% of Owner- Occupied Housing Units | \% Bank Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Boston-Worcester- <br> Providence, MA-RI-NH-CT <br> CSA (2017-2018) | 4,772 | 2,179,715 | 39.36 | 165,075 | 3.49 | 2.41 | 4.98 | 14.32 | 14.40 | 16.04 | 44.05 | 37.91 | 42.64 | 38.03 | 44.78 | 36.16 | 0.11 | 0.50 | 0.18 |
| 99999 <br> Boston-Worcester- <br> Providence, MA-RI-NH-CT <br> CSA (2019) | 7,103 | 3,293,397 | 58.59 | N/A | 3.49 | 3.34 | N/A | 14.32 | 14.60 | N/A | 44.05 | 40.22 | N/A | 38.03 | 41.62 | N/A | 0.11 | 0.23 | N/A |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 38340 Pittsfield, MA MSA | 90 | 27,582 | 0.74 | 6,584 | 3.11 | 2.22 | 4.01 | 10.17 | 2.22 | 9.05 | 55.49 | 46.67 | 54.50 | 31.23 | 48.89 | 32.44 | 0.00 | 0.00 | 0.00 |
| 44140 <br> Springfield, MA MSA | 159 | 31,338 | 1.31 | 11,552 | 6.37 | 3.77 | 7.82 | 16.12 | 11.95 | 18.95 | 33.19 | 35.22 | 34.38 | 44.32 | 49.06 | 38.85 | 0.00 | 0.00 | 0.00 |
| Total | 12,124 | 5,532,032 | 100.00 | 183,211 | 3.60 | 2.97 | 5.13 | 14.28 | 14.39 | 15.97 | 43.93 | 39.29 | 42.55 | 38.10 | 43.01 | 36.20 | 0.10 | 0.33 | 0.16 |
| Source: 2015 ACS; 01/01/2017-12/31/2019 B <br> Due to rounding, totals may not equal 100.0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |


| Table P: | Assessment Area Distribution of Home Mortgage Loans By Income Category of the Borrower - Massachusetts |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Home Mortgage Loans |  |  |  | Low-Income Borrowers |  |  | Moderate Income Borrowers |  |  | Middle-Income Borrowers |  |  | Upper-Income Borrowers |  |  | Not Available-Income Borrowers |  |  |
| Assessment Area: | \# | \$ | $\%$ of Total | Overall Market | \% Families | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \\ \hline \end{array}$ | \% Aggregate | $\begin{gathered} \% \\ \text { Families } \end{gathered}$ | $\begin{array}{c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | \% Aggregate | \% Families | $\begin{gathered} \hline \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | \% Families | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \\ \hline \end{array}$ | \% Aggregate | \% Families | \% Bank Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Boston-Worcester- <br> Providence, MA-RI-NH-CT <br> CSA (2017-2018) | 4,772 | 2,179,715 | 39.36 | 165,075 | 23.47 | 3.19 | 5.96 | 16.22 | 13.68 | 17.91 | 19.44 | 23.37 | 23.19 | 40.87 | 52.16 | 40.16 | 0.00 | 7.61 | 12.78 |
| 99999 <br> Boston-Worcester- <br> Providence, MA-RI-NH-CT <br> CSA (2019) | 7,103 | 3,293,397 | 58.59 | N/A | 23.47 | 3.65 | N/A | 16.22 | 16.36 | N/A | 19.44 | 25.23 | N/A | 40.87 | 51.82 | N/A | 0.00 | 2.94 | N/A |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 38340 Pittsfield, MA MSA | 90 | 27,582 | 0.74 | 6,584 | 21.28 | 0.00 | 7.75 | 17.62 | 11.11 | 18.32 | 20.52 | 8.89 | 19.96 | 40.58 | 71.11 | 42.22 | 0.00 | 8.89 | 11.76 |
| 44140 <br> Springfield, MA MSA | 159 | 31,338 | 1.31 | 11,552 | 27.23 | 4.40 | 8.54 | 16.51 | 22.64 | 24.58 | 17.57 | 30.19 | 22.86 | 38.69 | 39.62 | 27.85 | 0.00 | 3.14 | 16.18 |
| Total | 12,124 | 5,532,032 | 100.00 | 183,211 | 23.58 | 3.62 | 6.18 | 16.27 | 16.13 | 18.34 | 19.39 | 25.68 | 23.05 | 40.76 | 54.57 | 39.46 | 0.00 | 4.83 | 12.96 |

Charter Number: 8

| Able Q: Assessment Area Distribution of Loans to Small Businesses By Income Category of the Geography - Massachusetts 2017-2019 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Small Businesses |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \% \text { of } \\ & \text { Total } \end{aligned}$ | Overall Market | $\qquad$ Busines ses | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \\ \hline \end{array}$ | \% Aggregate | $\qquad$ Busines ses | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \\ \hline \end{array}$ | \% Aggregate | $\qquad$ Busines ses | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \\ \hline \end{array}$ | \% Aggregate | $\begin{gathered} \hline \% \text { of } \\ \text { Busines- } \\ \text { ses } \\ \hline \end{gathered}$ | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \\ \hline \end{array}$ | \% Aggregate | $\qquad$ Busines ses | \% Bank Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Boston-Worcester- <br> Providence, MA-RI-NH-CT <br> CSA (2017-2018) | 7,650 | 89,669 | 32.68 | 127,993 | 7.32 | 4.77 | 6.72 | 14.73 | 15.62 | 15.01 | 37.14 | 32.09 | 38.55 | 40.07 | 46.51 | 39.14 | 0.74 | 1.01 | 0.58 |
| 99999 <br> Boston-Worcester- <br> Providence, MA-RI-NH-CT <br> CSA (2019) | 14,290 | 177,869 | 61.05 | N/A | 7.25 | 4.91 | N/A | 14.89 | 14.00 | N/A | 36.64 | 38.53 | N/A | 40.50 | 42.00 | N/A | 0.72 | 0.55 | N/A |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 38340 <br> Pittsfield, MA MSA | 616 | 9,988 | 2.63 | 5,016 | 12.53 | 9.74 | 11.44 | 6.92 | 9.42 | 7.06 | 43.15 | 43.83 | 42.94 | 37.41 | 37.01 | 38.56 | 0.00 | 0.00 | 0.00 |
| 44140 <br> Springfield, MA MSA | 851 | 10,210 | 3.64 | 9,018 | 19.69 | 8.81 | 17.49 | 20.50 | 17.16 | 20.18 | 24.15 | 27.26 | 25.44 | 35.66 | 46.77 | 36.89 | 0.00 | 0.00 | 0.00 |
| Total | 23,407 | 287,736 | 100.00 | 142,027 | 7.81 | 5.14 | 7.57 | 14.83 | 14.53 | 15.06 | 36.60 | 36.16 | 37.87 | 40.08 | 43.52 | 38.97 | 0.69 | 0.67 | 0.52 |

Source: 2015 ACS; 01/01/2017-12/31/2019 Bank Data, 2019 HMDA Aggregate Data, 'N/A' data not available.
Due to rounding, totals may not equal 100.0

|  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Small Businesses |  |  |  | Businesses with Revenues <= 1 MM |  |  | Businesses with Revenues > 1 Mm |  | Businesses with Revenues Not Available |  |
| Assessment Area: | \# | \$ | \% of Total | Overall Market | \% of Businesses | \% Bank Loans | \% Aggregate | \% of Businesses | \% Bank Loans | \% of Businesses | \% Bank Loans |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Boston-Worcester- <br> Providence, MA-RI-NH-CT CSA (2017-2018) | 7,650 | 89,669 | 32.68 | 127,993 | 83.58 | 66.58 | 39.92 | 6.93 | 17.76 | 9.49 | 15.66 |
| 99999 <br> Boston-Worcester- <br> Providence, MA-RI-NH-CT <br> CSA (2019) | 14,290 | 177,869 | 61.05 | N/A | 85.20 | 67.74 | N/A | 6.10 | 19.62 | 8.71 | 12.64 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |
| $38340$ <br> Pittsfield, MA MSA | 616 | 9,988 | 2.63 | 5,016 | 81.49 | 67.21 | 46.29 | 6.27 | 23.70 | 12.24 | 9.09 |
| 44140 <br> Springfield, MA MSA | 851 | 10,210 | 3.64 | 9,018 | 82.27 | 62.75 | 39.52 | 6.23 | 26.44 | 11.50 | 10.81 |
| Total | 23,407 | 287,736 | 100.00 | 142,027 | 84.30 | 67.16 | 40.12 | 6.47 | 19.37 | 9.22 | 13.47 |

Due to rounding, totals may not equal 100.0

Charter Number: 8

Table S:
Assessment Area Distribution of Loans to Farms By Income Category of the Geography - Massachusetts
2017-2019

|  | Total Loans to Farms |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area: | \# | \$ | $\begin{aligned} & \% \text { of } \\ & \text { Total } \end{aligned}$ | Overall Market | $\%$ of Farms |  | \% <br> Aggregate | $\begin{aligned} & \text { \% of } \\ & \text { Farm s } \end{aligned}$ |  | \% Aggregate | $\%$ of Farms |  | \% <br> Aggregate | $\%$ of Farms |  | \% Aggregate | $\%$ of Farms | \% Bank Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Boston-Worcester- <br> Providence, MA-RI-NH- <br> CT CSA (2017-2018) | 26 | 277 | 22.22 | 243 | 2.80 | 0.00 | 2.88 | 10.59 | 11.54 | 7.82 | 43.74 | 46.15 | 40.74 | 42.80 | 42.31 | 48.56 | 0.07 | 0.00 | 0.00 |
| 99999 <br> Boston-Worcester- <br> Providence, MA-RI-NH- <br> CT CSA (2019) | 72 | 752 | 61.54 | N/A | 3.10 | 5.56 | N/A | 11.05 | 5.56 | N/A | 43.80 | 43.06 | N/A | 41.97 | 44.44 | N/A | 0.08 | 1.39 | N/A |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 38340 <br> Pittsfield, MA MSA | 10 | 86 | 8.55 | 58 | 2.24 | 0.00 | 0.00 | 4.48 | 0.00 | 0.00 | 49.02 | 20.00 | 41.38 | 44.26 | 80.00 | 58.62 | 0.00 | 0.00 | 0.00 |
| $\begin{aligned} & 44140 \\ & \text { Springfield, MA MSA } \end{aligned}$ | 9 | 89 | 7.69 | 20 | 4.45 | 0.00 | 10.00 | 9.69 | 0.00 | 10.00 | 29.45 | 22.22 | 15.00 | 56.41 | 77.78 | 65.00 | 0.00 | 0.00 | 0.00 |
| Total | 117 | 1,204 | 100.00 | 321 | 3.00 | 3.42 | 2.80 | 10.52 | 5.98 | 6.54 | 43.35 | 40.17 | 39.25 | 43.06 | 49.57 | 51.40 | 0.07 | 0.85 | 0.00 |

Source: 2015 ACS; 01/01/2017-12/31/2019 Bank Data, 2019 HMDA Aggregate Data, 'N/A' data not available.
Due to rounding, totals may not equal 100.0

| ble T: Assessment Area Distribution of Loans to Farms by Gross Annual Revenues - Massachusetts 2017-2019 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Farms |  |  |  | Farms with Revenues <= 1MM |  |  | Farms with Revenues > 1MM |  | Farms with Revenues Not Available |  |
| Assessment Area: | \# | \$ | \% of Total | Overall Market | \% of Businesses | \% Bank Loans | \% Aggregate | \% of Businesses | \% Bank Loans | \% of Businesses | \% Bank Loans |
| Full Review : |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Boston-Worcester- <br> Providence, MA-R1-NHCT CSA (2017-2018) | 26 | 277 | 22.22 | 243.00 | 94.66 | 76.92 | 51.44 | 2.96 | 11.54 | 2.37 | 11.54 |
| 99999 <br> Boston-Worcester- <br> Providence, MA-RI-NHCT CSA (2019) | 72 | 752 | 61.54 | 0.00 | 95.16 | 69.44 | NA | 2.71 | 25.00 | 2.13 | 5.56 |
| Limited Review : |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & 38340 \\ & \text { Pittsfield, MA MSA } \end{aligned}$ | 10 | 86 | 8.55 | 58.00 | 95.24 | 100.00 | 48.28 | 3.08 | 0.00 | 1.68 | 0.00 |
| 44140 <br> Springfield, MA MSA | 9 | 89 | 7.69 | 20.00 | 96.60 | 55.56 | 60.00 | 1.70 | 33.33 | 1.70 | 11.11 |
| Total | 117 | 1,204 | 100.00 | 321 | 95.01 | 72.65 | 51.40 | 2.79 | 20.51 | 2.19 | 6.84 |

Due to rounding, totals may not equal 100.0

Charter Number: 8

| Table O: | ga |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Home Mortgage Loans |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \% \text { of } \\ & \text { Total } \end{aligned}$ | Overall Market |  | \% <br> Bank <br> Loans | \% Aggregate | \% of <br> Owner- <br> Occupied <br> Housing <br> Units | \% <br> Bank <br> Loans | \% Aggregate | \% OwnerOccupied Housing Units | \% <br> Bank <br> Loans | \% Aggregate | \% of <br> Owner- <br> Occupied <br> Housing <br> Units | $\begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | $\%$ of <br> Owner- <br> Occupied <br> Housing <br> Units | \% Bank Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Detroit-Warren-Ann Arbor, MI CSA (2017-2018) | 17,711 | 3,339,729 | 51.70 | 156,389 | 6.30 | 1.73 | 2.76 | 19.42 | 12.87 | 14.82 | 37.56 | 37.13 | 39.93 | 36.60 | 48.22 | 42.44 | 0.12 | 0.04 | 0.05 |
| 99999 <br> Detroit-Warren-Ann Arbor, MI CSA (2019) | 9,578 | 2,034,151 | 27.96 | N/A | 6.30 | 1.75 | N/A | 19.42 | 13.09 | N/A | 37.56 | 34.49 | N/A | 36.60 | 50.63 | N/A | 0.12 | 0.04 | N/A |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Grand Rapids-KentwoodMuskegon, MI CSA | 4,061 | 665,770 | 11.85 | 42,449 | 2.37 | 1.85 | 2.38 | 16.97 | 13.30 | 16.62 | 49.97 | 48.71 | 50.75 | 30.69 | 36.15 | 30.26 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Kalamazoo-Battle CreekPortage, MI CSA (20172018) | 349 | 60,543 | 1.02 | 11,437 | 5.01 | 1.43 | 3.12 | 14.69 | 10.60 | 13.11 | 47.79 | 44.99 | 46.40 | 32.45 | 42.98 | 37.31 | 0.05 | 0.00 | 0.06 |
| 99999 <br> Kalamazoo-Battle CreekPortage, MICSA (2019) | 177 | 33,149 | 0.52 | N/A | 5.01 | 1.69 | N/A | 14.69 | 9.04 | N/A | 47.79 | 44.07 | N/A | 32.45 | 45.20 | N/A | 0.05 | 0.00 | N/A |
| Lansing-East LansingOwosso, MICSA (20172018) | 120 | 12,182 | 0.35 | 15,327 | 2.51 | 0.83 | 2.81 | 16.47 | 8.33 | 14.08 | 50.80 | 78.33 | 49.18 | 30.10 | 12.50 | 33.74 | 0.11 | 0.00 | 0.19 |
| 99999 <br> Lansing-East LansingOwosso, MICSA (2019) | 351 | 58,479 | 1.02 | N/A | 2.51 | 1.99 | N/A | 16.47 | 13.96 | N/A | 50.80 | 39.32 | N/A | 30.10 | 44.16 | N/A | 0.11 | 0.57 | N/A |
| 99999 <br> Saginaw-Midland-Bay City, MICSA | 230 | 23,481 | 0.67 | 3,768 | 7.76 | 2.61 | 1.73 | 9.64 | 3.04 | 3.95 | 54.82 | 66.09 | 59.45 | 27.77 | 28.26 | 34.87 | 0.00 | 0.00 | 0.00 |
| 99999 <br> South Bend-ElkhartMishawaka, IN-MI CSA (2017-2018) | 317 | 86,430 | 0.93 | 4,747 | 5.69 | 1.89 | 1.62 | 13.73 | 4.73 | 13.04 | 49.50 | 62.78 | 52.43 | 31.08 | 30.60 | 32.90 | 0.00 | 0.00 | 0.00 |
|  | 202 | 54,977 | 0.59 | N/A | 5.69 | 0.99 | N/A | 13.73 | 10.40 | N/A | 49.50 | 58.42 | N/A | 31.08 | 30.20 | N/A | 0.00 | 0.00 | N/A |
| 99999 <br> MI Non-Metro Roll-up | 1,162 | 220,840 | 3.39 | 9,239 | 0.00 | 0.00 | 0.00 | 5.37 | 4.73 | 5.37 | 65.45 | 52.41 | 58.39 | 29.18 | 42.86 | 36.24 | 0.00 | 0.00 | 0.00 |
| Total | 34,258 | 6,589,731 | 100.00 | 243,356 | 5.46 | 1.69 | 2.57 | 18.09 | 12.51 | 14.45 | 41.40 | 39.12 | 43.95 | 34.95 | 46.64 | 38.98 | 0.10 | 0.04 | 0.05 |

Charter Number: 8

| Table P: | Assessment Area Distribution of Home Mortgage Loans By Income Category of the Borrower - Michigan |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | $\begin{array}{\|c\|} \hline \text { 2017-2019 } \\ \hline \text { Borrowers } \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Home Mortgage Loans |  |  |  | Low-Income Borrowers |  |  | Moderate Income Borrowers |  |  | Middle-Income Borrowers |  |  | Upper-Income Borrowers |  |  | Not Available-Income Borrowers |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \% \text { of } \\ & \text { Total } \end{aligned}$ | Overall Market | \% Families | $\begin{array}{\|c\|} \hline \begin{array}{c} \% \\ \text { Bank } \\ \text { Loans } \end{array} \\ \hline \end{array}$ | \% Aggregate | $\begin{gathered} \text { \% } \\ \text { Families } \end{gathered}$ | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | \% <br> Aggregate | \% Families | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \\ \hline \end{array}$ | \% Aggregate | \% Families | $\%$ <br> Bank <br> Loans | \% Aggregate | \% Families | \% Bank Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Detroit-Warren-Ann Arbor, MI CSA (2017-2018) | 17,711 | 3,339,729 | 51.70 | 156,389 | 22.98 | 8.02 | 9.23 | 16.63 | 20.53 | 19.47 | 19.06 | 21.85 | 22.70 | 41.34 | 42.84 | 36.94 | 0.00 | 6.76 | 11.65 |
| 99999 <br> Detroit-Warren-Ann Arbor, MICSA (2019) | 9,578 | 2,034,151 | 27.96 | N/A | 22.98 | 9.54 | N/A | 16.63 | 19.27 | N/A | 19.06 | 23.07 | N/A | 41.34 | 43.70 | N/A | 0.00 | 4.41 | N/A |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Grand Rapids-KentwoodMuskegon, MICSA | 4,061 | 665,770 | 11.85 | 42,449 | 20.01 | 9.09 | 9.32 | 17.88 | 23.64 | 22.61 | 22.05 | 23.29 | 23.33 | 40.06 | 37.23 | 33.53 | 0.00 | 6.75 | 11.21 |
| Kalamazoo-Battle CreekPortage, MICSA (20172018) | 349 | 60,543 | 1.02 | 11,437 | 20.91 | 3.72 | 10.13 | 17.04 | 12.03 | 20.04 | 19.84 | 20.63 | 21.95 | 42.21 | 48.42 | 36.84 | 0.00 | 15.19 | 11.05 |
| 99999 <br> Kalamazoo-Battle Creek- <br> Portage, MICSA (2019) | 177 | 33,149 | 0.52 | N/A | 20.91 | 6.21 | N/A | 17.04 | 12.43 | N/A | 19.84 | 23.73 | N/A | 42.21 | 50.85 | N/A | 0.00 | 6.78 | N/A |
| 99999 <br> Lansing-East LansingOwosso, MI CSA (20172018) | 120 | 12,182 | 0.35 | 15,327 | 20.98 | 5.83 | 10.38 | 17.33 | 20.83 | 23.49 | 20.73 | 15.00 | 23.61 | 40.97 | 26.67 | 31.26 | 0.00 | 31.67 | 11.26 |
| 99999 <br> Lansing-East LansingOwosso, MI CSA (2019) | 351 | 58,479 | 1.02 | N/A | 20.98 | 0.28 | N/A | 17.33 | 3.13 | N/A | 20.73 | 2.85 | N/A | 40.97 | 5.41 | N/A | 0.00 | 0.57 | N/A |
| 99999 <br> Saginaw-Midand-Bay City, MICSA | 230 | 23,481 | 0.67 | 3,768 | 21.19 | 3.91 | 7.46 | 17.08 | 12.61 | 20.70 | 20.69 | 19.13 | 24.20 | 41.04 | 35.65 | 36.60 | 0.00 | 28.70 | 11.04 |
| 99999 <br> South Bend-ElkhartMishawaka, IN-MI CSA (2017-2018) | 317 | 86,430 | 0.93 | 4,747 | 22.60 | 4.10 | 7.04 | 17.04 | 8.83 | 16.39 | 19.44 | 9.15 | 20.77 | 40.92 | 65.93 | 46.60 | 0.00 | 11.99 | 9.21 |
| 99999 <br> South Bend-ElkhartMishawaka, IN-MI CSA (2019) | 202 | 54,977 | 0.59 | N/A | 22.60 | 5.45 | N/A | 17.04 | 6.93 | N/A | 19.44 | 9.90 | N/A | 40.92 | 69.80 | N/A | 0.00 | 7.92 | N/A |
| 99999 <br> MI Non-Metro Roll-up | 1,162 | 220,840 | 3.39 | 9,239 | 16.32 | 4.22 | 5.79 | 17.79 | 14.03 | 15.56 | 21.72 | 18.50 | 21.12 | 44.17 | 51.98 | 47.98 | 0.00 | 11.27 | 9.55 |
| Total | 34,258 | 6,589,731 | 100.00 | 243,356 | 22.28 | 8.89 | 9.16 | 16.85 | 21.37 | 20.11 | 19.56 | 23.58 | 22.76 | 41.31 | 46.15 | 36.58 | 0.00 | 6.56 | 11.39 |
| Source: 2015 ACS; 01/01/2017-12/31/2019 B <br> Due to rounding, totals may not equal 100.0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |


| Table Q: | ea |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Small Businesses |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \text { \% of } \\ & \text { Total } \end{aligned}$ | Overall <br> Market | $\begin{array}{\|c\|} \hline \begin{array}{c} \% \text { of } \\ \text { Busines- } \\ \text { ses } \end{array} \\ \hline \end{array}$ | $\begin{array}{\|c\|} \hline \begin{array}{c} \% \\ \text { Bank } \\ \text { Loans } \end{array} \\ \hline \end{array}$ | \% Aggregate | $\begin{gathered} \hline \% \text { of } \\ \text { Busines- } \\ \text { ses } \end{gathered}$ | $\begin{array}{\|c\|} \hline \begin{array}{c} \% \\ \text { Bank } \\ \text { Loans } \end{array} \\ \hline \end{array}$ | \% Aggregate | $\begin{gathered} \hline \% \text { of } \\ \text { Busines- } \\ \text { ses } \end{gathered}$ | $\begin{gathered} \hline \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | $\begin{gathered} \text { \% of } \\ \text { Busines- } \end{gathered}$ ses | $\begin{array}{\|c\|} \hline \begin{array}{c} \% \\ \text { Bank } \\ \text { Loans } \end{array} \\ \hline \end{array}$ | \% Aggregate | $\begin{array}{\|c\|} \hline \% \text { of } \\ \text { Busines- } \\ \text { ses } \end{array}$ | \% Bank Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Detroit-Warren-Ann Arbor, MI CSA (2017-2018) | 32,817 | 808,514 | 42.89 | 101,645 | 8.15 | 5.19 | 6.95 | 20.05 | 14.97 | 18.70 | 33.09 | 33.00 | 32.46 | 37.58 | 46.12 | 41.00 | 1.13 | 0.71 | 0.89 |
| 99999 <br> Detroit-Warren-Ann Arbor, MICSA (2019) | 23,566 | 473,951 | 30.80 | N/A | 8.02 | 5.55 | N/A | 19.77 | 15.65 | N/A | 32.75 | 33.09 | N/A | 38.36 | 44.90 | N/A | 1.10 | 0.81 | N/A |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Grand Rapids-KentwoodMuskegon, MI CSA | 10,378 | 208,743 | 13.56 | 19,589 | 3.86 | 3.05 | 4.07 | 17.81 | 13.09 | 16.76 | 45.89 | 46.27 | 46.27 | 32.44 | 37.59 | 32.90 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Kalamazoo-Battle CreekPortage, MI CSA (20172018) | 879 | 27,653 | 1.15 | 5,051 | 8.27 | 4.55 | 8.26 | 21.22 | 17.75 | 20.95 | 41.89 | 36.97 | 40.88 | 28.18 | 40.61 | 29.80 | 0.43 | 0.11 | 0.12 |
| 99999 <br> Kalamazoo-Battle CreekPortage, MICSA (2019) | 776 | 19,127 | 1.01 | N/A | 8.47 | 3.74 | N/A | 22.15 | 18.94 | N/A | 42.22 | 36.98 | N/A | 26.73 | 40.34 | N/A | 0.43 | 0.00 | N/A |
| 99999 <br> Lansing-East LansingOwosso, MI CSA (20172018) | 1,481 | 35,788 | 1.94 | 6,789 | 7.83 | 7.22 | 8.19 | 18.49 | 12.83 | 18.32 | 39.86 | 36.12 | 38.99 | 31.26 | 42.07 | 32.97 | 2.56 | 1.76 | 1.53 |
| 99999 <br> Lansing-East LansingOwosso, MICSA (2019) | 1,082 | 23,718 | 1.41 | N/A | 6.85 | 5.27 | N/A | 20.14 | 18.02 | N/A | 40.51 | 36.32 | N/A | 29.86 | 39.19 | N/A | 2.63 | 1.20 | N/A |
| 99999 <br> Saginaw-Midland-Bay City, MI CSA | 842 | 29,511 | 1.10 | 2,213 | 6.69 | 6.89 | 5.24 | 12.19 | 8.08 | 9.17 | 53.26 | 52.49 | 54.59 | 27.86 | 32.54 | 31.00 | 0.00 | 0.00 | 0.00 |
| 99999 <br> South Bend-ElkhartMishawaka, IN-MI CSA (2017-2018) | 655 | 18,575 | 0.86 | 2,171 | 10.65 | 8.09 | 8.20 | 12.10 | 4.27 | 8.61 | 45.04 | 37.40 | 46.02 | 32.20 | 50.23 | 37.17 | 0.00 | 0.00 | 0.00 |
| 99999 <br> South Bend-ElkhartMishawaka, IN-MI CSA (2019) | 514 | 13,892 | 0.67 | N/A | 10.45 | 6.42 | N/A | 11.57 | 7.39 | N/A | 43.92 | 39.30 | N/A | 34.06 | 46.89 | N/A | 0.00 | 0.00 | N/A |
| 99999 <br> MI Non-Metro Roll-up | 3,529 | 65,184 | 4.61 | 6,222 | 0.00 | 0.00 | 0.00 | 7.11 | 7.11 | 8.08 | 59.99 | 50.41 | 55.37 | 32.89 | 42.48 | 36.55 | 0.00 | 0.00 | 0.00 |
| Total | 76,519 | 1,724,656 | 100.00 | 143,680 | 7.54 | 4.84 | 6.35 | 19.17 | 14.42 | 17.73 | 36.11 | 36.12 | 36.48 | 36.16 | 44.01 | 38.72 | 1.03 | 0.61 | 0.71 |
| Source: 2015 ACS; 01/01/2017-12/31/2019 Bank Data, 2019 HMDA Aggregate Data, 'N/A' data not ava Due to rounding, totals may not equal 100.0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Charter Number: 8


Due to rounding, totals may not equal 100.0

Charter Number: 8
Table S:
Assessment Area Distribution of Loans to Farms By Income Category of the Geography - Michigan

|  | Total Loans to Farms |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area: | \# | \$ | $\begin{aligned} & \text { \% of } \\ & \text { Total } \end{aligned}$ | Overall Market | $\%$ of Farms |  | \% <br> Aggregate | \% of Farms |  | \% Aggregate | $\%$ of Farms |  | $\%$ <br> Aggregate | $\%$ of Farms |  | \% Aggregate | $\%$ of <br> Farms | \% Bank <br> Loans | \% <br> Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Detroit-Warren-Ann <br> Arbor, MI CSA (2017- <br> $2018)$ | 240 | 3,522 | 24.95 | 427 | 4.51 | 0.00 | 0.70 | 16.93 | 10.42 | 13.11 | 45.03 | 46.67 | 51.29 | 33.36 | 42.92 | 34.43 | 0.18 | 0.00 | 0.47 |
| 99999 <br> Detroit-Warren-Ann <br> Arbor, MI CSA (2019) | 157 | 2,519 | 16.32 | N/A | 4.61 | 0.64 | NA | 16.53 | 10.83 | N/A | 44.53 | 46.50 | N/A | 34.10 | 40.76 | N/A | 0.22 | 1.27 | N/A |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Grand Rapids-Kentw oodMuskegon, MI CSA | 192 | 1,970 | 19.96 | 403 | 1.35 | 1.04 | 0.50 | 15.08 | 9.90 | 13.40 | 52.02 | 53.65 | 58.06 | 31.55 | 35.42 | 28.04 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Kalamazoo-Battle Creek- <br> Portage, MI CSA (20172018) | 21 | 184 | 2.18 | 96 | 2.33 | 0.00 | 0.00 | 9.66 | 9.52 | 6.25 | 57.49 | 66.67 | 67.71 | 30.41 | 23.81 | 26.04 | 0.11 | 0.00 | 0.00 |
| 99999 <br> Kalamazoo-Battle Creek- <br> Portage, MI CSA (2019) | 25 | 276 | 2.60 | N/A | 2.89 | 0.00 | NA | 10.49 | 20.00 | N/A | 58.24 | 52.00 | N/A | 28.16 | 28.00 | N/A | 0.21 | 0.00 | N/A |
| 99999 <br> Lansing-East LansingOw osso, MI CSA (2017- 2018) | 50 | 399 | 5.20 | 256 | 1.96 | 2.00 | 0.78 | 6.32 | 0.00 | 2.34 | 66.08 | 74.00 | 73.44 | 25.08 | 24.00 | 23.44 | 0.57 | 0.00 | 0.00 |
| 99999 <br> Lansing-East Lansing- <br> Ow osso, MI CSA (2019) | 34 | 312 | 3.53 | N/A | 1.51 | 0.00 | NA | 7.39 | 0.00 | NA | 63.72 | 70.59 | NA | 26.77 | 29.41 | N/A | 0.61 | 0.00 | N/A |
| 99999 Saginaw -Midland-Bay City, MI CSA | 21 | 180 | 2.18 | 116 | 1.14 | 0.00 | 0.00 | 2.84 | 0.00 | 0.00 | 60.23 | 57.14 | 58.62 | 35.80 | 42.86 | 41.38 | 0.00 | 0.00 | 0.00 |
| 99999 <br> South Bend-Ekhart- | 26 | 673 | 2.70 | 100 | 1.74 | 0.00 | 0.00 | 6.42 | 0.00 | 1.00 | 70.49 | 73.08 | 71.00 | 21.35 | 26.92 | 28.00 | 0.00 | 0.00 | 0.00 |
| 99999 South Bend-Ekhart- Mishaw aka, IN-MI CSA (2019) | 31 | 479 | 3.22 | N/A | 1.78 | 0.00 | NA | 7.12 | 9.68 | N/A | 67.26 | 64.52 | NA | 23.84 | 25.81 | N/A | 0.00 | 0.00 | N/A |
| 99999 MI Non-Metro Roll-up | 165 | 2,510 | 17.15 | 275 | 0.00 | 0.00 | 0.00 | 1.67 | 0.61 | 0.00 | 72.82 | 72.12 | 88.36 | 25.51 | 27.27 | 11.64 | 0.00 | 0.00 | 0.00 |
| Total | 962 | 13,024 | 99.99 | 1,673 | 3.34 | 0.42 | 0.42 | 13.36 | 7.48 | 7.35 | 51.69 | 56.76 | 65.03 | 31.39 | 35.14 | 27.08 | 0.20 | 0.21 | 0.12 |

Due to rounding, totals may not equal 100.0

Charter Number: 8

| ble T: Assessment Area Distribution of Loans to Farms by Gross Annual Revenues - Michigan 2017-2019 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Farms |  |  |  | Farms with Revenues <= 1MM |  |  | Farms with Revenues > 1MM |  | Farms with Revenues Not Available |  |
| Assessment Area: | \# | \$ | \% of Total | Overall Market | \% of Businesses | \% Bank Loans | \% Aggregate | \% of Businesses | \% Bank Loans | \% of Businesses | \% Bank Loans |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |
|  | 240 | 3,522 | 24.95 | 427.00 | 95.53 | 75.83 | 44.96 | 2.80 | 14.17 | 1.67 | 10.00 |
| 99999 Detroit-Warren-Ann Arbor, MI CSA (2019) | 157 | 2,519 | 16.32 | 0.00 | 95.51 | 80.25 | N/A | 2.74 | 12.10 | 1.75 | 7.64 |
| Limited Review : |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Grand Rapids-Kentw oodMuskegon, MI CSA | 192 | 1,970 | 19.96 | 403.00 | 93.54 | 62.50 | 39.21 | 4.94 | 18.75 | 1.51 | 18.75 |
| $99999$ <br> Kalamazoo-Battle CreekPortage, MI CSA (20172018) | 21 | 184 | 2.18 | 96.00 | 93.34 | 80.95 | 33.33 | 4.33 | 9.52 | 2.33 | 9.52 |
| 99999 <br> Kalamazoo-Battle Creek- <br> Portage, MI CSA (2019) | 25 | 276 | 2.60 | 0.00 | 93.25 | 60.00 | N/A | 4.60 | 28.00 | 2.14 | 12.00 |
| 99999 <br> Lansing-East Lansing- <br> Ow osso, MI CSA (2017- <br> 2018) | 50 | 399 | 5.20 | 256.00 | 96.21 | 68.00 | 26.17 | 2.15 | 6.00 | 1.64 | 26.00 |
| 99999 <br> Lansing-East Lansing- <br> Ow osso, MI CSA (2019) | 34 | 312 | 3.53 | 0.00 | 96.37 | 76.47 | N/A | 2.18 | 8.82 | 1.45 | 14.71 |
| 99999 <br> Saginaw -Midland-Bay City, MI CSA | 21 | 180 | 2.18 | 116.00 | 96.78 | 90.48 | 55.17 | 1.52 | 4.76 | 1.70 | 4.76 |
| 99999 <br> South Bend-Ekhart- <br> Mishaw aka, IN-MI CSA (2017-2018) | 26 | 673 | 2.70 | 100.00 | 96.01 | 69.23 | 32.00 | 3.65 | 19.23 | 0.35 | 11.54 |
| 99999 <br> South Bend-Ekhart- <br> Mishaw aka, IN-MI CSA (2019) | 31 | 479 | 3.22 | NA | 95.73 | 67.74 | N/A | 3.74 | 12.90 | 0.53 | 19.35 |
| 99999 <br> Ml Non-Metro Roll-up | 165 | 2,510 | 17.15 | 275.00 | 96.84 | 71.52 | 36.00 | 2.29 | 16.97 | 0.87 | 11.52 |
| Total | 962 | 13,024 | 99.99 | 1,673 | 95.40 | 72.35 | 38.49 | 2.99 | 14.76 | 1.60 | 12.89 |

Source: 2015 ACS; 01/01/2017-12/31/2019 Bank Data, 2019 HMDA Aggregate Data, 'N/A' data not available.
Due to rounding, totals may not
Due to rounding, totals may not equal 100.0

Charter Number: 8

| Oble 0: Assessment Area Distribution of Home Mortgage Loans By Income Category of the Geography - Nevada |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Home Mortgage Loans |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \% \text { of } \\ & \text { Total } \end{aligned}$ | Overall Market |  | \% <br> Bank <br> Loans | \% Aggregate | \% of OwnerOccupied Housing Units |  | \% <br> Aggregate | \% of <br> Owner- <br> Occupied Housing <br> Units | $\begin{aligned} & \% \\ & \text { Bank } \\ & \text { Loans } \end{aligned}$ | \% Aggregate | \% <br> Owner- <br> Occupied Housing <br> Units |  | \% Aggregate | \% of <br> Owner- <br> Occupied Housing Units | \% Bank Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 29820 <br> Las Vegas-HendersonParadise, NV MSA | 8,641 | 2,199,879 | 97.86 | 93,068 | 1.90 | 1.33 | 1.62 | 16.89 | 11.10 | 14.25 | 41.70 | 38.41 | 42.78 | 39.49 | 49.10 | 41.30 | 0.01 | 0.06 | 0.06 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Reno-Carson City-Fernley, <br> NV CSA | 189 | 80,779 | 2.14 | 2,169 | 0.00 | 0.00 | 0.00 | 3.39 | 3.17 | 1.06 | 55.01 | 37.57 | 57.17 | 41.59 | 59.26 | 41.77 | 0.00 | 0.00 | 0.00 |
| Total | 8,830 | 2,280,658 | 100.00 | 95,237 | 1.83 | 1.30 | 1.58 | 16.42 | 10.93 | 13.95 | 42.17 | 38.39 | 43.10 | 39.57 | 49.32 | 41.31 | 0.01 | 0.06 | 0.05 |

Due to rounding, totals may not equal 100.0

| Assessment Area Distribution of Home Mortgage Loans By Income Category of the Borrower - Nevada |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Home Mortgage Loans |  |  |  | Low-Income Borrowers |  |  | Moderate Income Borrowers |  |  | Middle-Income Borrowers |  |  | Upper-Income Borrowers |  |  | Not Available-Income Borrowers |  |  |
| Assessment Area: | \# | \$ | \% of <br> Total | Overall Market | \% Families | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | \% Aggregate | \% <br> Families | $\%$ <br> Bank <br> Loans | \% <br> Aggregate | \% Families |  | \% Aggregate | \% Families | $\%$ <br> Bank <br> Loans | \% Aggregate | \% Families | \% Bank Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 29820 <br> Las Vegas-Henderson- <br> Paradise, NV MSA | 8,641 | 2,199,879 | 97.86 | 93,068 | 20.67 | 5.18 | 4.44 | 18.35 | 18.53 | 14.86 | 20.51 | 20.91 | 22.15 | 40.47 | 50.55 | 38.93 | 0.00 | 4.83 | 19.62 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Reno-Carson City-Fernley, NV CSA | 189 | 80,779 | 2.14 | 2,169 | 17.28 | 2.65 | 4.01 | 15.76 | 5.29 | 13.09 | 22.15 | 10.58 | 21.21 | 44.82 | 75.66 | 50.95 | 0.00 | 5.82 | 10.74 |
| Total | 8,830 | 2,280,658 | 100.00 | 95,237 | 20.57 | 5.39 | 4.43 | 18.28 | 19.17 | 14.82 | 20.56 | 21.74 | 22.13 | 40.59 | 53.69 | 39.20 | 0.00 | 4.85 | 19.42 |

Due to rounding, totals may not equal 100.0

Charter Number: 8


Due to rounding, totals may not equal 100.0


Due to rounding, totals may not equal 100.0

Charter Number: 8

| Assessment Area Distribution of Loans to Farms By Income Category of the Geography - Nevada |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Farms |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | \% of <br> Total | Overall Market | $\%$ of Farms |  | \% Aggregate | $\%$ of Farms |  | \% Aggregate | \% of <br> Farms |  | \% Aggregate | \% of Farms |  | \% Aggregate | \% of Farms | \% Bank <br> Loans | \% <br> Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 29820 <br> Las Vegas-HendersonParadise, NV MSA | 64 | 795 | 87.67 | 62 | 2.35 | 3.13 | 1.61 | 19.89 | 25.00 | 14.52 | 41.26 | 28.13 | 25.81 | 36.45 | 43.75 | 58.06 | 0.05 | 0.00 | 0.00 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Reno-Carson City- <br> Fernley, NV CSA | 9 | 110 | 12.33 | 27 | 0.00 | 0.00 | 0.00 | 3.64 | 0.00 | 3.70 | 38.79 | 0.00 | 25.93 | 57.58 | 100.00 | 70.37 | 0.00 | 0.00 | 0.00 |
| Total | 73 | 905 | 100.00 | 89 | 2.16 | 2.74 | 1.12 | 18.55 | 21.92 | 11.24 | 41.05 | 24.66 | 25.84 | 38.20 | 50.68 | 61.80 | 0.05 | 0.00 | 0.00 |

Due to rounding, totals may not equal 100.0


[^133]Charter Number: 8

| Assessment Area Distribution of Home Mortgage Loans By Income Category of the Geography - New York 2017 -2019 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Home Mortgage Loans |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | \% of Total | Overall Market |  | \% <br> Bank <br> Loans | \% Aggregate |  | \% <br> Bank <br> Loans | \% <br> Aggregate | \% of OwnerOccupied Housing Units | \% <br> Bank <br> Loans | \% Aggregate |  | \% <br> Bank <br> Loans | \% Aggregate |  | \% Bank Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Rochester-Batavia-Seneca <br> Falls, NY CSA | 1,506 | 217,628 | 52.57 | 27,036 | 3.85 | 1.93 | 3.00 | 11.92 | 9.30 | 10.87 | 47.99 | 43.29 | 47.50 | 36.21 | 45.48 | 38.61 | 0.03 | 0.00 | 0.02 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & \hline 99999 \\ & \text { NM NY - Sullivan County RU } \\ & \hline \end{aligned}$ | 160 | 28,546 | 5.58 | 1,329 | 0.00 | 0.00 | 0.00 | 13.19 | 13.13 | 11.59 | 67.17 | 65.00 | 67.12 | 19.64 | 21.88 | 21.29 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Syracuse-Auburn, NYCSA | 1,199 | 157,456 | 41.85 | 15,367 | 2.63 | 2.59 | 1.97 | 13.98 | 15.93 | 12.70 | 51.67 | 47.79 | 50.59 | 31.61 | 33.69 | 34.63 | 0.12 | 0.00 | 0.11 |
| Total | 2,865 | 403,630 | 100.00 | 43,732 | 3.21 | 2.09 | 2.55 | 12.77 | 12.29 | 11.54 | 50.23 | 46.39 | 49.18 | 33.73 | 39.23 | 36.68 | 0.06 | 0.00 | 0.05 |

Source: 2015 ACS; 01/01/2017-12/31/2019 Bank Data, 2019 HMDA Aggregate Data, ' 'N/A' data not available.
Due to rounding, totals may not equal 100.0


Due to rounding, totals may not equal 100.0

Charter Number: 8


Due to rounding, totals may not equal 100.0


Charter Number: 8

| S: $\quad$ Assessment Area Distribution of Loans to Farms By Income Category of the Geography - New York |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Farms |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\% \text { of }$ Total | Overall Market | $\%$ of Farms |  | \% Aggregate | $\%$ of Farms |  | \% Aggregate | \% of Farms |  | \% <br> Aggregate | \% of Farms |  | \% <br> Aggregate | \% of Farms | \% Bank <br> Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Rochester-BataviaSeneca Falls, NY CSA | 153 | 1,299 | 58.62 | 341 | 2.09 | 1.31 | 0.59 | 9.28 | 3.92 | 14.96 | 58.10 | 66.01 | 73.31 | 30.47 | 28.76 | 11.14 | 0.05 | 0.00 | 0.00 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & \hline 99999 \\ & \text { NM NY - Sullivan County } \\ & \text { RU } \\ & \hline \end{aligned}$ | 28 | 329 | 10.73 | 28 | 0.00 | 0.00 | 0.00 | 13.89 | 10.71 | 7.14 | 73.33 | 85.71 | 85.71 | 12.78 | 3.57 | 7.14 | 0.00 | 0.00 | 0.00 |
| 99999 Syracuse-Auburn, NY CSA | 80 | 777 | 30.65 | 148 | 2.33 | 0.00 | 0.68 | 11.80 | 2.50 | 10.14 | 53.50 | 55.00 | 70.27 | 31.80 | 41.25 | 18.24 | 0.57 | 1.25 | 0.68 |
| Total | 261 | 2,405 | 100.00 | 517 | 2.08 | 0.77 | 0.58 | 10.55 | 4.21 | 13.15 | 57.01 | 64.75 | 73.11 | 30.10 | 29.89 | 12.96 | 0.26 | 0.38 | 0.19 |

Source: 2015 ACS; 01/01/2017 - 12/31/2019 Bank Data, 2019 HMDA Aggregate Data, 'N/A' data not available.
Due to rounding, totals may not equal 100.0

| ble T: Assessment Area Distribution of Loans to Farms by Gross Annual Revenues - New York |  |  |  |  |  |  |  |  |  | 2017-2019 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Farms |  |  |  | Farms with Revenues <= 1MM |  |  | Farms with Revenues > 1MM |  | Farms with Revenues Not Available |  |
| Assessment Area: | \# | \$ | \% of Total | Overall Market | \% of Businesses | \% Bank Loans | \% Aggregate | \% of Businesses | \% Bank Loans | \% of Businesses | \% Bank Loans |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |
| $99999$ <br> Rochester-BataviaSeneca Falls, NY CSA | 153 | 1,299 | 58.62 | 341.00 | 94.80 | 75.82 | 50.15 | 3.49 | 10.46 | 1.72 | 13.73 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |
|  | 28 | 329 | 10.73 | 28.00 | 97.22 | 75.00 | 57.14 | 2.78 | 14.29 | 0.00 | 10.71 |
| 99999 <br> Syracuse-Auburn, NY CSA | 80 | 777 | 30.65 | 148.00 | 95.19 | 66.25 | 47.97 | 2.90 | 22.50 | 1.91 | 11.25 |
| Total | 261 | 2,405 | 100.00 | 517 | 95.09 | 72.80 | 49.90 | 3.21 | 14.56 | 1.71 | 12.64 |

Due to rounding, totals may not equal 100.0

Charter Number: 8

| Table 0: Assessment Area Distribution of Home Mortgage Loans By Income Category of the Geography - Ohio |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Home Mortgage Loans |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \% \text { of } \\ & \text { Total } \end{aligned}$ | Overall Market |  | \% <br> Bank <br> Loans | \% Aggregate | \% of <br> Owner- <br> Occupied <br> Housing <br> Units | \% <br> Bank <br> Loans | \% <br> Aggregate | \% of Owner- Occupied Housing Units | \% <br> Bank <br> Loans | \% Aggregate |  | $\begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | \% of Owner- Occupied Housing Units | \% Bank Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Columbus-Marion- <br> Zanesville, OH CSA | 12,862 | 2,526,869 | 42.06 | 74,447 | 5.18 | 3.16 | 4.40 | 18.67 | 12.49 | 16.88 | 38.05 | 32.10 | 35.97 | 38.10 | 52.23 | 42.72 | 0.01 | 0.02 | 0.03 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Cleveland-Akron-Canton, <br> OH CSA (2017-2018) | 7,008 | 1,021,661 | 22.92 | 99,942 | 5.99 | 2.17 | 2.82 | 15.66 | 12.10 | 12.08 | 43.03 | 44.79 | 44.06 | 35.20 | 40.94 | 41.01 | 0.12 | 0.00 | 0.03 |
| 99999 <br> Cleveland-Akron-Canton, <br> OH CSA (2019) | 3,657 | 600,151 | 11.96 | N/A | 5.99 | 2.05 | N/A | 15.66 | 8.31 | N/A | 43.03 | 40.80 | N/A | 35.20 | 48.84 | N/A | 0.12 | 0.00 | N/A |
| 99999 <br> Dayton-Springfield-Sidney, OH CSA (2017-2018) | 1,182 | 154,781 | 3.87 | 27,068 | 5.36 | 1.61 | 2.74 | 16.86 | 11.34 | 14.48 | 45.76 | 43.57 | 46.55 | 32.03 | 43.49 | 36.23 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Dayton-Springfield-Sidney, <br> OH CSA (2019) | 691 | 98,865 | 2.26 | N/A | 5.36 | 3.47 | N/A | 16.86 | 10.42 | N/A | 45.76 | 42.84 | N/A | 32.03 | 43.27 | N/A | 0.00 | 0.00 | N/A |
| 99999 <br> Lima-Van Wert-Celina, OH CSA | 282 | 31,316 | 0.92 | 2,604 | 2.68 | 0.35 | 1.88 | 12.82 | 9.22 | 8.60 | 52.65 | 43.97 | 51.92 | 31.85 | 46.45 | 37.60 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Mansfield-Ashland-Bucyrus, <br> OH CSA | 246 | 25,032 | 0.80 | 2,981 | 2.15 | 0.00 | 0.67 | 13.59 | 10.57 | 9.12 | 57.94 | 62.60 | 59.68 | 26.32 | 26.83 | 30.53 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Pittsburgh-New Castle- <br> Weirton, PA-OH-WV CSA | 103 | 8,141 | 0.34 | 1,379 | 2.53 | 0.97 | 1.16 | 8.22 | 5.83 | 6.96 | 78.37 | 74.76 | 79.33 | 10.88 | 18.45 | 12.55 | 0.00 | 0.00 | 0.00 |
| $\begin{aligned} & \text { 99999 } \\ & \text { Toledo-Findlay-Tiffin, OH } \\ & \text { CSA } \end{aligned}$ | 783 | 119,569 | 2.56 | 14,196 | 7.44 | 1.28 | 2.46 | 13.08 | 6.26 | 9.24 | 42.91 | 40.23 | 42.53 | 36.57 | 52.23 | 45.77 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Youngstown-Warren, OH- <br> PA CSA | 1,027 | 114,747 | 3.36 | 11,417 | 5.69 | 1.07 | 1.29 | 13.64 | 8.37 | 8.71 | 49.51 | 49.56 | 53.39 | 31.16 | 40.99 | 36.61 | 0.00 | 0.00 | 0.00 |
| $99999$ <br> OH Non-Metro Roll-up | 2,738 | 313,986 | 8.95 | 22,690 | 0.84 | 0.51 | 0.52 | 10.58 | 11.18 | 11.62 | 62.07 | 54.57 | 60.92 | 26.44 | 33.67 | 26.87 | 0.07 | 0.07 | 0.07 |
| Total | 30,579 | 5,015,118 | 100.00 | 256,724 | 5.30 | 2.33 | 2.94 | 15.56 | 11.32 | 13.28 | 45.04 | 40.04 | 44.25 | 34.03 | 46.29 | 39.51 | 0.07 | 0.02 | 0.03 |
| Source: 2015 ACS; 01/01/2017-12/31/2019 Bank Data, 2019 HMDA Aggregate Data, 'N/A' data not available.Due to rounding, totals may not equal 100.0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Charter Number: 8

| Assessment Area Distribution of Home Mortgage Loans By Income Category of the Borrower - Ohio |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Home Mortgage Loans |  |  |  | Low-Income Borrowers |  |  | Moderate Income Borrowers |  |  | Middle-Income Borrowers |  |  | Upper-Income Borrowers |  |  | Not Available-Income Borrowers |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \text { \% of } \\ & \text { Total } \end{aligned}$ | Overall Market | \% Families | $\%$ <br> Bank <br> Loans | \% Aggregate | \% <br> Families | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | \% <br> Aggregate | \% Families | \% Bank Loans | \% Aggregate | \% Families | $\begin{gathered} \hline \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | \% Families | \% Bank Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 12,862 | 2,526,869 | 42.06 | 74,447 | 22.26 | 6.90 | 7.77 | 17.12 | 18.25 | 18.54 | 19.59 | 18.55 | 20.97 | 41.03 | 38.12 | 38.01 | 0.00 | 18.18 | 14.71 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Cleveland-Akron-Canton, <br> OH CSA (2017-2018) | 7,008 | 1,021,661 | 22.92 | 99,942 | 22.05 | 8.79 | 9.52 | 16.98 | 24.17 | 19.88 | 19.97 | 21.13 | 21.60 | 41.00 | 35.83 | 36.04 | 0.00 | 10.07 | 12.96 |
| 99999 <br> Cleveland-Akron-Canton, OH CSA (2019) | 3,657 | 600,151 | 11.96 | N/A | 22.05 | 8.94 | N/A | 16.98 | 20.43 | N/A | 19.97 | 22.48 | N/A | 41.00 | 42.88 | N/A | 0.00 | 5.28 | N/A |
| 99999 <br> Dayton-Springfield-Sidney, OH CSA (2017-2018) | 1,182 | 154,781 | 3.87 | 27,068 | 22.32 | 7.02 | 8.50 | 17.04 | 17.26 | 20.16 | 19.77 | 22.00 | 22.12 | 40.87 | 37.73 | 37.43 | 0.00 | 15.99 | 11.79 |
| 99999 <br> Dayton-Springfield-Sidney, OH CSA (2019) | 691 | 98,865 | 2.26 | N/A | 22.32 | 7.67 | N/A | 17.04 | 20.69 | N/A | 19.77 | 25.33 | N/A | 40.87 | 41.53 | N/A | 0.00 | 4.78 | N/A |
| 99999 <br> Lima-Van Wert-Celina, OH CSA | 282 | 31,316 | 0.92 | 2,604 | 21.74 | 8.87 | 9.79 | 17.04 | 20.57 | 22.50 | 21.57 | 29.08 | 25.04 | 39.66 | 28.72 | 32.14 | 0.00 | 12.77 | 10.52 |
| 99999 <br> Mansfield-Ashland-Bucyrus, <br> OH CSA | 246 | 25,032 | 0.80 | 2,981 | 20.58 | 8.54 | 9.36 | 18.49 | 20.33 | 20.56 | 20.92 | 22.76 | 25.36 | 40.02 | 34.96 | 30.96 | 0.00 | 13.41 | 13.75 |
| 99999 <br> Pittsburgh-New Castle- <br> Weirton, PA-OH-WV CSA | 103 | 8,141 | 0.34 | 1,379 | 19.59 | 6.80 | 9.35 | 18.78 | 20.39 | 23.35 | 21.83 | 21.36 | 25.89 | 39.80 | 26.21 | 30.67 | 0.00 | 25.24 | 10.73 |
| 99999 <br> Toledo-Findlay-Tiffin, OH <br> CSA | 783 | 119,569 | 2.56 | 14,196 | 23.82 | 5.49 | 9.43 | 16.38 | 17.62 | 20.21 | 19.31 | 22.35 | 22.94 | 40.49 | 42.15 | 35.88 | 0.00 | 12.39 | 11.54 |
| 99999 <br> Youngstown-Warren, OH - <br> PA CSA | 1,027 | 114,747 | 3.36 | 11,417 | 21.19 | 6.13 | 9.74 | 18.00 | 20.64 | 21.77 | 20.50 | 26.68 | 24.54 | 40.31 | 32.91 | 31.26 | 0.00 | 13.63 | 12.68 |
| 99999 <br> OH Non-Metro Roll-up | 2,738 | 313,986 | 8.95 | 22,690 | 19.04 | 7.56 | 7.90 | 18.02 | 19.65 | 22.72 | 21.67 | 23.27 | 23.35 | 41.27 | 34.44 | 33.79 | 0.00 | 15.08 | 12.24 |
| Total | 30,579 | 5,015,118 | 100.00 | 256,724 | 21.89 | 8.85 | 8.77 | 17.13 | 23.33 | 19.93 | 20.05 | 24.15 | 21.93 | 40.93 | 43.68 | 36.21 | 0.00 | 13.75 | 13.16 |
| Source: 2015 ACS; 01/01/2017-12/31/2019 Due to rounding, totals may not equal 100.0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Charter Number: 8

| Q: Assessment Area Distribution of Loans to Small Businesses By Income Category of the Geography - Ohio |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Small Businesses |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \% \text { of } \\ & \text { Total } \end{aligned}$ | Overall Market | \% of Busines- ses | $\%$ <br> Bank <br> Loans | \% Aggregate | \% of Businesses | $\%$ <br> Bank <br> Loans | \% Aggregate | \% of Businesses |  | \% Aggregate | \% of Businesses | $\%$ <br> Bank <br> Loans | \% Aggregate | \% of Businesses | \% Bank Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Columbus-MarionZanesville, OH CSA | 26,588 | 555,444 | 36.67 | 36,756 | 9.04 | 5.75 | 13.16 | 18.26 | 11.89 | 14.95 | 31.15 | 27.57 | 28.12 | 41.08 | 54.49 | 43.43 | 0.47 | 0.29 | 0.33 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Cleveland-Akron-Canton, <br> OH CSA (2017-2018) | 16,032 | 376,671 | 22.11 | 57,111 | 8.38 | 4.69 | 7.25 | 14.91 | 11.02 | 14.01 | 37.18 | 35.15 | 35.82 | 38.70 | 48.65 | 42.24 | 0.83 | 0.49 | 0.67 |
| 99999 <br> Cleveland-Akron-Canton, OH CSA (2019) | 12,214 | 228,155 | 16.84 | N/A | 8.34 | 5.16 | N/A | 15.05 | 10.82 | N/A | 37.00 | 35.10 | N/A | 38.80 | 48.34 | N/A | 0.81 | 0.59 | N/A |
| 99999 <br> Dayton-Springfield-Sidney, <br> OH CSA (2017-2018) | 3,172 | 74,892 | 4.37 | 12,990 | 6.93 | 4.92 | 6.73 | 18.68 | 13.52 | 18.36 | 42.71 | 38.49 | 41.85 | 31.63 | 43.06 | 33.06 | 0.04 | 0.00 | 0.01 |
| 99999 <br> Dayton-Springfield-Sidney, <br> OH CSA (2019) | 2,406 | 40,434 | 3.32 | N/A | 6.96 | 5.78 | N/A | 18.36 | 12.88 | N/A | 42.64 | 39.65 | N/A | 32.01 | 41.69 | N/A | 0.03 | 0.00 | N/A |
| 99999 <br> Lima-Van Wert-Celina, OH <br> CSA | 737 | 23,405 | 1.02 | 1,163 | 4.78 | 5.29 | 4.30 | 19.20 | 15.47 | 17.97 | 44.31 | 41.79 | 45.31 | 31.71 | 37.45 | 32.42 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Mansfield-Ashland-Bucyrus, OH CSA | 851 | 19,968 | 1.17 | 1,619 | 9.00 | 7.87 | 8.96 | 14.99 | 9.05 | 15.32 | 48.36 | 56.17 | 49.60 | 27.65 | 26.91 | 26.13 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Pittsburgh-New Castle- <br> Weirton, PA-OH-WV CSA | 191 | 4,597 | 0.26 | 826 | 1.97 | 0.00 | 1.09 | 18.33 | 6.81 | 18.64 | 63.95 | 63.87 | 69.25 | 15.76 | 29.32 | 11.02 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Toledo-Findlay-Tiffin, OH <br> CSA | 1,917 | 30,537 | 2.64 | 7,012 | 13.22 | 8.19 | 10.95 | 10.92 | 8.92 | 10.61 | 36.00 | 29.58 | 33.21 | 39.75 | 53.31 | 45.18 | 0.11 | 0.00 | 0.04 |
| $\begin{aligned} & 99999 \\ & \text { Youngstown-Warren, OH- } \\ & \text { PA CSA } \end{aligned}$ | 2,613 | 46,149 | 3.60 | 6,551 | 8.43 | 5.01 | 7.66 | 13.04 | 10.07 | 11.86 | 40.32 | 37.93 | 38.88 | 38.21 | 47.00 | 41.60 | 0.00 | 0.00 | 0.00 |
| 99999 <br> OH Non-Metro Roll-up | 5,793 | 118,750 | 7.99 | 12,149 | 1.45 | 0.69 | 0.91 | 16.39 | 12.95 | 13.07 | 57.84 | 58.02 | 59.60 | 23.42 | 27.53 | 25.94 | 0.90 | 0.81 | 0.49 |
| Total | 72,514 | 1,519,002 | 99.99 | 136,177 | 7.99 | 5.02 | 8.40 | 15.95 | 11.55 | 14.40 | 38.47 | 34.83 | 36.90 | 37.01 | 48.22 | 39.89 | 0.59 | 0.38 | 0.42 |
| Source: 2015 ACS; 01/01/2017-12/31/2019 Bank Data, 2019 HMDA Aggregate Data, 'N <br> Due to rounding, totals may not equal 100.0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Charter Number: 8


Due to rounding, totals may not equal 100.0

Charter Number: 8

| able S: Assessment Area Distribution of Loans to Farms By Income Category of the Geography - Ohio |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | $\begin{array}{\|c} \hline \text { 2017-2019 } \\ \hline \text { ne Tracts } \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Farms |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | \% of <br> Total | Overall Market | \% of Farms |  | \% <br> Aggregate | \% of Farms |  | \% <br> Aggregate | \% of Farms |  | \% <br> Aggregate | \% of Farms |  | \% <br> Aggregate | \% of Farms | \% Bank Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 Columbus-MarionZanesville, OH CSA | 358 | 7,593 | 30.47 | 553 | 4.48 | 1.12 | 1.08 | 14.89 | 12.85 | 11.39 | 46.78 | 53.35 | 60.94 | 33.76 | 32.68 | 26.22 | 0.09 | 0.00 | 0.36 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Cleveland-Akron-Canton, OH CSA (2017-2018) | 133 | 1,132 | 11.32 | 392 | 3.43 | 1.50 | 2.04 | 9.64 | 3.76 | 4.34 | 48.85 | 48.12 | 59.44 | 38.00 | 46.62 | 34.18 | 0.09 | 0.00 | 0.00 |
| 99999 <br> Cleveland-Akron-Canton, OH CSA (2019) | 96 | 1,070 | 8.17 | N/A | 3.62 | 1.04 | NA | 10.14 | 4.17 | N/A | 47.79 | 55.21 | N/A | 38.35 | 39.58 | N/A | 0.10 | 0.00 | N/A |
| 99999 <br> Dayton-Springfield- <br> Sidney, OH CSA (2017- <br> 2018) | 61 | 1,243 | 5.19 | 305 | 3.04 | 0.00 | 0.33 | 12.57 | 1.64 | 5.57 | 52.74 | 70.49 | 58.69 | 31.65 | 27.87 | 35.41 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Dayton-Springfield- <br> Sidney, OH CSA (2019) | 52 | 554 | 4.43 | N/A | 3.23 | 0.00 | NA | 13.28 | 9.62 | N/A | 51.84 | 36.54 | NA | 31.65 | 53.85 | N/A | 0.00 | 0.00 | N/A |
| $\begin{aligned} & 99999 \\ & \text { Lima-Van Wert-Celina, } \\ & \text { OH CSA } \\ & \hline \end{aligned}$ | 24 | 228 | 2.04 | 128 | 0.61 | 0.00 | 0.00 | 5.21 | 0.00 | 0.78 | 75.77 | 79.17 | 87.50 | 18.40 | 20.83 | 11.72 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Mansfield-Ashland- <br> Bucyrus, OH CSA | 16 | 149 | 1.36 | 73 | 1.13 | 0.00 | 2.74 | 4.80 | 0.00 | 0.00 | 65.82 | 75.00 | 78.08 | 28.25 | 25.00 | 19.18 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Pittsburgh-New CastleWeirton, PA-OH-WV CSA | 1 | 6 | 0.09 | 20 | 0.82 | 0.00 | 0.00 | 4.10 | 0.00 | 0.00 | 85.25 | 0.00 | 100.00 | 9.84 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Toledo-Findlay-Tiffin, OH <br> CSA | 42 | 794 | 3.57 | 191 | 4.67 | 0.00 | 0.52 | 7.57 | 0.00 | 3.14 | 45.33 | 35.71 | 57.59 | 42.43 | 64.29 | 38.74 | 0.00 | 0.00 | 0.00 |
| 99999 Youngstow n-Warren, OH-PA CSA | 47 | 441 | 4.00 | 112 | 2.51 | 0.00 | 0.00 | 7.52 | 6.38 | 3.57 | 49.29 | 29.79 | 47.32 | 40.68 | 63.83 | 49.11 | 0.00 | 0.00 | 0.00 |
| $\begin{aligned} & 99999 \\ & \text { OH Non-Metro Roll-up } \end{aligned}$ | 345 | 6,259 | 29.36 | 1,247 | 0.21 | 0.00 | 0.24 | 4.09 | 2.90 | 1.04 | 60.14 | 62.32 | 68.48 | 35.52 | 34.78 | 30.23 | 0.04 | 0.00 | 0.00 |
| Total | 1,175 | 19,469 | 100.00 | 3,021 | 2.97 | 0.60 | 0.70 | 9.81 | 6.30 | 4.01 | 51.36 | 54.89 | 64.71 | 35.80 | 38.21 | 30.52 | 0.06 | 0.00 | 0.07 |

Due to rounding, totals may not equal 100.0

Charter Number: 8

Table T: $\quad$ Assessment Area Distribution of Loans to Farms by Gross Annual Revenues - Ohio
2017-2019

| Assessment Area Distribution of Loans to Farms by Gross Annual Revenues - Ohio |  |  |  |  |  |  |  |  |  | 2017-2019 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Farms |  |  |  | Farms with Revenues <= 1MM |  |  | Farms with Revenues > 1 MM |  | Farms No | Revenues ailable |
| Assessment Area: | \# | \$ | \% of Total | Overall Market | \% of Businesses | \% Bank Loans | \% Aggregate | \% of Businesses | \% Bank Loans | \% of Businesses | \% Bank Loans |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Columbus-Marion- <br> Zanesville, OH CSA | 358 | 7,593 | 30.47 | 553.00 | 95.88 | 71.51 | 47.38 | 2.54 | 11.17 | 1.58 | 17.32 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Cleveland-Akron-Canton, OH CSA (2017-2018) | 133 | 1,132 | 11.32 | 392.00 | 95.92 | 77.44 | 66.84 | 2.41 | 9.02 | 1.67 | 13.53 |
| 99999 Cleveland-Akron-Canton, OH CSA (2019) | 96 | 1,070 | 8.17 | 0.00 | 95.98 | 81.25 | NA | 2.45 | 4.17 | 1.58 | 14.58 |
| 99999 <br> Dayton-Springfield- <br> Sidney, OH CSA (2017- <br> 2018) | 61 | 1,243 | 5.19 | 305.00 | 96.06 | 75.41 | 57.38 | 2.66 | 9.84 | 1.28 | 14.75 |
| 99999 <br> Dayton-Springfield- <br> Sidney, OH CSA (2019) | 52 | 554 | 4.43 | 0.00 | 96.13 | 84.62 | NA | 2.50 | 3.85 | 1.37 | 11.54 |
| $\begin{aligned} & 99999 \\ & \text { Lima-Van Wert-Celina, } \\ & \text { OH CSA } \end{aligned}$ | 24 | 228 | 2.04 | 128.00 | 97.85 | 79.17 | 62.50 | 1.53 | 12.50 | 0.61 | 8.33 |
| 99999 Mansfield-AshlandBucyrus, OH CSA | 16 | 149 | 1.36 | 73.00 | 97.46 | 81.25 | 54.79 | 1.69 | 18.75 | 0.85 | 0.00 |
| 99999 <br> Pittsburgh-New CastleWeirton, PA-OH-WV CSA | 1 | 6 | 0.09 | 20.00 | 98.36 | 100.00 | 60.00 | 0.82 | 0.00 | 0.82 | 0.00 |
| 99999 <br> Toledo-Findlay-Tiffin, OH <br> CSA <br> Cgig | 42 | 794 | 3.57 | 191.00 | 94.81 | 80.95 | 75.39 | 3.63 | 9.52 | 1.56 | 9.52 |
| 99999 <br> Youngstow n-Warren, <br> OH-PA CSA <br> O9999 | 47 | 441 | 4.00 | 112.00 | 97.27 | 80.85 | 66.07 | 1.42 | 6.38 | 1.31 | 12.77 |
| $\begin{array}{\|l\|} \hline 99999 \\ \text { OH Non-Metro Roll-up } \end{array}$ | 345 | 6,259 | 29.36 | 1,247.00 | 97.88 | 75.07 | 58.70 | 1.27 | 11.88 | 0.84 | 13.04 |
| Total | 1,175 | 19,469 | 100.00 | 3,021 | 96.36 | 75.83 | 58.95 | 2.25 | 10.04 | 1.40 | 14.13 |

Source: 2015 ACS; 01/01/2017-12/31/2019 Bank Data, 2019 HMDA Aggregate Data, 'N/A' data not available.
Due to rounding, totals may not equal 100.0

Charter Number: 8



Due to rounding, totals may not equal 100.0

Charter Number: 8

| Assessment Area Distribution of Loans to Small Businesses By Income Category of the Geography - Oklahoma |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Small Businesses |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \% \text { of } \\ & \text { Total } \end{aligned}$ | Overall Market | \% of Businesses | $\%$ <br> Bank <br> Loans | \% Aggregate | \% of Businesses | $\%$ <br> Bank <br> Loans | \% Aggregate | \% of Businesses | $\begin{gathered} \hline \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | \% of Businesses | $\%$ <br> Bank <br> Loans | \% Aggregate | \% of Businesses | \% Bank <br> Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Oklahoma City-Shawnee, OK CSA | 12,344 | 191,890 | 66.34 | 19,662 | 4.49 | 3.50 | 5.01 | 21.80 | 15.93 | 20.55 | 34.79 | 31.88 | 34.08 | 35.73 | 46.39 | 37.68 | 3.20 | 2.31 | 2.68 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Tulsa-Muskogee- <br> Bartlesville, OK CSA | 6,264 | 88,359 | 33.66 | 12,290 | 3.88 | 2.81 | 3.55 | 21.64 | 15.41 | 21.33 | 34.02 | 32.57 | 33.68 | 40.46 | 49.22 | 41.44 | 0.00 | 0.00 | 0.00 |
| Total | 18,608 | 280,249 | 100.00 | 31,952 | 4.25 | 3.27 | 4.45 | 21.74 | 15.75 | 20.85 | 34.49 | 32.11 | 33.93 | 37.56 | 47.34 | 39.12 | 1.96 | 1.53 | 1.65 |

Due to rounding, totals may not equal 100.0

|  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Small Businesses |  |  |  | Businesses with Revenues <= 1MM |  |  | Businesses with Revenues > 1 MM |  | Businesses with Revenues Not Available |  |
| Assessment Area: | \# | \$ | \% of Total | Overall Market | \% of Businesses | \% Bank Loans | \% Aggregate | \% of Businesses | \% Bank Loans | \% of Businesses | \% Bank Loans |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Oklahoma City-Shawnee, OK CSA | 12,344 | 191,890 | 66.34 | 19,662 | 86.95 | 69.01 | 46.11 | 4.33 | 20.10 | 8.72 | 10.90 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |
| $99999$ <br> Tulsa-MuskogeeBartlesville, OK CSA | 6,264 | 88,359 | 33.66 | 12,290 | 86.12 | 64.61 | 41.19 | 5.20 | 23.21 | 8.67 | 12.18 |
| Total | 18,608 | 280,249 | 100.00 | 31,952 | 86.63 | 67.52 | 44.22 | 4.67 | 21.15 | 8.70 | 11.33 |

Due to rounding, totals may not equal 100.0


Due to rounding, totals may not equal 100.0

| T: Assessment Area Distribution of Loans to Farms by Gross Annual Revenues - Oklahoma |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Farms |  |  |  | Farms with Revenues $<=1 \mathrm{MM}$ |  |  | Farms with Revenues > 1MM |  | Farms with Revenues Not Available |  |
| Assessment Area: | \# | \$ | \% of Total | Overall Market | \% of Businesses | \% Bank Loans | \% Aggregate | \% of Businesses | \% Bank Loans | \% of <br> Businesses | \% Bank Loans |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Oklahoma City-Shaw nee, OK CSA | 150 | 1,877 | 76.92 | 379.00 | 96.84 | 84.00 | 69.92 | 1.60 | 6.67 | 1.56 | 9.33 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |
| $99999$ <br> Tulsa-Muskogee- <br> Bartlesville, OK CSA | 45 | 395 | 23.08 | 66.00 | 95.76 | 88.89 | 56.06 | 1.75 | 4.44 | 2.49 | 6.67 |
| Total | 195 | 2,272 | 100.00 | 445 | 96.45 | 85.13 | 67.87 | 1.65 | 6.15 | 1.89 | 8.72 |

Source: 2015 ACS; 01/01/2017-12/31/201
Due to rounding, totals may not equal 100.0

| O: Assessment Area Distribution of Home Mortgage Loans By Income Category of the Geography - Oregon |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Home Mortgage Loans |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | \% of Total | Overall Market |  | \% <br> Bank <br> Loans | \% Aggregate | \% of <br> Owner- <br> Occupied <br> Housing <br> Units | \% <br> Bank <br> Loans | \% <br> Aggregate |  | \% <br> Bank <br> Loans | \% Aggregate |  | \% <br> Bank <br> Loans | \% Aggregate |  | \% Bank Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Medford-Grants Pass, OR CSA (2017-2018) | 478 | 106,359 | 14.26 | 10,317 | 0.13 | 0.00 | 0.37 | 10.58 | 12.55 | 11.80 | 61.23 | 56.07 | 58.56 | 28.05 | 31.38 | 29.27 | 0.00 | 0.00 | 0.00 |
| 99999 Medford-Grants Pass, OR CSA (2019) | 390 | 97,452 | 11.64 | N/A | 0.13 | 0.00 | N/A | 10.58 | 14.10 | N/A | 61.23 | 51.28 | N/A | 28.05 | 34.62 | N/A | 0.00 | 0.00 | N/A |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Bend-Prineville, OR CSA | 1,022 | 347,013 | 30.50 | 10,460 | 0.00 | 0.00 | 0.00 | 19.09 | 18.00 | 18.45 | 59.12 | 55.48 | 60.64 | 21.79 | 26.52 | 20.91 | 0.00 | 0.00 | 0.00 |
| 21660 <br> Eugene-Springfield, OR MSA | 875 | 323,641 | 26.11 | 12,553 | 0.85 | 2.86 | 1.15 | 16.94 | 17.71 | 17.97 | 57.21 | 52.80 | 57.86 | 24.99 | 26.63 | 23.02 | 0.00 | 0.00 | 0.00 |
| 99999 <br> OR Non-Metro Roll-up | 586 | 123,462 | 17.49 | 11,199 | 0.54 | 0.34 | 0.40 | 8.77 | 7.17 | 8.23 | 80.23 | 77.47 | 79.03 | 10.46 | 15.02 | 12.33 | 0.00 | 0.00 | 0.00 |
| Total | 3,351 | 997,927 | 100.00 | 44,529 | 0.39 | 0.81 | 0.51 | 12.55 | 14.80 | 14.20 | 64.96 | 58.22 | 64.00 | 22.11 | 26.17 | 21.29 | 0.00 | 0.00 | 0.00 |

Source: 2015 ACS; 01/01/2017-12/31/2019 Bank Data, 2019 HMDA Aggregate Data, 'N/A' data not available.
Due to rounding, totals may not equal 100.0

| ble P: Assessment Area Distribution of Home Mortgage Loans By Income Category of the Borrower - Oregon |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Home Mortgage Loans |  |  |  | Low-Income Borrowers |  |  | Moderate Income Borrowers |  |  | Middle-Income Borrowers |  |  | Upper-Income Borrowers |  |  | Not Available-Income Borrowers |  |  |
| Assessment Area: | \# | \$ | $\%$ of Total | Overall Market | \% Families |  | \% Aggregate | $\begin{gathered} \text { \% } \\ \text { Families } \end{gathered}$ | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | \% <br> Aggregate | \% Families |  | \% Aggregate | \% Families | $\%$ <br> Bank <br> Loans | \% Aggregate | \% Families | \% Bank Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Medford-Grants Pass, OR <br> CSA (2017-2018) | 478 | 106,359 | 14.26 | 10,317 | 20.63 | 2.51 | 3.16 | 18.55 | 16.32 | 12.78 | 19.61 | 22.38 | 22.89 | 41.20 | 52.72 | 48.93 | 0.00 | 6.07 | 12.24 |
| 99999 <br> Medford-Grants Pass, OR CSA (2019) | 390 | 97,452 | 11.64 | N/A | 20.63 | 1.79 | N/A | 18.55 | 19.23 | N/A | 19.61 | 20.00 | N/A | 41.20 | 55.38 | N/A | 0.00 | 3.59 | N/A |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 Bend-Prineville, OR CSA | 1,022 | 347,013 | 30.50 | 10,460 | 21.72 | 4.01 | 3.33 | 18.72 | 13.41 | 12.35 | 19.79 | 18.88 | 22.05 | 39.78 | 60.67 | 52.49 | 0.00 | 3.03 | 9.79 |
| 21660 <br> Eugene-Springfield, OR MSA | 875 | 323,641 | 26.11 | 12,553 | 21.42 | 2.97 | 4.40 | 17.83 | 15.66 | 15.19 | 20.46 | 21.94 | 23.47 | 40.30 | 50.06 | 45.42 | 0.00 | 9.37 | 11.53 |
| 99999 <br> OR Non-Metro Roll-up | 586 | 123,462 | 17.49 | 11,199 | 21.59 | 5.12 | 4.25 | 19.04 | 10.92 | 14.19 | 20.63 | 17.92 | 23.01 | 38.73 | 53.58 | 45.73 | 0.00 | 12.46 | 12.82 |
| Total | 3,351 | 997,927 | 100.00 | 44,529 | 21.18 | 3.72 | 3.82 | 18.53 | 15.73 | 13.71 | 20.08 | 21.62 | 22.89 | 40.21 | 58.94 | 47.97 | 0.00 | 6.83 | 11.61 |
| Source: 2015 ACS; 01/01/2017-12/31/2019 Bank Data, 2019 HMDA Aggregate Data, 'N/A' data n Due to rounding, totals may not equal 100.0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Charter Number: 8

| Q: Assessment Area Distribution of Loans to Small Businesses By Income Category of the Geography - Oregon |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Small Businesses |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \% \text { of } \\ & \text { Total } \end{aligned}$ | Overall Market | \% of Businesses | \% Bank Loans | \% Aggregate | $\%$ of Busines- ses | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | \% Aggregate | \% of Busines- ses | $\begin{gathered} \hline \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | \% of Busines- ses | $\%$ <br> Bank <br> Loans | \% Aggregate | $\%$ of $\begin{gathered}\text { Busines- } \\ \text { ses }\end{gathered}$ | \% Bank Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Medford-Grants Pass, OR CSA (2017-2018) | 1,451 | 19,580 | 15.59 | 5,810 | 4.36 | 3.31 | 4.04 | 16.61 | 12.68 | 14.37 | 55.96 | 54.31 | 56.30 | 23.07 | 29.70 | 25.28 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Medford-Grants Pass, OR CSA (2019) | 1,221 | 16,778 | 13.12 | N/A | 4.08 | 2.21 | N/A | 16.61 | 13.43 | N/A | 56.04 | 53.56 | N/A | 23.27 | 30.79 | N/A | 0.00 | 0.00 | N/A |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $99999$ <br> Bend-Prineville, OR CSA | 2,536 | 33,989 | 27.25 | 5,972 | 0.00 | 0.00 | 0.00 | 31.32 | 27.29 | 29.02 | 43.30 | 39.94 | 43.49 | 25.38 | 32.77 | 27.49 | 0.00 | 0.00 | 0.00 |
| $21660$ <br> Eugene-Springfield, OR MSA | 2,711 | 36,944 | 29.13 | 6,623 | 5.66 | 6.53 | 5.71 | 24.13 | 21.80 | 24.85 | 47.63 | 46.59 | 46.69 | 22.58 | 25.08 | 22.75 | 0.00 | 0.00 | 0.00 |
| 99999 <br> OR Non-Metro Roll-up | 1,387 | 16,504 | 14.90 | 5,612 | 0.97 | 1.66 | 0.77 | 13.17 | 13.05 | 12.53 | 74.05 | 71.38 | 75.39 | 11.80 | 13.91 | 11.32 | 0.00 | 0.00 | 0.00 |
| Total | 9,306 | 123,795 | 99.99 | 24,017 | 3.07 | 2.96 | 2.73 | 19.93 | 19.47 | 20.47 | 55.97 | 50.59 | 54.92 | 21.03 | 26.98 | 21.87 | 0.00 | 0.00 | 0.00 |

Source: 2015 ACS; 01/01/2017-12/31/2019 Bank Data, 2019 HMDA Aggregate Data, 'N/A' data not available.
Due to rounding, totals may not equal 100.0

| le R: Assessment Area Distribution of Loans to Small Businesses Loans by Gross Annual Revenues - Oregon |  |  |  |  |  |  |  | 2017-2019 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Small Businesses |  |  |  | Businesses with Revenues <= 1MM |  |  | Businesses with Revenues > 1 MM |  | Businesses with Revenues Not Available |  |
| Assessment Area: | \# | \$ | \% of Total | Overall Market | \% of Businesses | \% Bank Loans | \% Aggregate | \% of Businesses | \% Bank Loans | \% of Businesses | \% Bank Loans |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Medford-Grants Pass, OR CSA (2017-2018) | 1,451 | 19,580 | 15.59 | 5,810 | 87.85 | 72.78 | 48.12 | 3.96 | 15.78 | 8.18 | 11.44 |
| 99999 <br> Medford-Grants Pass, OR CSA (2019) | 1,221 | 16,778 | 13.12 | N/A | 89.42 | 72.24 | N/A | 3.37 | 18.92 | 7.21 | 8.85 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Bend-Prineville, OR CSA | 2,536 | 33,989 | 27.25 | 5,972 | 90.77 | 76.06 | 47.92 | 3.27 | 12.46 | 5.96 | 11.47 |
| $\begin{aligned} & 21660 \\ & \text { Eugene-Springfield, OR } \\ & \text { MSA } \\ & \hline \end{aligned}$ | 2,711 | 36,944 | 29.13 | 6,623 | 85.67 | 72.67 | 49.60 | 5.12 | 16.19 | 9.21 | 11.14 |
| $\begin{aligned} & 99999 \\ & \text { OR Non-Metro Roll-up } \\ & \hline \end{aligned}$ | 1,387 | 16,504 | 14.90 | 5,612 | 86.22 | 69.79 | 51.35 | 3.78 | 17.16 | 10.00 | 13.05 |
| Total | 9,306 | 123,795 | 99.99 | 24,017 | 87.94 | 73.12 | 49.24 | 3.89 | 15.61 | 8.16 | 11.26 |

Due to rounding, totals may not equal 100.0

Charter Number: 8

| ble S: Assessment Area Distribution of Loans to Farms By Income Category of the Geography - Oregon |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Farms |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \% \text { of } \\ & \text { Total } \end{aligned}$ | Overall Market | \% of Farms |  | \% <br> Aggregate | $\%$ of Farm s |  | \% <br> Aggregate | \% of Farms |  | \% <br> Aggregate | $\%$ of Farms |  | \% <br> Aggregate | \% of Farms | \% Bank <br> Loans | \% <br> Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Medford-Grants Pass, OR CSA (2017-2018) | 74 | 851 | 19.84 | 174 | 1.25 | 0.00 | 1.72 | 9.26 | 4.05 | 7.47 | 65.21 | 71.62 | 68.97 | 24.28 | 24.32 | 21.84 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Medford-Grants Pass, OR CSA (2019) | 64 | 732 | 17.16 | N/A | 1.20 | 4.69 | NA | 8.62 | 6.25 | N/A | 66.71 | 59.38 | N/A | 23.46 | 29.69 | N/A | 0.00 | 0.00 | N/A |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Bend-Prineville, OR CSA | 51 | 447 | 13.67 | 85 | 0.00 | 0.00 | 0.00 | 19.20 | 9.80 | 12.94 | 62.63 | 76.47 | 70.59 | 18.17 | 13.73 | 16.47 | 0.00 | 0.00 | 0.00 |
| 21660 <br> Eugene-Springfield, OR MSA | 74 | 803 | 19.84 | 146 | 1.52 | 0.00 | 1.37 | 14.15 | 5.41 | 14.38 | 53.36 | 40.54 | 49.32 | 30.98 | 54.05 | 34.93 | 0.00 | 0.00 | 0.00 |
| $\begin{aligned} & 99999 \\ & \text { OR Non-Metro Roll-up } \end{aligned}$ | 110 | 1,285 | 29.49 | 604 | 0.14 | 0.00 | 0.00 | 5.84 | 11.82 | 4.30 | 85.71 | 83.64 | 91.72 | 8.31 | 4.55 | 3.97 | 0.00 | 0.00 | 0.00 |
| Total | 373 | 4,118 | 100.00 | 1,009 | 0.79 | 0.80 | 0.50 | 10.14 | 7.77 | 7.04 | 69.44 | 67.56 | 79.88 | 19.62 | 23.86 | 12.59 | 0.00 | 0.00 | 0.00 |

Source: 2015 ACS; 01/01/2017-12/31/2019 Bank Data, 2019 HMDA Aggregate Data, 'N/A' data not available.
Due to rounding, totals may not equal 100.0

| Assessment Area Distribution of Loans to Farms by Gross Annual Revenues - Oregon 2017 -2019 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Farms |  |  |  | Farms with Revenues <= 1mm |  |  | Farms with Revenues > 1mm |  | Farms with Revenues Not Available |  |
| Assessment Area: | \# | \$ | \% of Total | Overall Market | \% of <br> Businesses | \% Bank Loans | \% Aggregate | \% of <br> Businesses | \% Bank Loans | \% of Businesses | \% Bank Loans |
| Full Review : |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Medford-Grants Pass, <br> OR CSA (2017-2018) | 74 | 851 | 19.84 | 174.00 | 96.65 | 79.73 | 53.45 | 2.18 | 13.51 | 1.17 | 6.76 |
| 99999 <br> Medford-Grants Pass, <br> OR CSA (2019) | 64 | 732 | 17.16 | 0.00 | 96.77 | 70.31 | NA | 1.78 | 26.56 | 1.46 | 3.13 |
| Limited Review : |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{array}{\|l\|} \hline 99999 \\ \text { Bend-Prineville, OR CSA } \end{array}$ | 51 | 447 | 13.67 | 85.00 | 98.06 | 84.31 | 54.12 | 1.49 | 11.76 | 0.46 | 3.92 |
| $\begin{aligned} & 21660 \\ & \text { Eugene-Springfield, OR } \\ & \text { MSA } \\ & \hline \end{aligned}$ | 74 | 803 | 19.84 | 146.00 | 95.97 | 71.62 | 56.16 | 2.78 | 18.92 | 1.25 | 9.46 |
| $\begin{array}{\|l\|} \hline 99999 \\ \text { OR Non-Metro Roll-up } \\ \hline \end{array}$ | 110 | 1,285 | 29.49 | 604.00 | 96.28 | 75.45 | 65.73 | 2.17 | 14.55 | 1.55 | 10.00 |
| Total | 373 | 4,118 | 100.00 | 1,009 | 96.64 | 75.87 | 61.25 | 2.09 | 16.89 | 1.27 | 7.24 |

Due to rounding, totals may not equal 100.0

Charter Number: 8

| Assessment Area: | Total Home Mortgage Loans |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | \# | \$ | $\begin{aligned} & \% \text { of } \\ & \text { Total } \end{aligned}$ | Overall Market | \% of Owner- Occupied Housing Units | $\begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | $\%$ of <br> Owner- <br> Occupied <br> Housing <br> Units | $\begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | \% of <br> Owner- <br> Occupied <br> Housing <br> Units | $\begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | \% of Owner- Occupied Housing Units | $\begin{array}{\|l} \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | \% Aggregate | \% of Owner- Occupied Housing Units | $\begin{gathered} \text { \% Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 12420 <br> Austin-Round RockGeorgetown, TX MSA | 13,502 | 4,615,140 | 13.02 | 79,581 | 3.81 | 3.36 | 3.55 | 18.11 | 10.87 | 15.71 | 40.27 | 37.36 | 43.04 | 37.63 | 48.26 | 37.46 | 0.18 | 0.16 | 0.24 |
| 99999 <br> Dallas-Fort Worth, TX-OK CSA (2017-2018) | 27,053 | 7,463,965 | 26.08 | 238,723 | 5.03 | 2.34 | 2.99 | 19.31 | 11.84 | 13.27 | 32.29 | 29.15 | 34.01 | 43.28 | 56.59 | 49.65 | 0.09 | 0.08 | 0.08 |
| 99999 <br> Dallas-Fort Worth, TX-OK CSA (2019) | 15,654 | 4,722,231 | 15.09 | N/A | 5.03 | 2.27 | N/A | 19.31 | 11.28 | N/A | 32.29 | 27.44 | N/A | 43.28 | 58.92 | N/A | 0.09 | 0.10 | N/A |
| 99999 <br> Houston-The Woodlands, <br> TX CSA | 30,913 | 7,952,507 | 29.80 | 177,354 | 5.20 | 2.77 | 2.77 | 21.29 | 12.51 | 14.17 | 29.40 | 22.86 | 28.63 | 44.05 | 61.82 | 54.39 | 0.06 | 0.05 | 0.04 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 10180 <br> Abilene, TX MSA | 341 | 59,106 | 0.33 | 4,141 | 0.00 | 0.00 | 0.00 | 19.39 | 8.50 | 11.49 | 34.61 | 24.05 | 26.27 | 45.99 | 66.86 | 62.09 | 0.02 | 0.59 | 0.14 |
| 99999 <br> Amarillo-Pampa-Borger, TX <br> CSA | 323 | 58,050 | 0.31 | 6,813 | 1.00 | 0.31 | 0.21 | 22.93 | 6.81 | 12.74 | 34.82 | 25.08 | 34.76 | 41.25 | 67.80 | 52.30 | 0.00 | 0.00 | 0.00 |
| $\begin{aligned} & 13140 \\ & \text { Beaumont-Port Arthur, TX } \\ & \text { MSA } \end{aligned}$ | 620 | 101,721 | 0.60 | 6,104 | 4.18 | 1.45 | 1.54 | 20.71 | 6.13 | 7.65 | 43.99 | 48.55 | 51.51 | 31.13 | 43.87 | 39.30 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Brownsville-HarlingenRaymondville, TX CSA | 377 | 62,301 | 0.36 | 5,046 | 0.00 | 0.00 | 0.00 | 29.12 | 11.14 | 12.94 | 29.94 | 21.49 | 26.81 | 40.94 | 67.37 | 60.25 | 0.00 | 0.00 | 0.00 |
| 17780 College Station-Bryan, TX MSA | 869 | 178,167 | 0.84 | 4,939 | 2.26 | 4.60 | 4.11 | 27.55 | 17.38 | 22.35 | 23.56 | 25.43 | 25.57 | 46.63 | 52.59 | 47.92 | 0.00 | 0.00 | 0.04 |
| 99999 <br> EI Paso-Las Cruces, TX- <br> NM (part) CSA | 1,155 | 162,762 | 1.11 | 15,571 | 1.85 | 0.43 | 0.65 | 24.71 | 9.87 | 14.19 | 33.25 | 31.00 | 27.70 | 40.19 | 58.70 | 57.46 | 0.00 | 0.00 | 0.00 |
| $\begin{aligned} & 28660 \\ & \text { Killeen-Temple, TX MSA } \\ & \hline \end{aligned}$ | 545 | 84,557 | 0.53 | 10,228 | 0.95 | 0.37 | 0.21 | 9.24 | 3.67 | 6.39 | 51.95 | 49.36 | 52.42 | 37.86 | 46.61 | 40.84 | 0.00 | 0.00 | 0.14 |
| $\begin{aligned} & 29700 \\ & \text { Laredo, TX MSA } \\ & \hline \end{aligned}$ | 205 | 28,362 | 0.20 | 3,664 | 1.14 | 0.00 | 0.30 | 33.77 | 13.66 | 20.44 | 31.74 | 30.73 | 29.48 | 33.34 | 55.61 | 49.78 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Longview-Marshall, TX CSA | 134 | 24,340 | 0.13 | 3,740 | 0.88 | 0.00 | 0.56 | 16.88 | 4.48 | 6.39 | 51.84 | 36.57 | 53.96 | 30.40 | 58.96 | 39.09 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Lubbock-PlainviewLevelland, TX CSA | 861 | 161,846 | 0.83 | 9,507 | 2.52 | 1.16 | 1.67 | 16.40 | 5.46 | 9.67 | 38.15 | 36.12 | 41.29 | 42.94 | 57.26 | 47.38 | 0.00 | 0.00 | 0.00 |
| 99999 McAllen-Edinburg, TX CSA | 702 | 105,249 | 0.68 | 9,422 | 1.37 | 0.14 | 0.31 | 24.63 | 8.26 | 13.32 | 42.25 | 32.62 | 37.94 | 31.51 | 58.83 | 48.28 | 0.24 | 0.14 | 0.15 |
| 99999 <br> Midland-Odessa, TX CSA <br> (2017-2018) | 711 | 235,842 | 0.69 | 10,184 | 2.23 | 0.42 | 1.18 | 17.31 | 5.34 | 8.17 | 42.23 | 31.08 | 32.72 | 38.23 | 63.15 | 57.93 | 0.00 | 0.00 | 0.00 |
| 29999 <br> Midland-Odessa, TX CSA <br> (2019) <br> 10270 | 438 | 121,402 | 0.42 | N/A | 2.23 | 0.23 | N/A | 17.31 | 5.94 | N/A | 42.23 | 27.40 | N/A | 38.23 | 66.44 | N/A | 0.00 | 0.00 | N/A |
| $\begin{aligned} & \text { 41700 } \\ & \text { San Antonio-New Braunfels, } \\ & \text { TX MSA } \end{aligned}$ | 7,350 | 1,573,587 | 7.09 | 67,123 | 4.61 | 1.28 | 1.46 | 24.47 | 12.44 | 13.88 | 28.37 | 26.93 | 31.62 | 42.54 | 59.36 | 53.04 | 0.00 | 0.00 | 0.01 |
| 99999 <br> Tyler-Jacksonville, TX CSA | 454 | 84,587 | 0.44 | 5,296 | 0.90 | 0.00 | 0.59 | 19.89 | 10.13 | 13.67 | 40.88 | 39.43 | 39.56 | 38.33 | 50.44 | 46.19 | 0.00 | 0.00 | 0.00 |
| 47380 Waco, TX MSA | 626 | 109,696 | 0.60 | 6,112 | 4.49 | 4.15 | 5.07 | 22.14 | 9.74 | 16.70 | 26.93 | 19.97 | 20.94 | 46.44 | 66.13 | 57.28 | 0.00 | 0.00 | 0.00 |
| Wichita Falls, TX MSA | 183 | 22,701 | 0.18 | 3,161 | 6.05 | 2.19 | 1.11 | 23.71 | 13.66 | 16.58 | 26.63 | 24.04 | 27.93 | 43.62 | 60.11 | 54.38 | 0.00 | 0.00 | 0.00 |
| 99999 <br> TX Non-Metro Roll-up <br> (2017-2018) | 450 | 83,800 | 0.43 | 5,089 | 0.00 | 0.00 | 0.00 | 4.12 | 2.89 | 5.93 | 49.30 | 47.78 | 64.75 | 46.57 | 49.33 | 29.32 | 0.00 | 0.00 | 0.00 |
| 99999 <br> TX Non-Metro Roll-up <br> (2019) | 272 | 58,725 | 0.26 | N/A | 0.00 | 0.00 | N/A | 4.12 | 2.21 | N/A | 49.30 | 36.03 | N/A | 46.57 | 61.76 | N/A | 0.00 | 0.00 | N/A |
| Total | 103,738 | 28,070,644 | 100.02 | 671,798 | 4.33 | 2.40 | 2.53 | 20.22 | 11.56 | 13.64 | 33.19 | 28.26 | 33.91 | 42.19 | 57.71 | 49.85 | 0.07 | 0.07 | 0.07 |

 Source: 2015 ACS: 01/01/2017-12/31/2019 Bank Data, 2019 HMDA Aggregate Data, 'N/A' data not available.
Due to rounding, totals may not equal 100.0

| Table Q: Assessment Area Distribution of Loans to Small Businesses By Income Category of the Geography - Texas |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Small Businesses |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \% \text { of } \\ & \text { Total } \end{aligned}$ | Overall Market | $\begin{array}{\|c\|} \hline \% \text { of } \\ \text { Busines- } \\ \text { ses } \end{array}$ | $\begin{array}{\|c} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | \% Aggregate | \% of Businesses | $\begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | \% of Businesses | $\begin{array}{\|c} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | \% Aggregate | \% of Businesses | $\begin{gathered} \hline \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | $\begin{array}{\|c\|} \hline \begin{array}{c} \% \text { of } \\ \text { Busines- } \\ \text { ses } \end{array} \\ \hline \end{array}$ | $\begin{gathered} \text { \% Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 12420 Austin-Round Rock- <br> Georgetown, TX MSA | 40,663 | 707,852 | 13.13 | 55,327 | 6.71 | 6.83 | 7.06 | 13.97 | 11.47 | 14.60 | 33.93 | 31.93 | 34.18 | 44.15 | 48.93 | 43.39 | 1.24 | 0.83 | 0.78 |
| 99999 Dallas-Fort Worth, TX-OK CSA (2017-2018) | 58,686 | 1,207,992 | 18.95 | 173,126 | 7.11 | 5.19 | 6.71 | 18.99 | 15.11 | 18.94 | 28.37 | 24.85 | 26.38 | 44.93 | 54.23 | 47.25 | 0.60 | 0.63 | 0.72 |
| 99999 <br> Dallas-Fort Worth, TX-OK CSA (2019) | 43,433 | 768,060 | 14.02 | N/A | 6.79 | 5.26 | N/A | 18.56 | 15.43 | N/A | 27.61 | 24.93 | N/A | 46.43 | 53.88 | N/A | 0.60 | 0.51 | N/A |
| $\begin{aligned} & \text { 99999 } \\ & \text { Houston-The Woodlands, } \\ & \text { TX CSA } \end{aligned}$ | 113,032 | 2,011,526 | 36.49 | 166,512 | 10.00 | 8.23 | 9.78 | 19.50 | 14.63 | 18.40 | 23.69 | 20.55 | 23.34 | 46.62 | 56.44 | 48.34 | 0.19 | 0.15 | 0.15 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 10180 Abilene, TX MSA | 609 | 7,177 | 0.20 | 2,589 | 0.00 | 0.00 | 0.00 | 29.44 | 19.38 | 22.98 | 31.70 | 23.15 | 34.61 | 37.87 | 57.47 | 42.14 | 0.99 | 0.00 | 0.27 |
| 99999 <br> Amarillo-Pampa-Borger, TX <br> CSA | 1,932 | 24,771 | 0.62 | 5,050 | 5.86 | 6.06 | 5.19 | 25.66 | 15.53 | 19.88 | 31.49 | 24.69 | 30.44 | 36.68 | 53.67 | 44.40 | 0.31 | 0.05 | 0.10 |
| 13140 <br> Beaumont-Port Arthur, TX <br> MSA | 1,774 | 28,409 | 0.57 | 5,595 | 5.14 | 3.72 | 5.24 | 20.19 | 17.08 | 20.00 | 49.53 | 49.27 | 46.51 | 25.01 | 29.93 | 28.26 | 0.13 | 0.00 | 0.00 |
| 99999 Brownsville-HarlingenRaymondville, TX CSA | 1,892 | 31,150 | 0.61 | 5,802 | 0.00 | 0.00 | 0.00 | 32.48 | 23.20 | 29.64 | 27.70 | 26.48 | 30.14 | 39.53 | 50.00 | 39.90 | 0.29 | 0.32 | 0.31 |
| $\begin{aligned} & 17780 \\ & \text { College Station-Bryan, TX } \\ & \text { MSA } \end{aligned}$ | 2,017 | 29,132 | 0.65 | 3,735 | 7.43 | 6.35 | 4.55 | 28.71 | 19.19 | 26.35 | 26.45 | 25.83 | 26.32 | 36.99 | 48.64 | 42.76 | 0.42 | 0.00 | 0.03 |
| 99999 EIPaso-Las Cruces, TX- NM (part) CSA | 5,313 | 113,107 | 1.72 | 12,565 | 6.93 | 6.46 | 5.76 | 26.61 | 22.19 | 29.34 | 30.28 | 28.27 | 28.98 | 35.49 | 42.22 | 35.60 | 0.69 | 0.87 | 0.33 |
| $\begin{aligned} & 28660 \\ & \text { Killeen-Temple, TX MSA } \\ & \hline \end{aligned}$ | 1,550 | 22,031 | 0.50 | 3,891 | 4.91 | 3.74 | 4.06 | 13.62 | 9.68 | 10.28 | 49.41 | 44.39 | 47.19 | 31.96 | 42.19 | 38.47 | 0.10 | 0.00 | 0.00 |
| $\begin{aligned} & 29700 \\ & \text { Laredo, TX MSA } \end{aligned}$ | 1,338 | 28,189 | 0.43 | 5,868 | 0.89 | 1.05 | 0.61 | 34.68 | 28.85 | 32.31 | 17.79 | 16.74 | 13.85 | 46.20 | 52.62 | 52.97 | 0.44 | 0.75 | 0.26 |
| 99999 Longview-Marshall, TX CSA | 1,202 | 27,758 | 0.39 | 4,770 | 6.75 | 3.49 | 6.56 | 13.48 | 9.40 | 12.68 | 52.82 | 49.92 | 51.91 | 26.78 | 36.94 | 28.62 | 0.18 | 0.25 | 0.23 |
| 99999 <br> Lubbock-PlainviewLevelland, TX CSA | 2,774 | 34,192 | 0.90 | 5,868 | 3.78 | 2.38 | 2.74 | 17.13 | 10.38 | 15.08 | 36.28 | 32.52 | 34.37 | 42.73 | 54.58 | 47.77 | 0.09 | 0.14 | 0.03 |
| 99999 <br> McAllen-Edinburg, TX CSA | 4,235 | 94,742 | 1.37 | 11,401 | 0.47 | 0.31 | 0.46 | 19.07 | 15.44 | 18.77 | 34.44 | 29.78 | 35.35 | 45.82 | 54.36 | 45.23 | 0.20 | 0.12 | 0.19 |
| McAlen-Edinburg, XCSA <br> Midland-Odessa, TX CSA <br> (2017-2018) | 2,172 | 31,610 | 0.70 | 3,376 | 1.46 | 0.92 | 1.16 | 23.19 | 15.79 | 20.88 | 35.83 | 34.07 | 35.93 | 39.04 | 49.17 | 42.03 | 0.47 | 0.05 | 0.00 |
| $\begin{aligned} & \begin{array}{l} \text { Midland-Odessa, TX CSA } \\ \text { (2019) } \end{array} \\ & \hline \end{aligned}$ | 1,723 | 24,189 | 0.56 | N/A | 1.49 | 1.04 | N/A | 22.44 | 17.59 | N/A | 35.33 | 33.89 | N/A | 40.33 | 47.36 | N/A | 0.40 | 0.12 | N/A |
| 41700 San Antonio-New Braunfels, TX MSA | 19,523 | 297,630 | 6.30 | 35,279 | 4.58 | 3.03 | 4.23 | 21.12 | 14.95 | 20.27 | 28.68 | 25.03 | 28.39 | 45.37 | 56.81 | 46.86 | 0.24 | 0.18 | 0.24 |
| 99999 <br> Tyler-Jacksonville, TX CSA | 1,503 | 24,062 | 0.49 | 5,342 | 6.13 | 3.66 | 7.26 | 17.89 | 14.24 | 18.23 | 35.04 | 32.14 | 32.83 | 40.76 | 49.77 | 41.37 | 0.17 | 0.20 | 0.30 |
| $\begin{aligned} & 47380 \\ & \text { Waco, TX MSA } \\ & \hline \end{aligned}$ | 1,672 | 28,593 | 0.54 | 3,363 | 5.08 | 5.62 | 4.37 | 30.44 | 27.27 | 27.98 | 25.27 | 25.96 | 27.89 | 38.64 | 40.73 | 39.34 | 0.56 | 0.42 | 0.42 |
| 48660 <br> Wichita Falls, TX MSA | 677 | 20,678 | 0.22 | 1,390 | 4.89 | 4.87 | 4.89 | 33.57 | 31.61 | 32.66 | 17.33 | 15.51 | 14.03 | 44.07 | 47.71 | 48.27 | 0.14 | 0.30 | 0.14 |
| 99999 <br> TX Non-Metro Roll-up <br> (2017-2018) | 1,131 | 16,270 | 0.37 | 4,231 | 0.00 | 0.00 | 0.00 | 8.63 | 4.60 | 4.89 | 55.31 | 44.74 | 41.74 | 36.06 | 50.66 | 53.37 | 0.00 | 0.00 | 0.00 |
|  | 888 | 11,525 | 0.29 | N/A | 0.00 | 0.00 | N/A | 6.65 | 3.49 | N/A | 40.89 | 37.16 | N/A | 52.46 | 59.35 | N/A | 0.00 | 0.00 | N/A |
| Total | 309,739 | 5,590,645 | 100.02 | 515,080 | 6.85 | 6.16 | 7.01 | 19.11 | 14.73 | 18.83 | 28.78 | 24.98 | 27.55 | 44.74 | 53.74 | 46.19 | 0.51 | 0.39 | 0.42 |

Total
Source: 2015 ACS: 01/012017 - 121312019 Bank Data, 2019 HMDA Agregate Data 'N/A' data not available.
Due to rounding, totals may not equal 100.0

Charter Number: 8

|  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  | Businesses with Revenues > 1 MM |  | Businesses with Revenues Not Available |  |
| Assessment Area: | \# | \$ | \% of Total | Overall Market | \% of Businesses | \% Bank Loans | \% Aggregate | \% of Businesses | \% Bank Loans | \% of Businesses | \% Bank Loans |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |
| 12420 <br> Austin-Round RockGeorgetown, TX MSA | 40,663 | 707,852 | 13.13 | 55,327 | 88.14 | 72.13 | 42.80 | 3.75 | 15.78 | 8.12 | 12.09 |
| 99999 Dallas-Fort Worth, TX-OK CSA (2017-2018) | 58,686 | 1,207,992 | 18.95 | 173,126 | 85.75 | 69.86 | 42.20 | 5.06 | 16.88 | 9.19 | 13.27 |
| 99999 <br> Dallas-Fort Worth, TX-OK CSA (2019) | 43,433 | 768,060 | 14.02 | N/A | 87.44 | 73.05 | N/A | 4.26 | 18.81 | 8.30 | 8.14 |
| $\begin{aligned} & \text { 99999 } \\ & \text { Houston-The Woodlands, } \\ & \text { TX CSA } \end{aligned}$ | 113,032 | 2,011,526 | 36.49 | 166,512 | 85.24 | 70.55 | 40.67 | 5.92 | 18.52 | 8.84 | 10.93 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |
| 10180 Abilene, TX MSA | 609 | 7,177 | 0.20 | 2,589 | 80.02 | 70.61 | 34.76 | 5.87 | 18.72 | 14.10 | 10.67 |
|  | 1,932 | 24,771 | 0.62 | 5,050 | 82.09 | 62.94 | 45.76 | 5.48 | 24.95 | 12.42 | 12.11 |
| 13140 <br> Beaumont-Port Arthur, TX <br> MSA | 1,774 | 28,409 | 0.57 | 5,595 | 80.79 | 63.19 | 34.83 | 5.43 | 24.30 | 13.78 | 12.51 |
| 99999 <br> Brownsville-HarlingenRaymondville, TX CSA | 1,892 | 31,150 | 0.61 | 5,802 | 81.61 | 64.85 | 40.38 | 5.03 | 23.89 | 13.36 | 11.26 |
| 17780 <br> College Station-Bryan, TX MSA | 2,017 | 29,132 | 0.65 | 3,735 | 79.95 | 72.48 | 39.12 | 5.24 | 15.72 | 14.82 | 11.80 |
| 99999 (las Cruces, TXNM (part) CSA | 5,313 | 113,107 | 1.72 | 12,565 | 84.15 | 65.07 | 43.29 | 4.55 | 25.56 | 11.31 | 9.37 |
| 28660 <br> Killeen-Temple, TX MSA | 1,550 | 22,031 | 0.50 | 3,891 | 85.57 | 72.65 | 40.58 | 3.19 | 18.13 | 11.24 | 9.23 |
| $\begin{aligned} & 29700 \\ & \text { Laredo, TX MSA } \end{aligned}$ | 1,338 | 28,189 | 0.43 | 5,868 | 81.10 | 60.54 | 42.33 | 7.00 | 27.28 | 11.90 | 12.18 |
| 99999 <br> Longview-Marshall, TX CSA | 1,202 | 27,758 | 0.39 | 4,770 | 79.51 | 67.22 | 42.39 | 6.03 | 21.96 | 14.46 | 10.82 |
| 99999 <br> Lubbock-PlainviewLevelland, TX CSA | 2,774 | 34,192 | 0.90 | 5,868 | 83.88 | 64.46 | 38.84 | 4.94 | 22.57 | 11.19 | 12.98 |
|  | 4,235 | 94,742 | 1.37 | 11,401 | 84.73 | 66.07 | 38.03 | 4.36 | 24.13 | 10.92 | 9.80 |
| 99999 <br> $\left.\begin{array}{l}\text { Midland-Odessa, TX CSA } \\ \text { (2017-2018) }\end{array}\right]$ | 2,172 | 31,610 | 0.70 | 3,376 | 79.65 | 61.14 | 24.26 | 7.36 | 25.46 | 12.99 | 13.40 |
| 99999 <br> Midland-Odessa, TX CSA <br> (2019) <br> 17 | 1,723 | 24,189 | 0.56 | N/A | 82.13 | 63.20 | N/A | 6.26 | 26.87 | 11.61 | 9.92 |
| 41700 <br> San Antonio-New Braunfels, <br> TX MSA | 19,523 | 297,630 | 6.30 | 35,279 | 86.24 | 68.68 | 42.73 | 4.20 | 21.50 | 9.56 | 9.81 |
| 99999 <br> Tyler-Jacksonville, TX CSA | 1,503 | 24,062 | 0.49 | 5,342 | 84.86 | 67.00 | 40.85 | 4.72 | 20.09 | 10.42 | 12.91 |
| 47380 <br> Waco, TX MSA | 1,672 | 28,593 | 0.54 | 3,363 | 83.22 | 65.55 | 37.64 | 5.19 | 21.71 | 11.59 | 12.74 |
| 48660 Wichita Falls, TX MSA | 677 | 20,678 | 0.22 | 1,390 | 79.25 | 63.96 | 41.15 | 6.26 | 24.67 | 14.49 | 11.37 |
| 99999 <br> TX Non-Metro Roll-up <br> (2017-2018) | 1,131 | 16,270 | 0.37 | 4,231 | 84.23 | 69.23 | 45.14 | 4.80 | 15.47 | 10.97 | 15.30 |
| 99999 TX Non-Metro Roll-up (2019) <br> (2019) | 888 | 11,525 | 0.29 | N/A | 85.62 | 72.30 | N/A | 4.25 | 17.23 | 10.13 | 10.47 |
| Total | 309,739 | 5,590,645 | 100.02 | 515,080 | 85.94 | 70.33 | 41.43 | 4.85 | 18.57 | 9.21 | 11.11 |

Due to rounding, totals may not equal 100.0

Charter Number: 8

| Table | Assessment Area Distribution of Loans to Farms By Income Category of the Geography - Texas |  |  |  |  |  |  |  |  |  |  |  |  | Upper-Income Tracts |  |  | 2017-2019 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Farms |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  |  |  |  | Not Av | lable-Inco | e Tracts |
| Assessment Area: | \# | \$ | $\begin{aligned} & \% \text { of } \\ & \text { Total } \end{aligned}$ | Overall Market | $\begin{gathered} \text { \% of } \\ \text { Farms } \end{gathered}$ | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | $\stackrel{\%}{\text { Aggregate }}$ | $\begin{aligned} & \text { \% of } \\ & \text { Farms } \end{aligned}$ | $\begin{array}{c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | $\stackrel{\%}{\text { Agregate }}$ | $\begin{aligned} & \text { \% of } \\ & \text { Farms } \end{aligned}$ | $\begin{array}{\|c\|} \hline \% \\ \hline \text { Bank } \\ \text { Loans } \end{array}$ | Aggregate | $\begin{aligned} & \text { \% of } \\ & \text { Farms } \end{aligned}$ | $\begin{array}{\|c} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | $\stackrel{\%}{\%}$ | $\begin{aligned} & \text { \% of } \\ & \text { Farm s } \end{aligned}$ | \% Bank Loans | $\stackrel{\%}{\text { Agregate }}$ |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 12420 Austin-Round RockGeorgetown, TX MSA | 331 | 3,030 | 12.04 | 422 | 4.72 | 4.23 | 2.84 | 17.84 | 15.11 | 23.93 | 40.19 | 38.07 | 45.97 | 36.99 | 41.69 | 27.01 | 0.25 | 0.91 | 0.24 |
| 99999 <br> Dallas-Fort Worth, TX-OK <br> CSA (2017-2018) | 465 | 5,659 | 16.91 | 1,495 | 4.87 | 0.00 | 1.00 | 16.27 | 8.39 | 13.44 | 34.55 | 35.27 | 45.89 | 43.93 | 56.34 | 39.67 | 0.36 | 0.00 | 0.00 |
| 99999 <br> Dallas-Fort Worth, TX-OK <br> CSA (2019) | 306 | 3,927 | 11.13 | N/A | 4.69 | 0.33 | N/A | 16.49 | 9.48 | N/A | 33.48 | 39.54 | N/A | 44.96 | 50.65 | NA | 0.39 | 0.00 | N/A |
| 99999 <br> Houston-The Woodlands, <br> TX CSA | 756 | 8,995 | 27.49 | 921 | 5.31 | 2.38 | 1.41 | 17.62 | 10.85 | 17.92 | 32.69 | 31.22 | 41.91 | 44.31 | 55.56 | 38.76 | 0.06 | 0.00 | 0.00 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 10180 Abilene, TX MSA | 6 | 111 | 0.22 | 143 | 0.00 | 0.00 | 0.00 | 12.46 | 16.67 | 3.50 | 30.09 | 16.67 | 55.94 | 57.45 | 66.67 | 40.56 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Amarillo-Pampa-Borger, <br> TX CSA | 82 | 1,181 | 2.98 | 365 | 3.39 | 0.00 | 0.55 | 11.71 | 8.54 | 4.93 | 31.88 | 30.49 | 21.10 | 53.03 | 60.98 | 73.42 | 0.00 | 0.00 | 0.00 |
| $\qquad$ <br> Beaumo <br> TX MSA | 23 | 150 | 0.84 | 67 | 3.24 | 0.00 | 0.00 | 13.52 | 8.70 | 2.99 | 43.81 | 21.74 | 35.82 | 39.43 | 69.57 | 61.19 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Brow nsville-Harlingen- <br> Raymondville, TX CSA | 39 | 371 | 1.42 | 108 | 0.00 | 0.00 | 0.00 | 20.80 | 12.82 | 22.22 | 33.57 | 17.95 | 33.33 | 45.63 | 69.23 | 44.44 | 0.00 | 0.00 | 0.00 |
| $\|$17780 <br> College Station-Bryan, TX <br> MSA | 32 | 296 | 1.16 | 90 | 2.88 | 6.25 | 1.11 | 22.36 | 9.38 | 20.00 | 26.68 | 21.88 | 30.00 | 47.84 | 62.50 | 48.89 | 0.24 | 0.00 | 0.00 |
| 99999 <br> 日 Paso-Las Cruces, TXNM (part) CSA | 20 | 247 | 0.73 | 34 | 2.91 | 5.00 | 0.00 | 29.06 | 30.00 | 41.18 | 28.03 | 10.00 | 8.82 | 39.83 | 55.00 | 50.00 | 0.17 | 0.00 | 0.00 |
| 28660 <br> Killeen-Temple, TX MSA | 28 | 315 | 1.02 | 149 | 2.95 | 0.00 | 0.00 | 6.84 | 3.57 | 1.34 | 48.06 | 32.14 | 31.54 | 42.15 | 64.29 | 67.11 | 0.00 | 0.00 | 0.00 |
| $\begin{aligned} & 29700 \\ & \text { Laredo, TX MSA } \end{aligned}$ | 9 | 118 | 0.33 | 53 | 0.54 | 0.00 | 0.00 | 34.41 | 55.56 | 66.04 | 22.58 | 33.33 | 3.77 | 42.47 | 11.11 | 30.19 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Longview -Marshall, TX CSA | 24 | 251 | 0.87 | 73 | 1.59 | 0.00 | 2.74 | 10.19 | 0.00 | 9.59 | 61.46 | 54.17 | 60.27 | 26.75 | 45.83 | 27.40 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Lubbock-Plainview Levelland, TX CSA | 160 | 1,551 | 5.82 | 437 | 1.69 | 1.25 | 0.69 | 8.35 | 3.13 | 2.97 | 34.52 | 22.50 | 35.93 | 55.44 | 73.13 | 60.41 | 0.00 | 0.00 | 0.00 |
| $\begin{aligned} & \text { 99999 } \\ & \text { McAllen-Edinburg, TX } \\ & \text { CSA } \\ & \hline \end{aligned}$ | 73 | 665 | 2.65 | 132 | 0.90 | 8.22 | 2.27 | 19.31 | 15.07 | 19.70 | 38.77 | 23.29 | 32.58 | 40.12 | 53.42 | 44.70 | 0.90 | 0.00 | 0.76 |
| 99999 <br> Midland-Odessa, TX CSA <br> (2017-2018) | 24 | 214 | 0.87 | 9 | 1.10 | 0.00 | 0.00 | 13.44 | 16.67 | 11.11 | 34.36 | 20.83 | 11.11 | 50.88 | 62.50 | 77.78 | 0.22 | 0.00 | 0.00 |
| 99999 <br> Midland-Odessa, TX CSA <br> (2019) | 17 | 163 | 0.62 | N/A | 0.97 | 0.00 | N/A | 14.67 | 5.88 | NA | 32.24 | 11.76 | N/A | 51.93 | 82.35 | NA | 0.19 | 0.00 | N/A |
| San Antonio-New Braunfels, TX MSA | 163 | 2,847 | 5.93 | 188 | 2.21 | 3.68 | 1.06 | 15.31 | 4.29 | 10.11 | 29.55 | 22.70 | 35.64 | 52.87 | 69.33 | 53.19 | 0.06 | 0.00 | 0.00 |
| 99999 <br> Tyler-Jacksonville, TX CSA | 32 | 338 | 1.16 | 197 | 1.69 | 0.00 | 1.52 | 16.86 | 12.50 | 10.66 | 42.66 | 50.00 | 61.93 | 38.79 | 37.50 | 25.89 | 0.00 | 0.00 | 0.00 |
| $\begin{aligned} & 47380 \\ & \text { Waco, TX MSA } \end{aligned}$ | 32 | 247 | 1.16 | 109 | 2.16 | 0.00 | 0.92 | 14.04 | 6.25 | 3.67 | 37.81 | 46.88 | 55.05 | 45.99 | 46.88 | 40.37 | 0.00 | 0.00 | 0.00 |
| 48660 Wichita Falls, TX MSA | 9 | 79 | 0.33 | 28 | 4.31 | 0.00 | 3.57 | 23.71 | 11.11 | 7.14 | 12.93 | 66.67 | 17.86 | 59.05 | 22.22 | 71.43 | 0.00 | 0.00 | 0.00 |
| 99999 <br> TX Non-Metro Roll-up <br> (2017-2018) (2017-2018) | 64 | 589 | 2.33 | 443 | 0.00 | 0.00 | 0.00 | 4.02 | 0.00 | 2.48 | 53.24 | 48.44 | 55.98 | 42.75 | 51.56 | 41.53 | 0.00 | 0.00 | 0.00 |
| 99999 <br> TX Non-Metro Roll-up <br> (2019) | 55 | 539 | 2.00 | N/A | 0.00 | 0.00 | N/A | 2.88 | 3.64 | N/A | 45.62 | 27.27 | N/A | 51.50 | 69.09 | NA | 0.00 | 0.00 | N/A |
| Total | 2,750 | 31,883 | 100.01 | 5,463 | 4.04 | 1.82 | 1.06 | 16.01 | 9.71 | 12.61 | 34.93 | 32.69 | 42.27 | 44.79 | 55.67 | 44.02 | 0.24 | 0.11 | 0.04 |

Source: 2015 ACS; 01/01/2017-12/31/2019
Due to rounding, totals may not equal 100.0

Charter Number: 8

| Assessment Area Distribution of Loans to Farms by Gross Annual Revenues - Texas |  |  |  |  |  |  |  | 201 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Farms |  |  |  | Farms with Revenues <= 19m |  |  | Farms with Revenues > 1mm |  | Farms with Revenues Not Available |  |
| Assessment Area: | \# | \$ | \% of Total | Overall Market | $\begin{gathered} \text { \% of } \\ \text { Businesses } \end{gathered}$ | \% Bank Loans | \% Aggregate | $\begin{gathered} \text { \% of } \\ \text { Businesses } \end{gathered}$ | \% Bank Loans | $\begin{gathered} \text { \% of } \\ \text { Businesses } \end{gathered}$ | \% Bank Loans |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |
| 12420 <br> Austin-Round RockGeorgetown, TX MSA | 331 | 3,030 | 12.04 | 422.00 | 96.61 | 74.62 | 41.23 | 1.89 | 7.25 | 1.50 | 18.13 |
| 99999 Dallas-Fort Worth, TX-OK CSA (2017-2018) | 465 | 5,659 | 16.91 | 1,495.00 | 95.26 | 76.99 | 49.50 | 2.48 | 8.39 | 2.26 | 14.62 |
| 99999 <br> Dallas-Fort Worth, TX-OK <br> CSA (2019) | 306 | 3,927 | 11.13 | 0.00 | 95.88 | 73.86 | N/A | 2.17 | 12.42 | 1.95 | 13.73 |
| 99999 <br> Houston-The Woodlands, TX CSA | 756 | 8,995 | 27.49 | 921.00 | 95.00 | 75.53 | 51.90 | 2.76 | 12.17 | 2.24 | 12.30 |
| Limited Review : |  |  |  |  |  |  |  |  |  |  |  |
| 10180 Abilene, TX MSA | 6 | 111 | 0.22 | 143.00 | 97.26 | 66.67 | 67.83 | 2.74 | 33.33 | 0.00 | 0.00 |
| 99999 <br> Amarillo-Pampa-Borger, <br> TX CSA | 82 | 1,181 | 2.98 | 365.00 | 94.64 | 74.39 | 67.95 | 3.81 | 10.98 | 1.55 | 14.63 |
| 13140 <br> Beaumont-Port Arthur, <br> TX MSA | 23 | 150 | 0.84 | 67.00 | 99.05 | 65.22 | 65.67 | 0.76 | 13.04 | 0.19 | 21.74 |
| 99999 <br> Brow nsville-HarlingenRaymondville, TX CSA | 39 | 371 | 1.42 | 108.00 | 95.98 | 69.23 | 32.41 | 2.36 | 20.51 | 1.65 | 10.26 |
| 17780 <br> College Station-Bryan, TX <br> MSA | 32 | 296 | 1.16 | 90.00 | 93.51 | 87.50 | 58.89 | 2.16 | 6.25 | 4.33 | 6.25 |
| 99999 <br> E Paso-Las Cruces, TX <br> NM (part) CSA | 20 | 247 | 0.73 | 34.00 | 92.99 | 60.00 | 29.41 | 4.44 | 30.00 | 2.56 | 10.00 |
| 28660 <br> Killeen-Temple, TX MSA | 28 | 315 | 1.02 | 149.00 | 97.36 | 71.43 | 44.97 | 1.09 | 0.00 | 1.56 | 28.57 |
| $\begin{aligned} & 29700 \\ & \text { Laredo, TX MSA } \end{aligned}$ | 9 | 118 | 0.33 | 53.00 | 95.16 | 66.67 | 88.68 | 2.69 | 11.11 | 2.15 | 22.22 |
| $\qquad$ Longview -Marshall, TX CSA | 24 | 251 | 0.87 | 73.00 | 96.82 | 75.00 | 64.38 | 2.23 | 4.17 | 0.96 | 20.83 |
| 99999 <br> Lubbock-Plainview - <br> Levelland, TX CSA | 160 | 1,551 | 5.82 | 437.00 | 96.44 | 80.00 | 49.20 | 2.35 | 8.75 | 1.22 | 11.25 |
| 99999 <br> McAllen-Edinburg, TX McAl CSA | 73 | 665 | 2.65 | 132.00 | 90.87 | 73.97 | 35.61 | 6.44 | 21.92 | 2.69 | 4.11 |
| 99999 <br> Midland-Odessa, T× CSA <br> (2017-2018) | 24 | 214 | 0.87 | 9.00 | 98.24 | 75.00 | 11.11 | 0.66 | 4.17 | 1.10 | 20.83 |
| 99999 <br> Midand-Odessa, TX CSA <br> (2019) | 17 | 163 | 0.62 | 0.00 | 98.26 | 76.47 | N/A | 0.58 | 5.88 | 1.16 | 17.65 |
| 41700 San Antonio-New Braunfels, TX MSA | 163 | 2,847 | 5.93 | 188.00 | 95.91 | 74.85 | 53.19 | 2.06 | 5.52 | 2.03 | 19.63 |
| 99999 <br> Tyler-Jacksonville, TX CSA | 32 | 338 | 1.16 | 197.00 | 95.95 | 87.50 | 71.07 | 2.19 | 0.00 | 1.85 | 12.50 |
| 47380 <br> Waco, TX MSA | 32 | 247 | 1.16 | 109.00 | 97.38 | 81.25 | 42.20 | 1.39 | 3.13 | 1.23 | 15.63 |
| 48660 Wichita Falls, TX MSA | 9 | 79 | 0.33 | 28.00 | 94.83 | 44.44 | 28.57 | 1.72 | 0.00 | 3.45 | 55.56 |
| 999999 TX Non-Metro Roll-up (2017-2018) | 64 | 589 | 2.33 | 443.00 | 95.98 | 78.12 | 58.01 | 2.01 | 7.81 | 2.01 | 14.06 |
| 99999 <br> TX Non-Metro Roll-up <br> (2019) | 55 | 539 | 2.00 | 0.00 | 96.15 | 70.91 | N/A | 1.92 | 16.36 | 1.92 | 12.73 |
| Total | 2,750 | 31,883 | 100.01 | 5,463 | 95.68 | 75.45 | 52.24 | 2.34 | 10.22 | 1.98 | 14.33 |

Source: 2015 ACS; 01/01/2017-12/31/2019
Due to rounding, totals may not equal 100.0


Due to rounding, totals may not equal 100.0


Charter Number: 8


Due to rounding, totals may not equal 100.0


Source: 2015 ACS; 01/01/2017-12/31/2019 Bank Data, 2019 HMDA Aggregate Data, 'N/A' data not available.
Due to rounding, totals may not equal 100.0

| le S: Assessment Area Distribution of Loans to Farms By Income Category of the Geography - Utah 2017 -2019 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Farms |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \text { \% of } \\ & \text { Total } \end{aligned}$ | Overall Market | $\%$ of Farms |  | \% <br> Aggregate | $\%$ of Farms |  | \% <br> Aggregate | $\%$ of Farms |  | \% <br> Aggregate | \% of Farms |  | \% <br> Aggregate | $\%$ of Farms | \% Bank Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Salt Lake City-ProvoOrem, UT CSA | 153 | 2,213 | 65.38 | 180 | 2.24 | 0.00 | 0.00 | 14.89 | 7.19 | 10.56 | 47.12 | 51.63 | 51.67 | 35.53 | 41.18 | 37.78 | 0.21 | 0.00 | 0.00 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & 30860 \\ & \text { Logan, UT-ID MSA } \end{aligned}$ | 43 | 460 | 18.38 | 120 | 1.04 | 2.33 | 0.83 | 7.29 | 11.63 | 4.17 | 61.72 | 72.09 | 85.00 | 29.95 | 13.95 | 10.00 | 0.00 | 0.00 | 0.00 |
| $\begin{array}{\|l\|} \hline 41100 \\ \text { St. George, UT MSA } \\ \hline \end{array}$ | 17 | 166 | 7.26 | 24 | 0.00 | 0.00 | 0.00 | 8.92 | 5.88 | 0.00 | 77.84 | 88.24 | 95.83 | 13.24 | 5.88 | 4.17 | 0.00 | 0.00 | 0.00 |
| 99999 <br> UT Non-Metro Roll-up (2017-2018) | 12 | 111 | 5.13 | 39 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 43.44 | 50.00 | 56.41 | 56.56 | 50.00 | 43.59 | 0.00 | 0.00 | 0.00 |
| 99999 <br> UT Non-Metro Roll-up <br> (2019) | 9 | 83 | 3.85 | N/A | 0.00 | 0.00 | N/A | 0.00 | 0.00 | N/A | 40.95 | 33.33 | NA | 59.05 | 66.67 | NA | 0.00 | 0.00 | N/A |
| Total | 234 | 3,033 | 100.00 | 363 | 1.70 | 0.43 | 0.28 | 11.97 | 7.26 | 6.61 | 49.72 | 57.26 | 66.12 | 36.45 | 35.04 | 27.00 | 0.15 | 0.00 | 0.00 |

Due to rounding, totals may not equal 100.0


[^134]Charter Number: 8


Charter Number: 8

| P: Assessment Area Distribution of Home Mortgage Loans By Income Category of the Borrower - Washington ${ }^{\text {2017-2019 }}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Home Mortgage Loans |  |  |  | Low-Income Borrowers |  |  | Moderate Income Borrowers |  |  | Middle-Income Borrowers |  |  | Upper-Income Borrowers |  |  | Not Available-Income Borrowers |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \text { \% of } \\ & \text { Total } \end{aligned}$ | Overall Market | \% Families | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \\ \hline \end{array}$ | \% Aggregate | $\begin{array}{\|c\|} \hline \% \\ \text { Families } \end{array}$ |  |  | \% Families | $\begin{array}{\|c\|} \hline \% \\ \text { Bank } \\ \text { Loans } \end{array}$ | \% Aggregate | \% Families | $; \begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \\ \hline \end{gathered}$ | \% Aggregate | \% Families | $\begin{gathered} \text { \% Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Seatlle-Tacoma, WA CSA <br> $(2017-2018)$ | 15,861 | 7,601,349 | 53.58 | 196,903 | 20.80 | 4.03 | 4.44 | 17.70 | 13.06 | 15.30 | 21.09 | 18.30 | 24.83 | 40.41 | 57.37 | 43.57 | 0.00 | 7.24 | 11.86 |
| $\begin{aligned} & \begin{array}{l} \text { 99999 } \\ \text { Seatl-TTacoma, WA CSA } \\ \text { (2019) } \end{array} \end{aligned}$ | 8,654 | 4,461,208 | 29.23 | NA | 20.80 | 4.89 | NA | 17.70 | 17.77 | NA | 21.09 | 19.85 | N/A | 40.41 | 52.63 | NA | 0.00 | 4.85 | N/A |
| 99999 <br> Spokane-Spokane ValleyCoeur d'Alene, WA-ID (part) CSA | 1,656 | 334,010 | 5.59 | 22,743 | 20.68 | 4.59 | 4.67 | 17.15 | 18.12 | 16.55 | 22.07 | 23.19 | 22.95 | 40.10 | 47.22 | 41.01 | 0.00 | 6.88 | 14.82 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 13380 Bellingham, WA MSA | 789 | 280,952 | 2.67 | 6,970 | 20.76 | 2.28 | 4.63 | 17.12 | 15.21 | 15.72 | 22.48 | 18.76 | 25.80 | 39.64 | 57.79 | 44.25 | 0.00 | 5.96 | 9.60 |
| 99999 <br> Kennewick-Richland-Walla Walla, WA CSA (20172018) | 593 | 116,314 | 2.00 | 12,495 | 21.65 | 3.37 | 5.91 | 17.21 | 16.69 | 18.18 | 19.93 | 21.92 | 24.75 | 41.21 | 46.88 | 38.22 | 0.00 | 11.13 | 12.93 |
| 99999 <br> Kennewick-Richland-Walla Walla, WA CSA (2019) | 318 | 73,604 | 1.07 | NA | 21.65 | 5.66 | NA | 17.21 | 26.73 | NA | 19.93 | 24.84 | N/A | 41.21 | 39.94 | NA | 0.00 | 2.83 | NA |
| 48300 Wenatchee, WA MSA | 421 | 132,356 | 1.42 | 3,965 | 19.06 | 2.61 | 3.03 | 19.11 | 9.98 | 11.58 | 22.27 | 19.95 | 23.25 | 39.56 | 63.42 | 51.75 | 0.00 | 4.04 | 10.39 |
| 49420 Yakima, WA MSA | 404 | 69,652 | 1.36 | 5,313 | 20.21 | 5.20 | 3.37 | 18.12 | 15.10 | 12.54 | 20.58 | 20.05 | 22.40 | 41.09 | 48.02 | 47.90 | 0.00 | 11.63 | 13.80 |
| 99999 <br> WA Non-Metro Roll-up | 908 | 220,851 | 3.07 | 12,304 | 20.05 | 4.07 | 5.19 | 18.87 | 11.89 | 14.45 | 22.02 | 20.93 | 23.68 | 39.05 | 55.07 | 44.59 | 0.00 | 8.04 | 12.09 |
| Total | 29,604 | 13,290,296 | 99.99 | 260,693 | 20.78 | 4.57 | 4.53 | 17.70 | 16.00 | 15.40 | 21.13 | 20.67 | 24.56 | 40.39 | 58.77 | 43.37 | 0.00 | 6.56 | 12.14 |

Due to rounding, totals may not equal 100.0

Charter Number: 8


Source: 2015 ACS; 01/01/2017-12/31/2019 Bank Data, 2019 HMDA Aggregate Data, 'N/A' data not available.
Due to rounding, totals may not equal 100.0

Charter Number: 8

| le R: Assessment Area Distribution of Loans to Small Businesses Loans by Gross Annual Revenues - Washington |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Small Businesses |  |  |  | Businesses with Revenues <= 1MM |  |  | Businesses with Revenues > 1 Mm |  | Businesses with Revenues Not Available |  |
| Assessment Area: | \# | \$ | \% of Total | Overall Market | \% of Businesses | \% Bank Loans | \% Aggregate | \% of Businesses | \% Bank Loans | \% of Businesses | \% Bank Loans |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Seattle-Tacoma, WA CSA (2017-2018) | 25,957 | 439,355 | 47.60 | 101,137 | 85.88 | 70.22 | 45.37 | 4.97 | 13.22 | 9.15 | 16.57 |
| 99999 <br> Seattle-Tacoma, WA CSA <br> (2019) | 18,832 | 299,761 | 34.53 | N/A | 87.05 | 73.84 | N/A | 4.49 | 15.09 | 8.46 | 11.07 |
| 99999 <br> Spokane-Spokane Valley- <br> Coeur d'Alene, WA-ID <br> (part) CSA | 3,747 | 59,688 | 6.87 | 8,699 | 84.90 | 70.64 | 47.13 | 4.91 | 16.47 | 10.19 | 12.89 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |
| 13380 <br> Bellingham, WA MSA | 1,655 | 24,480 | 3.03 | 4,617 | 87.86 | 74.26 | 43.88 | 4.69 | 14.50 | 7.45 | 11.24 |
| 99999 <br> Kennewick-Richland-Walla Walla, WA CSA (20172018) | 832 | 16,715 | 1.53 | 4,683 | 82.88 | 71.88 | 45.95 | 4.91 | 15.99 | 12.21 | 12.14 |
| 99999 <br> Kennewick-Richland-Walla Walla, WA CSA (2019) | 659 | 8,946 | 1.21 | N/A | 84.41 | 72.23 | N/A | 4.43 | 21.24 | 11.16 | 6.53 |
| $\begin{aligned} & 48300 \\ & \text { Wenatchee, WA MSA } \end{aligned}$ | 486 | 6,390 | 0.89 | 2,179 | 82.64 | 70.37 | 47.73 | 5.16 | 13.99 | 12.20 | 15.64 |
| 49420 <br> Yakima, WA MSA | 706 | 11,217 | 1.29 | 3,006 | 79.88 | 67.99 | 49.80 | 6.36 | 18.27 | 13.76 | 13.74 |
| 99999 <br> WA Non-Metro Roll-up | 1,663 | 22,474 | 3.05 | 5,660 | 83.16 | 72.70 | 51.57 | 4.40 | 11.12 | 12.45 | 16.18 |
| Total | 54,537 | 889,026 | 100.00 | 129,981 | 86.11 | 71.72 | 45.87 | 4.74 | 14.27 | 9.15 | 14.01 |

Due to rounding, totals may not equal 100.0

Charter Number: 8

| S: $\quad$ Assessment Area Distribution of Loans to Farms By Income Category of the Geography - Washington |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | $\begin{array}{\|c\|} \hline \text { 2017-2019 } \\ \hline \text { ne Tracts } \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Farms |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \% \text { of } \\ & \text { Total } \end{aligned}$ | Overall Market | $\%$ of Farms | $\begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | $\%$ of Farms | $\begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | $\%$ of Farms |  | \% Aggregate | $\%$ of Farms | $\begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | $\%$ of Farms | \% Bank <br> Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 Seattle-Tacoma, WA CSA (2017-2018) | 185 | 2,328 | 23.07 | 603 | 2.83 | 0.00 | 0.66 | 16.07 | 7.57 | 11.11 | 48.89 | 56.22 | 55.22 | 32.16 | 36.22 | 33.00 | 0.05 | 0.00 | 0.00 |
| 99999 Seattle-Tacoma, WA CSA (2019) | 125 | 1,207 | 15.59 | N/A | 2.88 | 0.80 | NA | 16.39 | 12.80 | N/A | 49.15 | 47.20 | N/A | 31.51 | 39.20 | N/A | 0.06 | 0.00 | N/A |
| 99999 <br> Spokane-Spokane ValleyCoeur d'Alene, WA-ID (part) CSA | 93 | 813 | 11.60 | 207 | 0.61 | 0.00 | 0.00 | 18.68 | 21.51 | 20.29 | 49.30 | 33.33 | 48.31 | 31.41 | 45.16 | 31.40 | 0.00 | 0.00 | 0.00 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 13380 Bellingham, WA MSA | 61 | 689 | 7.61 | 183 | 1.31 | 0.00 | 0.00 | 2.11 | 1.64 | 2.19 | 82.07 | 68.85 | 73.22 | 14.40 | 29.51 | 24.59 | 0.10 | 0.00 | 0.00 |
| 99999 Kennew ick-Richland- Walla Walla, WA CSA $(2017-2018)$ | 44 | 512 | 5.49 | 341 | 1.32 | 2.27 | 0.00 | 20.01 | 9.09 | 19.94 | 60.87 | 47.73 | 60.41 | 17.59 | 40.91 | 19.35 | 0.21 | 0.00 | 0.29 |
| 99999 <br> Kennew ick-RichlandWalla Walla, WA CSA (2019) | 46 | 633 | 5.74 | N/A | 1.45 | 0.00 | NA | 19.46 | 21.74 | N/A | 60.62 | 65.22 | N/A | 18.27 | 13.04 | N/A | 0.20 | 0.00 | N/A |
| $\begin{aligned} & 48300 \\ & \text { Wenatchee, WA MSA } \end{aligned}$ | 28 | 285 | 3.49 | 148 | 0.00 | 0.00 | 0.00 | 14.32 | 7.14 | 14.19 | 77.24 | 92.86 | 83.78 | 8.44 | 0.00 | 2.03 | 0.00 | 0.00 | 0.00 |
| $\begin{aligned} & 49420 \\ & \text { Yakima, WA MSA } \end{aligned}$ | 66 | 761 | 8.23 | 308 | 0.00 | 0.00 | 0.00 | 7.59 | 4.55 | 4.22 | 57.07 | 56.06 | 62.99 | 35.34 | 39.39 | 32.79 | 0.00 | 0.00 | 0.00 |
| 99999 WA Non-Metro Roll-up | 154 | 1,624 | 19.20 | 759 | 0.33 | 0.00 | 0.00 | 14.99 | 7.79 | 14.76 | 70.23 | 77.92 | 68.77 | 14.45 | 14.29 | 16.47 | 0.00 | 0.00 | 0.00 |
| Total | 802 | 8,852 | 100.02 | 2,549 | 2.07 | 0.25 | 0.16 | 15.72 | 10.22 | 12.83 | 54.61 | 58.60 | 63.28 | 27.54 | 30.92 | 23.70 | 0.06 | 0.00 | 0.04 |

Source: 2015 ACS; 01/01/2017-12/31/2019 Bank Data, 2019 HMDA Aggregate Data, 'N/A' data not available.
Due to rounding, totals may not equal 100.0

Charter Number: 8

| 2017-2019 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Farms |  |  |  | Farms with Revenues <= 1MM |  |  | Farms with Revenues > 1MM |  | Farms with Revenues Not Available |  |
| Assessment Area: | \# | \$ | \% of Total | Overall <br> Market | \% of Businesses | \% Bank Loans | \% Aggregate | \% of Businesses | \% Bank Loans | \% of Businesses | \% Bank Loans |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Seattle-Tacoma, WA <br> CSA (2017-2018) | 185 | 2,328 | 23.07 | 603.00 | 95.25 | 75.68 | 46.93 | 2.82 | 6.49 | 1.93 | 17.84 |
| 99999 <br> Seattle-Tacoma, WA <br> CSA (2019) | 125 | 1,207 | 15.59 | 0.00 | 95.70 | 70.40 | N/A | 2.47 | 5.60 | 1.83 | 24.00 |
| 99999 Spokane-Spokane Valley- Coeur d'Alene, WA-ID (part) CSA | 93 | 813 | 11.60 | 207.00 | 96.33 | 81.72 | 51.21 | 2.08 | 5.38 | 1.59 | 12.90 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & 13380 \\ & \text { Bellingham, WA MSA } \end{aligned}$ | 61 | 689 | 7.61 | 183.00 | 96.17 | 73.77 | 33.88 | 2.11 | 11.48 | 1.71 | 14.75 |
| 99999 <br> Kennew ick-Richland- <br> Walla Walla, WA CSA <br> (2017-2018) | 44 | 512 | 5.49 | 341.00 | 92.31 | 63.64 | 39.00 | 5.19 | 20.45 | 2.49 | 15.91 |
| $99999$ <br> Kennew ick-Richland- <br> Walla Walla, WA CSA (2019) | 46 | 633 | 5.74 | 0.00 | 92.74 | 71.74 | NA | 4.82 | 17.39 | 2.44 | 10.87 |
| 48300 <br> Wenatchee, WA MSA | 28 | 285 | 3.49 | 148.00 | 93.73 | 89.29 | 60.81 | 4.09 | 3.57 | 2.17 | 7.14 |
| $\begin{aligned} & 49420 \\ & \text { Yakima, WA MSA } \end{aligned}$ | 66 | 761 | 8.23 | 308.00 | 87.35 | 62.12 | 44.81 | 9.77 | 25.76 | 2.88 | 12.12 |
| 99999 <br> WA Non-Metro Roll-up | 154 | 1,624 | 19.20 | 759.00 | 95.06 | 75.32 | 55.07 | 2.78 | 14.29 | 2.16 | 10.39 |
| Total | 802 | 8,852 | 100.02 | 2,549 | 94.81 | 73.82 | 48.25 | 3.20 | 10.97 | 1.99 | 15.21 |

Due to rounding, totals may not equal 100.0

Charter Number: 8

| Assessment Area Distribution of Home Mortgage Loans By Income Category of the Geography - West Virginia 2017 -2019 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Home Mortgage Loans |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \text { \% of } \\ & \text { Total } \end{aligned}$ | Overall Market | \% of <br> Owner- <br> Occupied <br> Housing <br> Units |  | \% Aggregate | \% of <br> Owner- <br> Occupied <br> Housing <br> Units | \% <br> Bank <br> Loans | \% <br> Aggregate | \% <br> Owner- <br> Occupied Housing <br> Units |  | \% Aggregate | $\%$ of <br> Owner- <br> Occupied Housing <br> Units | \% <br> Bank <br> Loans | \% Aggregate | \% o <br> Owner- <br> Occupied Housing <br> Units | \% Bank <br> Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Charleston-Huntington- <br> Ashland, WV-OH-KYCSA | 845 | 69,731 | 66.17 | 8,653 | 1.79 | 0.83 | 1.48 | 15.07 | 11.72 | 11.09 | 54.35 | 47.46 | 48.19 | 28.78 | 40.00 | 39.02 | 0.01 | 0.00 | 0.22 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{array}{\|l\|} \hline 13220 \\ \text { Beckley, WV MSA } \\ \hline \end{array}$ | 214 | 21,915 | 16.76 | 1,931 | 0.00 | 0.00 | 0.00 | 7.95 | 6.54 | 5.44 | 81.32 | 78.50 | 77.52 | 10.73 | 14.95 | 17.04 | 0.00 | 0.00 | 0.00 |
| 99999 <br> WV Non-Metro Roll-up | 218 | 28,289 | 17.07 | 1,935 | 0.00 | 0.00 | 0.00 | 10.32 | 5.05 | 6.46 | 56.93 | 51.38 | 46.25 | 32.75 | 43.58 | 47.29 | 0.00 | 0.00 | 0.00 |
| Total | 1,277 | 119,935 | 100.00 | 12,519 | 1.16 | 0.55 | 1.02 | 13.00 | 9.71 | 9.50 | 59.44 | 53.33 | 52.41 | 26.39 | 36.41 | 36.91 | 0.01 | 0.00 | 0.15 |

Source: 2015 ACS; 01/01/2017 - 12/31/2019 Bank Data, 2019 HMDA Aggregate Data, 'N/A' data not available.
Due to rounding, totals may not equal 100.0


Due to rounding, totals may not equal 100.0


Due to rounding, totals may not equal 100.0

| Assessment Area Distribution of Loans to Small Businesses Loans by Gross Annual Revenues - West Virginia |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Small Businesses |  |  |  | Businesses with Revenues <= 1MM |  |  | Businesses with Revenues > 1 MM |  | Businesses with Revenues Not Available |  |
| Assessment Area: | \# | \$ | \% of Total | Overall Market | \% of Businesses | \% Bank Loans | \% Aggregate | \% of Businesses | \% Bank Loans | \% of Businesses | \% Bank Loans |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Charleston-Huntington- <br> Ashland, WV-OH-KYCSA | 1,606 | 51,995 | 64.21 | 5,792 | 76.32 | 65.69 | 44.99 | 6.74 | 23.97 | 16.94 | 10.34 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{array}{\|l} 13220 \\ \text { Beckley, WV MSA } \\ \hline \end{array}$ | 434 | 16,475 | 17.35 | 1,623 | 74.27 | 63.59 | 46.77 | 6.85 | 21.89 | 18.88 | 14.52 |
| $99999$ <br> WV Non-Metro Roll-up | 461 | 10,002 | 18.43 | 1,717 | 75.18 | 65.94 | 37.22 | 7.35 | 17.79 | 17.47 | 16.27 |
| Total | 2,501 | 78,472 | 99.99 | 9,132 | 75.83 | 65.37 | 43.85 | 6.86 | 22.47 | 17.31 | 12.16 |

Due to rounding, totals may not equal 100.0

Charter Number: 8

| ble S: Assessment Area Distribution of Loans to Farms By Income Category of the Geography - West Virginia |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Farms |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \% \text { of } \\ & \text { Total } \end{aligned}$ | Overall Market | \% of Farms | $\begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% <br> Aggregate | $\%$ of Farms | $\%$ <br> Bank <br> Loans | \% Aggregate | $\%$ of Farms |  | \% <br> Aggregate | $\%$ of Farms | $\begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | \% of <br> Farms | \% Bank <br> Loans | \% <br> Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Charleston-Huntington- <br> Ashland, WV-OH-KY CSA | 18 | 157 | 66.67 | 24 | 2.25 | 0.00 | 0.00 | 11.82 | 5.56 | 20.83 | 58.72 | 44.44 | 45.83 | 27.20 | 50.00 | 33.33 | 0.00 | 0.00 | 0.00 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 13220 <br> Beckley, WV MSA | 8 | 29 | 29.63 | 28 | 0.00 | 0.00 | 0.00 | 2.26 | 0.00 | 3.57 | 88.72 | 100.00 | 82.14 | 9.02 | 0.00 | 14.29 | 0.00 | 0.00 | 0.00 |
| 99999 <br> WV Non-Metro Roll-up | 1 | 10 | 3.70 | 49 | 0.00 | 0.00 | 0.00 | 5.60 | 0.00 | 0.00 | 60.80 | 100.00 | 81.63 | 33.60 | 0.00 | 18.37 | 0.00 | 0.00 | 0.00 |
| Total | 27 | 196 | 100.00 | 101 | 1.52 | 0.00 | 0.00 | 9.23 | 3.70 | 5.94 | 64.10 | 62.96 | 73.27 | 25.16 | 33.33 | 20.79 | 0.00 | 0.00 | 0.00 |

Due to rounding, totals may not equal 100.0

Table T: $\quad$ Assessment Area Distribution of Loans to Farms by Gross Annual Revenues - West Virginia
2017-2019

|  | Total Loans to Farms |  |  |  | Farms with Revenues <= 1MM |  |  | Farms with Revenues > 1MM |  | Farms with Revenues Not Available |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area: | \# | \$ | \% of Total | Overall Market | \% of Businesses | \% Bank Loans | \% Aggregate | \% of Businesses | \% Bank Loans | \% of Businesses | \% Bank Loans |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Charleston-Huntington- <br> Ashland, WV-OH-KY CSA | 18 | 157 | 66.67 | 24.00 | 95.31 | 83.33 | 45.83 | 2.25 | 5.56 | 2.44 | 11.11 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & 13220 \\ & \text { Beckley, WV MSA } \end{aligned}$ | 8 | 29 | 29.63 | 28.00 | 95.49 | 75.00 | 21.43 | 0.75 | 0.00 | 3.76 | 25.00 |
| $99999$ <br> WV Non-Metro Roll-up | 1 | 10 | 3.70 | 49.00 | 98.40 | 100.00 | 44.90 | 0.80 | 0.00 | 0.80 | 0.00 |
| Total | 27 | 196 | 100.00 | 101 | 95.83 | 81.48 | 38.61 | 1.77 | 3.70 | 2.40 | 14.81 |

Due to rounding, totals may not equal 100.0

Charter Number: 8

| Assessment Area Distribution of Home Mortgage Loans By Income Category of the Geography - Wisconsin |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Home Mortgage Loans |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \% \text { of } \\ & \text { Total } \end{aligned}$ | Overall Market | \% o <br> Owner- <br> Occupied Housing <br> Units |  | \% Aggregate | \% of <br> Owner- <br> Occupied <br> Housing <br> Units |  | \% <br> Aggregate | \% of <br> Owner- <br> Occupied <br> Housing <br> Units | \% <br> Bank <br> Loans | \% Aggregate |  | \% <br> Bank | \% Aggregate |  | \% Bank Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 33340 <br> Milwaukee-Waukesha, WI MSA | 7,506 | 1,765,817 | 54.64 | 47,498 | 7.32 | 1.77 | 4.13 | 11.91 | 9.06 | 11.11 | 36.25 | 34.08 | 37.21 | 44.52 | 55.09 | 47.55 | 0.00 | 0.00 | 0.00 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Appleton-Oshkosh-Neenah, WICSA (2017-2018) | 737 | 116,403 | 5.36 | 14,011 | 0.00 | 0.00 | 0.00 | 9.44 | 10.04 | 9.81 | 73.73 | 68.52 | 73.09 | 16.83 | 21.44 | 17.11 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Appleton-Oshkosh-Neenah, WICSA (2019) | 370 | 66,147 | 2.69 | N/A | 0.00 | 0.00 | N/A | 9.44 | 9.19 | N/A | 73.73 | 71.08 | N/A | 16.83 | 19.73 | N/A | 0.00 | 0.00 | N/A |
| 22540 <br> Fond du Lac, WIMSA | 221 | 33,268 | 1.61 | 2,605 | 1.18 | 1.36 | 1.69 | 2.54 | 3.17 | 2.88 | 87.10 | 86.43 | 85.83 | 9.19 | 9.05 | 9.60 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Green Bay-Shawano, WI CSA | 926 | 154,030 | 6.74 | 8,542 | 1.17 | 0.65 | 1.56 | 21.45 | 19.33 | 20.71 | 50.03 | 46.54 | 46.64 | 27.35 | 33.48 | 31.09 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Madison-Janesville-Beloit, WICSA (2017-2018) | 1,271 | 289,739 | 9.25 | 27,348 | 0.82 | 0.24 | 0.98 | 12.09 | 11.25 | 11.06 | 54.51 | 49.72 | 53.91 | 32.58 | 38.79 | 34.00 | 0.01 | 0.00 | 0.05 |
| 99999 <br> Madison-Janesville-Beloit, <br> WICSA (2019) | 630 | 164,653 | 4.59 | N/A | 0.82 | 1.11 | N/A | 12.09 | 10.95 | N/A | 54.51 | 47.62 | N/A | 32.58 | 40.32 | N/A | 0.01 | 0.00 | N/A |
| $39540$ <br> Racine, WIMSA | 701 | 115,467 | 5.10 | 6,431 | 2.69 | 0.71 | 1.38 | 16.13 | 13.55 | 15.47 | 57.36 | 60.91 | 59.28 | 23.64 | 24.82 | 23.57 | 0.17 | 0.00 | 0.30 |
| 99999 <br> WI Non-Metro Roll-up | 1,376 | 300,184 | 10.02 | 13,157 | 0.00 | 0.00 | 0.00 | 2.25 | 1.96 | 2.40 | 67.79 | 63.52 | 71.56 | 29.90 | 34.45 | 25.99 | 0.06 | 0.07 | 0.05 |
| Total | 13,738 | 3,005,708 | 100.00 | 119,592 | 2.75 | 1.14 | 2.09 | 11.05 | 9.52 | 10.73 | 54.27 | 44.99 | 51.93 | 31.92 | 44.34 | 35.22 | 0.02 | 0.01 | 0.03 |

Due to rounding, totals may not equal 100.0

Charter Number: 8


Due to rounding, totals may not equal 100.0

Charter Number: 8
Table Q:
Assessment Area Distribution of Loans to Small Businesses By Income Category of the Geography - Wisconsin
2017-2019

|  | Total Loans to Small Businesses |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assessment Area: | \# | \$ | $\begin{aligned} & \text { \% of } \\ & \text { Total } \end{aligned}$ | Overall Market | \% of Businesses | $\%$ <br> Bank <br> Loans | \% Aggregate | $\begin{gathered} \hline \% \text { of } \\ \text { Busines- } \\ \text { ses } \end{gathered}$ | $\%$ <br> Bank <br> Loans | \% Aggregate | $\begin{gathered} \hline \text { \% of } \\ \text { Busines- } \end{gathered}$ ses | $\%$ <br> Bank <br> Loans | \% Aggregate | $\begin{gathered} \hline \% \text { of } \\ \text { Busines. } \end{gathered}$ ses | \% <br> Bank <br> Loans | \% Aggregate | \% of <br> Busines- <br> ses | \% Bank Loans | \% Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 33340 Milwaukee-Waukesha, WI MSA | 14,969 | 271,816 | 49.93 | 28,731 | 10.88 | 4.42 | 8.17 | 11.91 | 8.00 | 10.02 | 34.99 | 32.60 | 34.06 | 42.18 | 54.97 | 47.73 | 0.04 | 0.00 | 0.02 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 Appleton-Oshkosh-Neenah, WICSA (2017-2018) | 1,546 | 29,997 | 5.16 | 5,429 | 0.00 | 0.00 | 0.00 | 13.65 | 11.58 | 12.89 | 71.76 | 69.15 | 70.36 | 14.59 | 19.28 | 16.74 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Appleton-Oshkosh-Neenah, WICSA (2019) | 1,179 | 18,162 | 3.93 | NA | 0.00 | 0.00 | NA | 13.59 | 11.79 | NA | 71.65 | 68.53 | NA | 14.75 | 19.68 | NA | 0.00 | 0.00 | NA |
| $\begin{aligned} & 22540 \\ & \text { Fond du Lac, WIMSA } \end{aligned}$ | 563 | 8,235 | 1.88 | 1,342 | 9.15 | 6.57 | 6.86 | 5.21 | 6.22 | 3.28 | 78.12 | 79.93 | 80.03 | 7.53 | 7.28 | 9.84 | 0.00 | 0.00 | 0.00 |
| $\begin{aligned} & 99999 \\ & \text { Green Bay-Shawano, WI } \\ & \text { CSA } \end{aligned}$ | 1,641 | 30,093 | 5.47 | 4,465 | 3.45 | 2.86 | 3.20 | 27.80 | 23.10 | 27.35 | 44.59 | 43.88 | 42.58 | 24.15 | 30.16 | 26.88 | 0.02 | 0.00 | 0.00 |
| 99999 <br> Madison-Janesville-Beloit, WICSA (2017-2018) | 3,298 | 50,384 | 11.00 | 9,936 | 2.38 | 1.09 | 1.59 | 15.81 | 13.13 | 14.30 | 46.79 | 44.85 | 46.83 | 33.26 | 38.60 | 35.90 | 1.76 | 2.33 | 1.38 |
| 99999 <br> Madison-Janesville-Beloit, WICSA (2019) | 2,399 | 35,406 | 8.00 | NA | 2.24 | 1.54 | NA | 15.57 | 12.30 | NA | 46.68 | 46.06 | NA | 33.62 | 38.06 | NA | 1.90 | 2.04 | NA |
| $\begin{aligned} & 39540 \\ & \text { Racine, WIMSA } \end{aligned}$ | 1,550 | 29,496 | 5.17 | 2,936 | 5.28 | 2.90 | 4.22 | 18.47 | 13.10 | 16.93 | 54.18 | 58.65 | 54.33 | 19.19 | 22.19 | 21.36 | 2.88 | 3.16 | 3.17 |
| 99999 <br> WINon-Metro Roll-up | 2,836 | 50,637 | 9.46 | 5,334 | 0.00 | 0.00 | 0.00 | 3.14 | 2.40 | 2.49 | 72.66 | 66.18 | 65.37 | 23.91 | 31.42 | 31.98 | 0.30 | 0.00 | 0.15 |
| Total | 29,981 | 524,226 | 100.00 | 58,173 | 5.00 | 2.88 | 4.92 | 13.59 | 9.77 | 11.85 | 49.25 | 44.35 | 45.24 | 31.43 | 42.41 | 37.57 | 0.74 | 0.58 | 0.42 |

Due to rounding, totals may not equal 100.0

Charter Number: 8

| Table R: $\quad$ Assessment Area Distribution of Loans to Small Businesses Loans by Gross Annual Revenues - Wisconsin |  |  |  |  |  |  |  |  |  |  | 2017-2019h Revenuesanilable |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Small Businesses |  |  |  | Businesses with Revenues <=1 MM |  |  | Businesses with Revenues > 1 MM |  | Businesses with Revenues Not Available |  |
| Assessment Area: | \# | \$ | \% of Total | Overall Market | \% of Businesses | \% Bank Loans | \% Aggregate | \% of Businesses | \% Bank Loans | \% of Businesses | \% Bank Loans |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |
| 33340 <br> Milwaukee-Waukesha, WI MSA | 14,969 | 271,816 | 49.93 | 28,731 | 80.67 | 63.35 | 44.88 | 8.31 | 21.28 | 11.02 | 15.37 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |
| Appleton-Oshkosh-Neenah, WICSA (2017-2018) | 1,546 | 29,997 | 5.16 | 5,429 | 75.49 | 60.67 | 45.70 | 8.49 | 22.12 | 16.03 | 17.21 |
| 99999 <br> Appleton-Oshkosh-Neenah, WICSA (2019) | 1,179 | 18,162 | 3.93 | N/A | 77.67 | 64.72 | NA | 7.58 | 22.73 | 14.76 | 12.55 |
| $22540$ <br> Fond du Lac, WIMSA | 563 | 8,235 | 1.88 | 1,342 | 78.74 | 58.97 | 51.49 | 7.04 | 28.42 | 14.22 | 12.61 |
| 99999 <br> Green Bay-Shawano, WI <br> CSA | 1,641 | 30,093 | 5.47 | 4,465 | 76.66 | 62.77 | 45.38 | 9.29 | 24.56 | 14.05 | 12.68 |
| 99999 <br> Madison-Janesville-Beloit, WICSA (2017-2018) | 3,298 | 50,384 | 11.00 | 9,936 | 80.68 | 67.74 | 47.55 | 7.12 | 15.55 | 12.20 | 16.71 |
| 99999 <br> Madison-Janesville-Beloit, WICSA (2019) | 2,399 | 35,406 | 8.00 | N/A | 81.94 | 69.78 | N/A | 6.38 | 16.47 | 11.68 | 13.76 |
| 39540 <br> Racine, WIMSA | 1,550 | 29,496 | 5.17 | 2,936 | 81.22 | 66.45 | 43.22 | 7.40 | 19.03 | 11.38 | 14.52 |
| 99999 <br> WI Non-Metro Roll-up | 2,836 | 50,637 | 9.46 | 5,334 | 79.50 | 62.87 | 46.12 | 7.01 | 21.02 | 13.49 | 16.11 |
| Total | 29,981 | 524,226 | 100.00 | 58,173 | 79.98 | 64.26 | 45.63 | 7.64 | 20.54 | 12.38 | 15.20 |

Due to rounding, totals may not equal 100.0

| able S: $\quad$ Assessment Area Distribution of Loans to Farms By Income Category of the Geography - Wisconsin |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2017-2019 <br> me Tracts |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Farms |  |  |  | Low-Income Tracts |  |  | Moderate Income Tracts |  |  | Middle-Income Tracts |  |  | Upper-Income Tracts |  |  | Not Available-Income Tracts |  |  |
| Assessment Area: | \# | \$ | $\begin{aligned} & \% \text { of } \\ & \text { Total } \end{aligned}$ | Overall Market | \% of Farms | $\%$ Bank Loans | \% <br> Aggregate | \% of Farms | \% <br> Bank <br> Loans | \% <br> Aggregate | \% of Farms | $\begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% | \% of Farms | $\begin{gathered} \% \\ \text { Bank } \\ \text { Loans } \end{gathered}$ | \% Aggregate | \% of Farms | \% Bank Loans | \% <br> Aggregate |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 33340 Milw aukee-Waukesha, WI MSA | 104 | 878 | 18.54 | 170 | 5.65 | 0.00 | 1.76 | 6.99 | 5.77 | 1.18 | 38.22 | 40.38 | 49.41 | 49.14 | 53.85 | 47.65 | 0.00 | 0.00 | 0.00 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Appleton-OshkoshNeenah, WI CSA (20172018) | 44 | 1,612 | 7.84 | 213 | 0.00 | 0.00 | 0.00 | 7.24 | 0.00 | 3.76 | 79.87 | 68.18 | 83.57 | 12.89 | 31.82 | 12.68 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Appleton-OshkoshNeenah, WI CSA (2019) | 35 | 414 | 6.24 | NA | 0.00 | 0.00 | NA | 7.88 | 2.86 | NA | 79.03 | 77.14 | NA | 13.10 | 20.00 | NA | 0.00 | 0.00 | NA |
| $\begin{array}{\|l\|} \hline 22540 \\ \text { Fond du Lac, WI MSA } \end{array}$ | 46 | 386 | 8.20 | 131 | 1.41 | 0.00 | 1.53 | 0.70 | 0.00 | 0.00 | 88.06 | 84.78 | 81.68 | 9.84 | 15.22 | 16.79 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Green Bay-Shaw ano, WI CSA | 33 | 567 | 5.88 | 83 | 0.97 | 0.00 | 0.00 | 10.44 | 0.00 | 1.20 | 49.52 | 42.42 | 54.22 | 39.07 | 57.58 | 44.58 | 0.00 | 0.00 | 0.00 |
| 99999 <br> Madison-Janesville- <br> Beloit, WI CSA (2017- <br> 2018) | 62 | 3,554 | 11.05 | 332 | 0.44 | 0.00 | 0.60 | 5.66 | 0.00 | 1.20 | 53.00 | 64.52 | 52.11 | 40.72 | 35.48 | 46.08 | 0.19 | 0.00 | 0.00 |
| 99999 <br> Madison-Janesville- <br> Beloit. WI CSA (2019) | 58 | 853 | 10.34 | NA | 0.71 | 0.00 | NA | 5.68 | 1.72 | NA | 53.27 | 55.17 | NA | 40.10 | 43.10 | NA | 0.24 | 0.00 | NA |
| $\begin{aligned} & 39540 \\ & \text { Racine, WI MSA } \end{aligned}$ | 18 | 136 | 3.21 | 68 | 1.07 | 0.00 | 0.00 | 5.61 | 0.00 | 0.00 | 58.02 | 88.89 | 48.53 | 35.29 | 11.11 | 51.47 | 0.00 | 0.00 | 0.00 |
| $\begin{aligned} & 99999 \\ & \text { WI Non-Metro Roll-up } \end{aligned}$ | 161 | 3,992 | 28.70 | 515 | 0.00 | 0.00 | 0.00 | 0.90 | 0.62 | 0.19 | 66.31 | 70.81 | 68.74 | 32.79 | 28.57 | 31.07 | 0.00 | 0.00 | 0.00 |
| Total | 561 | 12,392 | 100.00 | 1,512 | 1.35 | 0.00 | 0.46 | 5.51 | 1.60 | 1.06 | 58.78 | 63.10 | 64.42 | 34.28 | 35.29 | 34.06 | 0.08 | 0.00 | 0.00 |

Source: 2015 ACS; 01/01/2017 - 12/31/2019 Bank Data, 2019 HMDA Aggregate Data, 'N/A' data not available.
Due to rounding, totals may not equal 100.0

Charter Number: 8

| Assessment Area Distribution of Loans to Farms by Gross Annual Revenues - Wisconsin |  |  |  |  |  |  |  |  |  | 2017-2019 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Loans to Farms |  |  |  | Farms with Revenues <= 1MM |  |  | Farms with Revenues > 1MM |  | Farms with Revenues Not Available |  |
| Assessment Area: | \# | \$ | \% of Total | Overall <br> Market | \% of Businesses | \% Bank Loans | \% Aggregate | \% of Businesses | \% Bank Loans | \% of Businesses | \% Bank Loans |
| Full Review: |  |  |  |  |  |  |  |  |  |  |  |
| 33340 <br> Milw aukee-Waukesha, WI MSA | 104 | 878 | 18.54 | 170.00 | 93.58 | 69.23 | 47.06 | 4.36 | 8.65 | 2.06 | 22.12 |
| Limited Review: |  |  |  |  |  |  |  |  |  |  |  |
| 99999 <br> Appleton-OshkoshNeenah, WI CSA (20172018) | 44 | 1,612 | 7.84 | 213.00 | 95.45 | 68.18 | 34.74 | 2.88 | 11.36 | 1.67 | 20.45 |
| $99999$ <br> Appleton-OshkoshNeenah, WI CSA (2019) | 35 | 414 | 6.24 | 0.00 | 95.88 | 77.14 | NA | 2.93 | 17.14 | 1.19 | 5.71 |
| $22540$ <br> Fond du Lac, WI MSA | 46 | 386 | 8.20 | 131.00 | 95.08 | 60.87 | 46.56 | 4.45 | 19.57 | 0.47 | 19.57 |
| 99999 <br> Green Bay-Shaw ano, WI <br> CSA <br> G999 | 33 | 567 | 5.88 | 83.00 | 93.04 | 75.76 | 37.35 | 5.03 | 15.15 | 1.93 | 9.09 |
| 99999 <br> Madison-Janesville- <br> Beloit, WI CSA (2017- <br> 2018) | 62 | 3,554 | 11.05 | 332.00 | 95.99 | 74.19 | 49.70 | 2.42 | 11.29 | 1.60 | 14.52 |
| 99999 <br> Madison-Janesville- <br> Beloit, WI CSA (2019) | 58 | 853 | 10.34 | 0.00 | 95.79 | 62.07 | NA | 2.51 | 20.69 | 1.70 | 17.24 |
| $\begin{aligned} & 39540 \\ & \text { Racine, WI MSA } \end{aligned}$ | 18 | 136 | 3.21 | 68.00 | 94.65 | 83.33 | 55.88 | 4.01 | 5.56 | 1.34 | 11.11 |
| 99999 <br> WI Non-Metro Roll-up | 161 | 3,992 | 28.70 | 515.00 | 95.76 | 52.80 | 37.48 | 3.28 | 21.12 | 0.95 | 26.09 |
| Total | 561 | 12,392 | 100.00 | 1,512 | 95.22 | 64.88 | 42.46 | 3.25 | 15.69 | 1.53 | 19.43 |

Due to rounding, totals may not equal 100.0

# UNITED STATES <br> SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549 

FORM 10-K
Annual report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

For the fiscal year ended Commission file<br>December 31, 2022 number 1-5805

## JPMorgan Chase \& Co.

(Exact name of registrant as specified in its charter)

| Delaware | 13-2624428 <br> (I.R.S. employer <br> (State or other jurisdiction of <br> incorporation or organization) |
| :---: | :---: |
| 383 Madison Avenue, |  |
| New York, New York | 10179 |
| (Address of principal executive offices) | (Zip Code) |

Registrant's telephone number, including area code: (212) 270-6000 Securities registered pursuant to Section 12(b) of the Act:

| Title of each class | Trading Symbol(s) | Name of each exchange on which registered |
| :---: | :---: | :---: |
| Common stock | JPM | The New York Stock Exchange |
| Depositary Shares, each representing a one-four hundredth interest in a share of 5.75\% NonCumulative Preferred Stock, Series DD | JPM PR D | The New York Stock Exchange |
| Depositary Shares, each representing a one-four hundredth interest in a share of 6.00\% NonCumulative Preferred Stock, Series EE | JPM PR C | The New York Stock Exchange |
| Depositary Shares, each representing a one-four hundredth interest in a share of 4.75\% NonCumulative Preferred Stock, Series GG | JPM PR J | The New York Stock Exchange |
| Depositary Shares, each representing a one-four hundredth interest in a share of $4.55 \%$ NonCumulative Preferred Stock, Series JJ | JPM PR K | The New York Stock Exchange |
| Depositary Shares, each representing a one-four hundredth interest in a share of 4.625\% NonCumulative Preferred Stock, Series LL | JPM PR L | The New York Stock Exchange |
| Depositary Shares, each representing a one-four hundredth interest in a share of 4.20\% NonCumulative Preferred Stock, Series MM | JPM PR M | The New York Stock Exchange |
| Alerian MLP Index ETNs due May 24, 2024 | AMJ | NYSE Arca, Inc. |
| Guarantee of Callable Fixed Rate Notes due June 10, 2032 of JPMorgan Chase Financial Company LLC | JPM/32 | The New York Stock Exchange |

## Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. $\square$ Yes $\mathbb{X}$ No Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. $\square$ Yes $\mathbb{1}$ No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. $\mathbb{X}$ Yes $\square$ No Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). $\mathbb{V}$ Yes $\square$ No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule $12 b-2$ of the Exchange Act.
$\boxtimes$ Large accelerated filer $\quad \square$ Accelerated filer $\quad \square$ Non-accelerated filer $\quad \square$ Smaller reporting company $\square$ Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. $\square$

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. $\mathbf{7 2 6 2 ( b ) ) ~ b y ~ t h e ~ r e g i s t e r e d ~ p u b l i c ~ a c c o u n t i n g ~ f i r m ~ t h a t ~ p r e p a r e d ~ o r ~ i s s u e d ~ i t s ~ a u d i t ~ r e p o r t . ~} \mathbb{X}$ Yes $\square$ No Indicate by check mark whether the registrant is a shell company (as defined in Rule 12 b -2 of the Exchange Act). $\square$ Yes $\mathbb{\boxtimes}$ No

The aggregate market value of JPMorgan Chase \& Co. common stock held by non-affiliates as of June 30, 2022: \$327,588,442,114
Number of shares of common stock outstanding as of January 31, 2023: 2,943,355,459
Documents incorporated by reference: Portions of the registrant's Proxy Statement for the annual meeting of stockholders to be held on May 16, 2023, are incorporated by reference in this Form 10-K in response to Items 10, 11, 12, 13 and 14 of Part III.

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## Item 1. Business.

## Overview

JPMorgan Chase \& Co. ("JPMorgan Chase" or the "Firm", NYSE: JPM), a financial holding company incorporated under Delaware law in 1968, is a leading financial services firm based in the United States of America ("U.S."), with operations worldwide. JPMorgan Chase had $\$ 3.7$ trillion in assets and $\$ 292.3$ billion in stockholders' equity as of December 31, 2022. The Firm is a leader in investment banking, financial services for consumers and small businesses, commercial banking, financial transaction processing and asset management. Under the J.P. Morgan and Chase brands, the Firm serves millions of customers, predominantly in the U.S., and many of the world's most prominent corporate, institutional and government clients globally.
JPMorgan Chase's principal bank subsidiary is JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank, N.A."), a national banking association with U.S. branches in 48 states and Washington, D.C. JPMorgan Chase's principal non-bank subsidiary is J.P. Morgan Securities LLC ("J.P. Morgan Securities"), a U.S. broker-dealer. The bank and nonbank subsidiaries of JPMorgan Chase operate nationally as well as through overseas branches and subsidiaries, representative offices and subsidiary foreign banks. The Firm's principal operating subsidiaries outside the U.S. are J.P. Morgan Securities plc and J.P. Morgan SE ("JPMSE"), which are subsidiaries of JPMorgan Chase Bank, N.A. and are based in the United Kingdom ("U.K.") and Germany, respectively.

The Firm's website is www.jpmorganchase.com. JPMorgan Chase makes available on its website, free of charge, annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934, as soon as reasonably practicable after it electronically files or furnishes such material to the U.S. Securities and Exchange Commission (the "SEC") at www.sec.gov. JPMorgan Chase makes new and important information about the Firm available on its website at https://www.jpmorganchase.com, including on the Investor Relations section of its website at https://www.jpmorganchase.com/ir. Information on the Firm's website is not incorporated by reference into this Annual Report on Form 10-K for the year ended December 31, 2022 ("2022 Form 10-K" or "Form 10-K") or the Firm's other filings with the SEC. The Firm has adopted, and posted on its website, a Code of Conduct for all employees of the Firm and a Code of Ethics for its Chairman and Chief Executive Officer, Chief Financial Officer, Principal Accounting Officer and all other professionals of the Firm worldwide serving in a finance, accounting, treasury, tax or investor relations role. The Code of Ethics is also available in print upon request to the Firm's Investor Relations team. Within the time period required by the SEC, JPMorgan Chase will post on its website any amendment to the Code of Ethics and any waiver applicable to a director or executive officer.

## Business segments

For management reporting purposes, JPMorgan Chase's activities are organized into four major reportable business segments, as well as a Corporate segment. The Firm's consumer business is the Consumer \& Community Banking ("CCB") segment. The Firm's wholesale business segments are the Corporate \& Investment Bank ("CIB"), Commercial Banking ("CB"), and Asset \& Wealth Management ("AWM").
A description of the Firm's business segments and the products and services they provide to their respective client bases is provided in the "Business segment results" section of Management's discussion and analysis of financial condition and results of operations ("Management's discussion and analysis" or "MD\&A"), beginning on page 46 and in Note 32.

## Competition

JPMorgan Chase and its subsidiaries and affiliates operate in highly competitive environments. Competitors include other banks, brokerage firms, investment banking companies, merchant banks, hedge funds, commodity trading companies, private equity firms, insurance companies, mutual fund companies, investment managers, credit card companies, mortgage banking companies, trust companies, securities processing companies, automobile financing companies, leasing companies, e-commerce and other internet-based companies, financial technology companies, and other companies engaged in providing similar as well as new products and services. The Firm's businesses generally compete on the basis of the quality and variety of the Firm's products and services, transaction execution, innovation, reputation and price. Competition also varies based on the types of clients, customers, industries and geographies served. With respect to some of its geographies and products, JPMorgan Chase competes globally; with respect to others, the Firm competes on a national or regional basis. New competitors in the financial services industry continue to emerge, including firms that offer products and services solely through the internet and non-financial companies that offer products and services that disintermediate traditional banking products and services offered by financial services firms such as JPMorgan Chase.

## Part I

## Human capital

JPMorgan Chase believes that its long-term growth and success depend on its ability to attract, develop and retain a highperforming and diverse workforce, with inclusion and accessibility as key components of the way the Firm does business. The information provided below relates to JPMorgan Chase's full-time and part-time employees and does not include the Firm's contractors.

## Global workforce

As of December 31, 2022, JPMorgan Chase had 293,723 employees globally, an increase of 22,698 employees from the prior year. The increase was primarily attributable to additional employees in technology and operations, as well as front office. The Firm's employees are located in 63 countries, with over $60 \%$ of the Firm's employees located in the U.S. The following table presents the distribution of the Firm's global workforce by region and by line of business ("LOB") and Corporate as of December 31, 2022 :

| Employee Breakdown by Region |  |
| :--- | ---: |
| Region | Employees |
| North America | 178,599 |
| Asia-Pacific | 82,696 |
| Europe/Middle East/Africa | 27,514 |
| Latin America/Caribbean | 4,914 |
| Total Firm | $\mathbf{2 9 3 , 7 2 3}$ |


|  | Employee Breakdown by LOB and Corporate |
| :--- | ---: |
| LOB | Employees |
| CCB | 135,347 |
| CIB | 73,452 |
| CB | 14,687 |
| AWM | 26,041 |
| Corporate | 44,196 |
| Total Firm | $\mathbf{2 9 3 , 7 2 3}$ |

## Diversity, equity and inclusion

In connection with its diversity initiatives, the Firm periodically requests that its employees and Board members self-identify based on specified diversity categories. The following table presents information on self-identifications as of December 31, 2022. Information on race/ethnicity of employees is categorized based on Equal Employment Opportunity ("EEO") classifications and is presented for U.S. employees who self-identified, and information on gender is presented for global employees who self-identified. Information on race/ethnicity and gender for members of the Operating Committee and the Board of Directors reflects all such members. Information on LGBTQ+ and veteran statuses is based on U.S. employees, and all members of the Operating Committee and the Board of Directors. Information on disability status is based on all U.S. employees and all members of the Operating Committee.

| December 31, 2022 | Total employees | Senior level employees ${ }^{(\text {e) }}$ | Operating Committee | Board of Directors ${ }^{(f)}$ |
| :---: | :---: | :---: | :---: | :---: |
| Race/Ethnicity ${ }^{(a)}$ : |  |  |  |  |
| White | 44 \% | 75 \% | 83 \% | 91 \% |
| Hispanic | 21 \% | 6 \% | 11 \% | - |
| Asian | 18 \% | 12 \% | 6 \% | - |
| Black | 14 \% | $5 \%$ | - | $9 \%$ |
| Other ${ }^{(b)}$ | 3 \% | 2 \% | - | - |
| Gender ${ }^{(c)}$ : |  |  |  |  |
| Men | 51 \% | 73 \% | 61 \% | 64 \% |
| Women | 49 \% | 27 \% | 39 \% | 36 \% |
| LGBTQ+ ${ }^{(d)}$ | 4 \% | 3 \% | 6 \% | - |
| Military veterans ${ }^{(d)}$ | 3 \% | 2 \% | - | 9 \% |
| People with disabilities ${ }^{(d)}$ | $4 \%$ | $3 \%$ | - | - (g) |

(a) Based on EEO metrics. Presented as a percentage of the respective populations who self-identified race/ethnicity, which was $96 \%$ and $95 \%$ of the Firm's total U.S.-based employees and U.S.-based senior level employees, respectively, and all members of the Operating Committee and the Board of Directors. Information for the Operating Committee include one member who is based outside of the U.S.
(b) Other includes American Indian or Alaskan Native, Native Hawaiian or Other Pacific Islander, and two or more races/ethnicities.
(c) Presented as a percentage of the respective populations who self-identified gender, which was $98 \%$ of the Firm's total global employees and $99 \%$ of the Firm's global senior level employees, and all members of the Operating Committee and the Board of Directors.
(d) Presented as a percentage of total U.S.-based employees, total U.S.-based senior level employees, all members of the Operating Committee, and all members of the Board of Directors, respectively.
(e) Senior level employees represents employees with the titles of Managing Director and above.
(f) Excludes Alicia Boler Davis, who was elected to the Firm's Board of Directors, effective March 20, 2023.
(g) The Firm did not request members of the Board of Directors to self-identify disability status.

## Firm culture

The foundations of JPMorgan Chase's culture are its core values and How We Do Business Principles, which are fundamental to the Firm's success and are represented by four central corporate tenets: exceptional client service; operational excellence; a commitment to integrity, fairness and responsibility; and cultivation of a great team and winning culture. The Firm maintains its focus on its culture of inclusion and respect, which is reinforced by its Code of Conduct and by increasing employee awareness, education, communication and training. An important part of these efforts includes the Firm's Business Resource Groups, which are groups of employees who support JPMorgan Chase's diversity, equity and inclusion strategies by leveraging the unique perspectives of their members. The Firm has global Diversity, Equity \& Inclusion centers of excellence that lead the Firm's strategy in supporting its commitments to create more equity and lasting impact in communities, and strengthen its inclusive culture.

## Attracting and retaining employees

The goal of JPMorgan Chase's recruitment efforts is to attract and hire talented individuals in all roles and at all career levels. The Firm strives to provide both external candidates and internal employees who are seeking a different role with challenging and stimulating career opportunities. These opportunities range from internship training programs for students to entry-level, management and executive careers. During 2022, approximately twothirds of the Firm's employment opportunities were filled by external candidates, with the remainder filled by existing employees. In addition, depending on business needs, and where appropriate, the Firm has implemented hybrid work models which include a mix of on-site and remote work for certain roles.

Diversity is an important area of focus throughout the Firm's hiring process. JPMorgan Chase engages in efforts aimed at hiring diverse talent, including initiatives focused on gender, underrepresented ethnic groups, LGBTQ+ individuals, people with disabilities, veterans and others. The Firm's global Diversity, Equity \& Inclusion centers of excellence seek to increase representation of and advance career opportunities for talented diverse individuals across the Firm through initiatives such as career coaching and mentorship.

JPMorgan Chase offers a competitive fellowship program that seeks to attract accomplished individuals who have taken a career break and wish to return to the workforce. In addition, and where appropriate, the Firm's hiring practices focus on the skills of a job candidate rather than degrees held.

## Developing employees

JPMorgan Chase supports the professional development and career growth of its employees. An onboarding training curriculum is required for new hires, which covers, among other topics, compliance with the Firm's Code of Conduct and information concerning Firm policies and standards,
including those relating to cybersecurity. In addition, the Firm offers extensive training programs and educational resources to all employees, covering a broad variety of topics such as leadership, change management, analytical thinking, culture and conduct, diversity, equity and inclusion, and risk and controls. Leadership Edge, the Firm's global leadership and management development center of excellence, is focused on creating one Firmwide leadership culture.

## Compensation and benefits

The Firm provides market-competitive compensation and benefits programs. JPMorgan Chase's compensation philosophy includes guiding principles that drive compensation-related decisions across the Firm, and includes: pay-for-performance practices designed to attract and retain top talent; responsiveness and alignment with shareholder interests; and reinforcement of the Firm's culture and How We Do Business Principles, including the integration of risk, controls and conduct considerations. The Firm's commitment to diversity, equity and inclusion for all employees includes compensation review processes that seek to ensure that the Firm's employees are paid equitably and competitively for the work they do.

The Firm also supports employees' well-being. JPMorgan Chase offers an extensive benefits and wellness package to employees and their families, including healthcare coverage, retirement benefits, life and disability insurance, on-site health and wellness centers, counseling and resources related to mental health, employee assistance programs, competitive vacation and leave policies, backup child care arrangements, tuition reimbursement programs, and financial coaching. In 2022, the Firm implemented or announced enhancements to certain health and wellness benefits for U.S. employees, including expanded medical plan coverage and paid time off policies related to parental, critical caregiving and bereavement leaves.

## Part I

## Supervision and regulation

The Firm is subject to extensive and comprehensive regulation under U.S. federal and state laws, as well as the applicable laws of the jurisdictions outside the U.S. in which the Firm does business.

Financial holding company:
Consolidated supervision. JPMorgan Chase \& Co. is a bank holding company ("BHC") and a financial holding company ("FHC") under U.S. federal law, and is subject to comprehensive consolidated supervision, regulation and examination by the Board of Governors of the Federal Reserve System (the "Federal Reserve"). The Federal Reserve acts as the supervisor of the consolidated operations of BHCs. Certain of JPMorgan Chase's subsidiaries are also regulated directly by additional authorities based on the activities or licenses of those subsidiaries.

JPMorgan Chase's national bank subsidiary, JPMorgan Chase Bank, N.A., is supervised and regulated by the Office of the Comptroller of the Currency ("OCC") and, with respect to certain matters, by the Federal Deposit Insurance Corporation (the "FDIC").

JPMorgan Chase's U.S. broker-dealers are supervised and regulated by the Securities and Exchange Commission ("SEC") and the Financial Industry Regulatory Authority ("FINRA"). Subsidiaries of the Firm that engage in certain futures-related and swaps-related activities are supervised and regulated by the Commodity Futures Trading Commission ("CFTC"). J.P. Morgan Securities plc is a U.K.based bank regulated by the U.K. Prudential Regulation Authority (the "PRA") and the U.K. Financial Conduct Authority ("FCA").

JPMSE is a Germany-based credit institution regulated by the European Central Bank ("ECB") as well as the local regulators in each of the countries in which it operates. The Firm's other non-U.S. subsidiaries are regulated by the banking, securities, prudential and conduct regulatory authorities, as applicable, in the countries in which they operate.

Permissible business activities. The Bank Holding Company Act restricts BHCs from engaging in business activities other than the business of banking and certain closely-related activities. FHCs are permitted to engage in a broader range of financial activities. The Federal Reserve has the authority to limit an FHC's ability to conduct otherwise permissible activities if the FHC or any of its depository institution subsidiaries ceases to meet applicable eligibility requirements. The Federal Reserve may also impose corrective capital and/or managerial requirements on the FHC, and if deficiencies are persistent, may require divestiture of the FHC's depository institutions. If any depository institution controlled by an FHC fails to maintain a satisfactory rating under the Community Reinvestment Act, the Federal Reserve must prohibit the FHC and its subsidiaries from engaging in any new activities other than
those permissible for BHCs, or acquiring a company engaged in such activities.

Capital and liquidity requirements. The Federal Reserve establishes capital, liquidity and leverage requirements for JPMorgan Chase that are generally consistent with the international Basel III capital and liquidity framework and evaluates the Firm's compliance with those requirements. The OCC establishes similar requirements for JPMorgan Chase Bank, N.A. Certain of the Firm's non-U.S. subsidiaries and branches are also subject to local capital and liquidity requirements.

Banking supervisors globally continue to refine and enhance the Basel III capital framework for financial institutions. U.S. banking regulators have announced their support for the issuance of the Basel III reforms and are considering how to appropriately apply such reforms in the U.S.

Refer to Capital Risk Management on pages 86-96 and Liquidity Risk Management on pages 97-104.
Stress tests. As a large BHC, JPMorgan Chase is subject to supervisory stress testing administered by the Federal Reserve as part of the Federal Reserve's annual Comprehensive Capital Analysis and Review ("CCAR") framework. The Firm must conduct annual company-run stress tests and must also submit an annual capital plan to the Federal Reserve, taking into account the results of separate stress tests designed by the Firm and the Federal Reserve. The Federal Reserve uses the results under the severely adverse scenario from its supervisory stress test to determine the Firm's Stress Capital Buffer ("SCB") requirement for the coming year, which forms part of the Firm's applicable capital buffers. The Firm is required to file its annual CCAR submission on April 5, 2023. The Federal Reserve will notify the Firm of its indicative SCB requirement by June 30, 2023 and final SCB requirement by August 31, 2023. The Firm's final SCB requirement will become effective on October 1, 2023. The OCC requires JPMorgan Chase Bank, N.A. to perform separate, similar stress tests annually. The Firm publishes each year the results of the annual stress tests for the Firm and JPMorgan Chase Bank, N.A. under the supervisory "severely adverse" scenarios provided by the Federal Reserve and the OCC. Refer to Capital Risk Management on pages 86-96 for more information concerning the Firm's CCAR.

Enhanced prudential standards. As part of its mandate to identify and monitor risks to the financial stability of the U.S. posed by large banking organizations, the Financial Stability Oversight Council ("FSOC") recommends prudential standards and reporting requirements to the Federal Reserve for systemically important financial institutions ("SIFIs"), such as JPMorgan Chase. The Federal Reserve has adopted several rules to implement those heightened prudential standards, including rules relating to risk management and corporate governance of subject BHCs. JPMorgan Chase is required under these rules to comply with enhanced liquidity and overall risk
management standards, including oversight by the board of directors of risk management activities.

Resolution and recovery. The Firm is required to maintain a comprehensive recovery plan, updated annually, summarizing the actions it would take to remain wellcapitalized and well-funded in order to avoid failure in the case of an adverse event. In addition, JPMorgan Chase Bank, N.A. is required to prepare and submit a recovery plan as directed by the OCC. The Firm is required to submit periodically to the Federal Reserve and the FDIC a plan for resolution in the event of material distress or failure (a "resolution plan"). In 2019, the FDIC and Federal Reserve revised the regulations governing resolution plan requirements, and on the basis of those revisions, the Firm's resolution plan submissions will alternate between "targeted" and "full" plans. The Firm's "targeted" resolution plan was filed on June 28, 2021, and the Firm's next "full" resolution plan is due to be filed on or before July 1, 2023. JPMorgan Chase Bank, N.A. is also required to prepare and submit a separate resolution plan as directed by the FDIC on or before December 1, 2023.

Certain of the Firm's non-U.S. subsidiaries and branches are also subject to local resolution and recovery planning requirements.

Orderly liquidation authority. Certain financial companies, including JPMorgan Chase and certain of its subsidiaries, can also be subjected to resolution under an "orderly liquidation authority." The U.S. Treasury Secretary, in consultation with the President of the United States, must first make certain determinations concerning extraordinary financial distress and systemic risk, and action must be recommended by the FDIC and the Federal Reserve. Absent such actions, the Firm, as a BHC, would remain subject to resolution under the Bankruptcy Code. The FDIC has issued a draft policy statement describing its "single point of entry" strategy for resolution of SIFIs under the orderly liquidation authority, which seeks to keep operating subsidiaries of a BHC open and impose losses on shareholders and creditors of the BHC in receivership according to their statutory order of priority.

Holding company as a source of strength. JPMorgan Chase \& Co. is required to serve as a source of financial strength for its depository institution subsidiaries and to commit resources to support those subsidiaries, including when directed to do so by the Federal Reserve.

Regulation of acquisitions. Acquisitions by BHCs and their banks are subject to requirements, limitations and prohibitions established by law and by the Federal Reserve and the OCC. For example, FHCs and BHCs are required to obtain the approval of the Federal Reserve before they acquire more than $5 \%$ of the voting shares of an unaffiliated bank. In addition, acquisitions by financial companies are prohibited if, as a result of the acquisition, the total liabilities of the financial company would exceed $10 \%$ of the total liabilities of all financial companies. Furthermore, for certain acquisitions, the Firm must
provide written notice to the Federal Reserve prior to acquiring direct or indirect ownership or control of any voting shares of any company with over $\$ 10$ billion in assets that is engaged in activities that are "financial in nature." Moreover, while FHCs may engage in a broader range of activities (including acquisitions) than BHCs, the Federal Reserve has the authority to limit an FHC's ability to conduct otherwise permissible acquisitions if the FHC or any of its depository institution subsidiaries ceases to meet applicable eligibility requirements.

Ongoing obligations. The Firm is subject to obligations under the terms of a Deferred Prosecution Agreement entered into with the Department of Justice on September 29,2020 relating to precious metals and U.S. Treasuries markets investigations as well as under a related order issued by the CFTC.

## Subsidiary banks:

The activities of JPMorgan Chase Bank, N.A., the Firm's principal subsidiary bank, are limited to those specifically authorized under the National Bank Act and related interpretations of the OCC. The OCC has authority to bring an enforcement action against JPMorgan Chase Bank, N.A. for unsafe or unsound banking practices, which could include limiting JPMorgan Chase Bank, N.A.'s ability to conduct otherwise permissible activities, or imposing corrective capital or managerial requirements on the bank.

FDIC deposit insurance. The FDIC deposit insurance fund provides insurance coverage for certain deposits and is funded through assessments on banks, including JPMorgan Chase Bank, N.A.

FDIC powers upon a bank insolvency. Upon any insolvency of JPMorgan Chase Bank, N.A., the FDIC could be appointed as conservator or receiver under the Federal Deposit Insurance Act. The FDIC has broad powers to transfer assets and liabilities without the approval of the institution's creditors.

Prompt corrective action. The Federal Deposit Insurance Corporation Improvement Act of 1991 requires the relevant federal banking regulator to take "prompt corrective action" with respect to a depository institution if that institution does not meet certain capital adequacy standards. The Federal Reserve is also authorized to take appropriate action against the parent BHC, such as JPMorgan Chase \& Co., based on the undercapitalized status of any bank subsidiary. In certain instances, the BHC would be required to guarantee the performance of the capital restoration plan for its undercapitalized subsidiary.

OCC Heightened Standards. The OCC has established guidelines setting forth heightened standards for large banks, including minimum standards for the design and implementation of a risk governance framework for banks. Under these standards, a bank's risk governance framework must ensure that the bank's risk profile is easily distinguished and separate from that of its parent BHC for risk management purposes. The bank's board or risk

## Part I

committee is responsible for approving the bank's risk governance framework, providing active oversight of the bank's risk-taking activities, and holding management accountable for adhering to the risk governance framework.

Restrictions on transactions with affiliates. JPMorgan Chase Bank, N.A. and its subsidiaries are subject to restrictions imposed by federal law on extensions of credit to, investments in stock or securities of, and derivatives, securities lending and certain other transactions with, JPMorgan Chase \& Co. and certain other affiliates. These restrictions prevent JPMorgan Chase \& Co. and other affiliates from borrowing from such subsidiaries unless the loans are secured in specified amounts and comply with certain other requirements.

Dividend restrictions. Federal law imposes limitations on the payment of dividends by national banks, such as JPMorgan Chase Bank, N.A. Refer to Note 26 for the amount of dividends that JPMorgan Chase Bank, N.A. could pay, at January 1, 2023, to JPMorgan Chase without the approval of the banking regulators. The OCC and the Federal Reserve also have authority to prohibit or limit the payment of dividends of a bank subsidiary that they supervise if, in the banking regulator's opinion, payment of a dividend would constitute an unsafe or unsound practice in light of the financial condition of the bank.

Depositor preference. Under federal law, the claims of a receiver of an insured depositary institution ("IDI") for administrative expense and the claims of holders of U.S. deposit liabilities (including the FDIC and deposits in nonU.S. branches that are dually payable in the U.S. and in a non-U.S. branch) have priority over the claims of other unsecured creditors of the institution, including depositors in non-U.S. branches and public noteholders.

Consumer supervision and regulation. JPMorgan Chase and JPMorgan Chase Bank, N.A. are subject to supervision and regulation by the Consumer Financial Protection Bureau ("CFPB") with respect to federal consumer protection laws, including laws relating to fair lending and the prohibition of unfair, deceptive or abusive acts or practices in connection with the offer, sale or provision of consumer financial products and services. The CFPB also has jurisdiction over small business lending activities with respect to fair lending and the Equal Credit Opportunity Act. As part of its regulatory oversight, the CFPB has authority to take enforcement actions against firms that offer certain products and services to consumers using practices that are deemed to be unfair, deceptive or abusive. In February 2023, the CFPB proposed a rule that would significantly reduce and limit the late payment fees that credit card issuers, including the Firm, would be permitted to charge to customers. The Firm's consumer activities are also subject to regulation under state statutes which are enforced by the Attorney General or empowered agency of each state.

In the U.K., the Firm operates a retail bank through J.P. Morgan Europe Limited ("JPMEL") and provides retail investment management services through Nutmeg Saving
and Investment Limited ("Nutmeg"). JPMEL is regulated by the PRA, and both JPMEL and Nutmeg are regulated by the FCA with respect to their conduct of financial services in the U.K., including obligations relating to the fair treatment of customers. JPMEL is also regulated by the U.K. Payment Systems Regulator with respect to its operation and use of payment systems. In addition, the retail businesses of JPMEL and Nutmeg are subject to U.K. consumer-protection legislation.

Securities and broker-dealer regulation: The Firm conducts securities underwriting, dealing and brokerage activities in the U.S. through J.P. Morgan Securities LLC and other non-bank broker-dealer subsidiaries, all of which are subject to regulations of the SEC, FINRA and the New York Stock Exchange, among others. The Firm conducts similar securities activities outside the U.S. subject to local regulatory requirements. In the U.K., those activities are conducted by J.P. Morgan Securities plc. Broker-dealers are subject to laws and regulations covering all aspects of the securities business, including sales and trading practices, securities offerings, publication of research reports, use of customer funds, the financing of client purchases, capital structure, recordkeeping and retention, and the conduct of their directors, officers and employees. Refer to Broker-dealer regulatory capital on page 96 for information concerning the capital of J.P. Morgan Securities LLC and J.P. Morgan Securities plc.

Investment management regulation:
The Firm's asset and wealth management businesses are subject to significant regulation in jurisdictions around the world relating to, among other things, the safeguarding and management of client assets, offerings of funds and marketing activities. Certain of the Firm's subsidiaries are registered with, and subject to oversight by, the SEC as investment advisers and broker-dealers. The Firm's registered investment advisers in the United States are subject to the fiduciary and other obligations imposed under the Investment Advisers Act of 1940 and applicable state and federal law. The Firm's bank fiduciary activities are subject to supervision by the OCC.

## Derivatives regulation:

The Firm is subject to comprehensive regulation of its derivatives businesses, including regulations that impose capital and margin requirements, require central clearing of standardized over-the-counter ("OTC") derivatives, mandate that certain standardized OTC swaps be traded on regulated trading venues, and provide for reporting of certain mandated information. JPMorgan Chase Bank, N.A., J.P. Morgan Securities LLC and J.P. Morgan Securities plc are registered with the CFTC as "swap dealers". In addition, JPMorgan Chase Bank, N.A. and J.P. Morgan Securities LLC are registered with the SEC as "security-based swap dealers". As a result, these entities are subject to a comprehensive regulatory framework applicable to their swap or security-based swap activities, including capital requirements, rules requiring the collateralization of uncleared swaps and security-based swaps, rules regarding
segregation of counterparty collateral, business conduct and documentation standards, record-keeping and reporting obligations, and anti-fraud and anti-manipulation requirements. Similar requirements have also been established under the European Market Infrastructure Regulation ("EMIR") and the Markets in Financial Instruments Directive ("MiFID II"), as implemented in the EU and as adopted in the U.K.
J.P. Morgan Securities LLC is also registered with the CFTC as a futures commission merchant and is a member of the National Futures Association.

Data, privacy and cybersecurity regulation:
The Firm and its subsidiaries are subject to laws, rules and regulations globally concerning data, including data protection, consumer protection, privacy, cybersecurity and related matters. These laws, rules and regulations are constantly evolving, subject to interpretation, remain a focus of regulators globally, may be enforced by private parties or government bodies, and will continue to have a significant impact on all of the Firm's businesses and operations.
The Bank Secrecy Act and Economic Sanctions: The Bank Secrecy Act ("BSA") requires all financial institutions, including banks and securities broker-dealers, to establish a risk-based system of internal controls reasonably designed to prevent money laundering and the financing of terrorism. The BSA includes a variety of recordkeeping and reporting requirements, as well as due diligence/know-your-customer documentation requirements. The Firm is also subject to the regulations and economic sanctions programs administered and enforced by the U.S. Treasury's Office of Foreign Assets Control ("OFAC") and EU and U.K. authorities which target entities or individuals that are, or are located in countries that are, involved in activities including terrorism, hostilities, embezzlement or human rights violations. The Firm is also subject to economic sanctions laws, rules and regulations in other jurisdictions in which it operates, including those that conflict with or prohibit a firm such as JPMorgan Chase from complying with certain laws, rules and regulations to which it is otherwise subject.

## Anti-Corruption:

The Firm is subject to laws and regulations relating to corrupt and illegal payments to government officials and others in the jurisdictions in which it operates, including the U.S. Foreign Corrupt Practices Act and the U.K. Bribery Act.

## Compensation practices:

The Firm's compensation practices are subject to oversight by the Federal Reserve, as well as other agencies. The Federal Reserve has jointly issued guidance with the FDIC and the OCC that is designed to ensure that incentive compensation paid by banking organizations does not encourage imprudent risk-taking that threatens the organizations' safety and soundness. The Financial Stability Board ("FSB") has also established standards covering compensation principles for banks. The Firm's compensation practices are also subject to regulation and oversight by regulators in other jurisdictions, notably the Fifth Capital Requirements Directive ("CRD V"), as implemented in the EU and as adopted in the U.K, which includes compensation-related provisions. The European Banking Authority has instituted guidelines on compensation policies including under CRD $V$ which in certain countries, such as Germany, are implemented or supplemented by local regulations or guidelines. The U.K. regulators have also instituted guidelines on CRD V compensation policies. The Firm expects that the implementation of regulatory guidelines regarding compensation in the U.S. and other countries will continue to evolve, and may affect the manner in which the Firm structures its compensation programs and practices.

Other significant international regulatory initiatives: Policymakers in the U.K. and EU continue to implement a program of regulatory enhancements relating to financial services, several key elements of which are discussed below.

MiFID II requires the trading of shares and certain standardized OTC derivatives to take place on specified trading venues. MiFID II also significantly enhanced requirements for pre- and post-trade transparency, transaction reporting and investor protection, and introduced a position limits and reporting regime for commodities. In November 2021, the European Commission ("EC") published a draft legislative proposal for amendments to MiFID II focused on changes to rules related to transparency and market structure, including the proposed creation of a consolidated tape intended to increase transparency into trading across the EU by providing a centralized source of market data. This legislation remains subject to review by the European Parliament and European Council.
In the U.K., MiFID II is being amended through the "Wholesale Markets Review", a set of proposals designed to streamline and improve regulation of the U.K. secondary markets following the U.K.'s departure from the EU. Some of the changes, such as the removal of the requirement to execute trades in shares on certain trading venues, have been introduced through the Financial Services and Markets Bill ("FSMB"), which is expected to be passed by the U.K. Parliament in the first half of 2023. Other changes, such as amendments to MiFID II rules related to transparency, will be subject to further consultation, which is expected during 2023.

In December 2022, the EC published a legislative proposal to amend EMIR to increase the competitiveness of the EU central clearing framework and to enhance supervision of EU central counterparties ("CCPs"). These proposals are subject to further review by the European Parliament and European Council.

The EU has adopted mandatory buy-in rules under the Central Securities Depositories Regulation ("CSDR") which will impose requirements relating to sourcing of securities in the event of a settlement fail. In June 2022, EU regulators proposed an amendment to postpone the application of these rules until November 2025. The amendment remains subject to review by the European Parliament and European Council.

In December 2022, the Chancellor of the Exchequer announced an extensive package of reforms to U.K. financial services regulation known as the "Edinburgh Reforms". These reforms aim to drive growth and competitiveness in the U.K. financial services sector following the U.K.'s departure from the EU. The reform package includes initiatives relating to a number of areas of financial services policy, including retail banks, payments, markets, digital assets and sustainable finance. The U.K. Government and regulators are expected to release further consultations and announcements related to these reforms in 2023.

EU and U.K. regulators are expected to finalize the rules implementing the Basel III framework during 2023. The Firm's banking entities in the EU and the U.K. will be required to comply with the Basel III final rules by January 2025, allowing for certain transitional arrangements until 2030 and 2032, respectively. The main changes implemented by the Basel III final rules will be revisions to the credit risk and operational risk calculation methods to reduce the use of and reliance on internal modelling approaches and introduce internationally-agreed changes to the market risk framework. The EU Basel III final rules also strengthen enforcement tools for supervisors overseeing EU banks and require EU banking entities to systematically identify, disclose and manage environmental, social and governance ("ESG") risks as part of their risk management practices. In addition, in December 2022, the European Banking Authority ("EBA") announced that it will publish rules and technical standards between 2023 and 2025 related to sustainable finance, which will be applicable to EU banks. The Firm's banking entities in the U.K. will be required to comply with regulatory policies and standards related to climate risk being developed by the PRA. In addition, EU legislation requires that certain non-EU banks operating in the EU establish an intermediate parent undertaking ("IPU") located in the EU. The IPU legislation allows a second IPU to be established if a single IPU would conflict with "home country" bank separation rules or impede resolvability. The Firm will be required to comply with the EU's IPU requirements by December 30, 2023.

The Firm's banking entities in the EU and U.K. are also subject to supervisory expectations published by the ECB
and the PRA, respectively, for management of financial risks arising from climate change and the increasing operational reliance on IT systems, third-party services and innovative technologies, as well as supervisory expectations for operational resilience and resilience from macrofinancial and geopolitical shocks. These expectations address bank strategy, governance, risk management, scenario analysis, risk reporting and disclosure.
Policymakers in the EU have continued to implement sustainability-related initiatives. In December 2022, the Corporate Sustainability Reporting Directive ("CSRD") was published in the Official Journal of the EU. The CSRD will replace and significantly expand the scope and content of ESG reporting requirements under the EU's existing ESG reporting rules. CSRD reporting requirements will be phased in beginning in 2024. In addition, the EC published its legislative proposal on the Corporate Sustainability Due Diligence Directive ("CSDDD") in February 2022. The draft directive sets mandatory due diligence obligations for companies to address actual and potential human rights violations and environmental adverse impacts stemming from their own operations and business relationships, including the activities of companies with which they have established business relationships. The proposed legislation may also require the adoption of company-specific climaterelated transition plans. The CSDDD is currently subject to review by the European Parliament and European Council. Both the CSRD and CSDDD will apply to certain of the Firm's EU entities as well as to certain non-EU entities.

## Item 1A. Risk Factors.

The following discussion sets forth the material risk factors that could affect JPMorgan Chase's financial condition and operations. Readers should not consider any descriptions of these factors to be a complete set of all potential risks that could affect the Firm. Any of the risk factors discussed below could by itself, or combined with other factors, materially and adversely affect JPMorgan Chase's business, results of operations, financial condition, capital position, liquidity, competitive position or reputation, including by materially increasing expenses or decreasing revenues, which could result in material losses or a decrease in earnings.

Summary
The principal risk factors that could adversely affect JPMorgan Chase's business, results of operations, financial condition, capital position, liquidity, competitive position or reputation include:

- Regulatory risks, including the impact that applicable laws, rules and regulations in the highly-regulated and supervised financial services industry, as well as changes to or in the application, interpretation or enforcement of those laws, rules and regulations, can have on JPMorgan Chase's business and operations; the ways in which differences in financial services regulation in different jurisdictions or with respect to certain competitors can negatively impact JPMorgan Chase's business; the penalties and collateral consequences, and higher compliance and operational costs, that JPMorgan Chase may incur when resolving a regulatory investigation; the ways in which less predictable legal and regulatory frameworks in certain countries can negatively impact JPMorgan Chase's operations and financial results; and the losses that security holders will absorb if JPMorgan Chase were to enter into a resolution.
- Political risks, including the potential negative effects on JPMorgan Chase's businesses due to economic uncertainty or instability caused by political developments.
- Market risks, including the effects that economic and market events and conditions, governmental policies, changes in interest rates and credit spreads, and market fluctuations can have on JPMorgan Chase's consumer and wholesale businesses and its investment and market-making positions and on JPMorgan Chase's earnings and its liquidity and capital levels.
- Credit risks, including potential negative effects from adverse changes in the financial condition of clients, customers, counterparties, custodians and central counterparties; and the potential for losses due to declines in the value of collateral in stressed market conditions or from concentrations of credit and market risk.
- Liquidity risks, including the risk that JPMorgan Chase's liquidity could be impaired by market-wide
illiquidity or disruption, unforeseen liquidity or capital requirements, the inability to sell assets, default by a significant market participant, unanticipated outflows of cash or collateral, or lack of market or customer confidence in JPMorgan Chase; the dependence of JPMorgan Chase \& Co. on the cash flows of its subsidiaries; the adverse effects that any downgrade in any of JPMorgan Chase's credit ratings may have on its liquidity and cost of funding; and potential negative impacts, including litigation risks, associated with the transition to alternative reference rates.
- Capital risks, including the risk that any failure by or inability of JPMorgan Chase to maintain the required level and composition of capital, or unfavorable changes in applicable capital requirements, could limit JPMorgan Chase's ability to distribute capital to shareholders or to support its business activities.
- Operational risks, including risks associated with JPMorgan Chase's dependence on its operational systems, its ability to maintain appropriately-staffed workforces and the competence, integrity, health and safety of its employees, as well as the systems and employees of third parties, market participants and service providers; the potential negative effects of failing to identify and address operational risks related to the introduction of or changes to products, services and delivery platforms; legal and regulatory risks related to safeguarding personal information; the harm that could be caused by a successful cyber attack affecting JPMorgan Chase or by other extraordinary events; risks associated with JPMorgan Chase's risk management framework, its models and estimations and associated judgments used in its stress testing and financial statements, and controls over disclosure and financial reporting; and potential adverse effects of failing to comply with heightened regulatory and other standards for the oversight of vendors and other service providers.
- Strategic risks, including the damage to JPMorgan Chase's competitive standing and results that could occur if management fails to develop and execute effective business strategies; risks associated with the significant and increasing competition that JPMorgan Chase faces; and the potential adverse impacts of climate change on JPMorgan Chase's business operations, clients and customers.
- Conduct risks, including the negative impact that can result from the actions or misconduct of employees, including any failure of employees to conduct themselves in accordance with JPMorgan Chase's expectations, policies and practices.
- Reputation risks, including the potential adverse effects on JPMorgan Chase's relationships with its clients, customers, shareholders, regulators and other stakeholders that could arise from employee misconduct, security breaches, inadequate risk


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management, compliance or operational failures, litigation and regulatory investigations, failure to satisfy expectations concerning environmental, social and governance concerns, failure to effectively manage conflicts of interest or to satisfy fiduciary obligations, or other factors that could damage JPMorgan Chase's reputation.

- Country risks, including potential impacts on JPMorgan Chase's businesses from an outbreak or escalation of hostilities between countries or within a country or region; and the potential adverse effects of local economic, political, regulatory and social factors on JPMorgan Chase's business and revenues in certain countries.
- People risks, including the criticality of attracting and retaining qualified and diverse employees; and the potential adverse effects of unfavorable changes in immigration or travel policies on JPMorgan Chase's workforce.
- Legal risks, including those relating to litigation and regulatory and government investigations.
The above summary is subject in its entirety to the discussion of the risk factors set forth below.


## Regulatory

JPMorgan Chase's businesses are highly regulated, and the laws, rules and regulations that apply to JPMorgan Chase have a significant impact on its business and operations.
JPMorgan Chase is a financial services firm with operations worldwide. JPMorgan Chase must comply with the laws, rules and regulations that apply to its operations in all of the jurisdictions around the world in which it does business, and financial services firms such as JPMorgan Chase are subject to extensive regulation and supervision.

The regulation and supervision of JPMorgan Chase significantly affects the way that it conducts its business and structures its operations, and JPMorgan Chase could be required to make changes to its business and operations in response to supervisory expectations or decisions or to new or changed laws, rules and regulations. These types of developments could result in JPMorgan Chase incurring additional costs in connection with complying with applicable laws, rules and regulations, which could reduce its profitability. Furthermore, JPMorgan Chase's entry into or acquisition of a new business or an increase in its principal investments may require JPMorgan Chase to comply with additional laws, rules, and regulations.

In response to new and existing laws, rules and regulations and expanded supervision, JPMorgan Chase has in the past been and could in the future be, required to:

- limit the products and services that it offers
- reduce the liquidity that it can provide through its market-making activities
- refrain from engaging in business opportunities that it might otherwise pursue
- pay higher taxes (including as part of any minimum global tax regime), assessments, levies or other governmental charges, including in connection with the resolution of tax examinations
- incur losses, including with respect to fraudulent transactions perpetrated against its customers
- dispose of certain assets, and do so at times or prices that are disadvantageous
- impose restrictions on certain business activities, or
- increase the prices that it charges for products and services, which could reduce the demand for them.

Any failure by JPMorgan Chase to comply with the laws, rules and regulations to which it is subject could result in:

- increased regulatory and supervisory scrutiny
- regulatory and governmental enforcement actions
- the imposition of fines, penalties or other sanctions
- increased exposure to litigation, or
- harm to its reputation.

Differences and inconsistencies in financial services regulation can negatively impact JPMorgan Chase's businesses, operations and financial results.

The content and application of laws, rules and regulations affecting financial services firms sometimes vary according to factors such as the size of the firm, the jurisdiction in which it is organized or operates, and other criteria. For example:

- larger firms such as JPMorgan Chase are often subject to more stringent supervision, regulation and regulatory scrutiny
- financial technology companies and other nontraditional competitors may not be subject to banking regulation, or may be supervised by a national or state regulatory agency that does not have the same resources or regulatory priorities as the regulatory agencies which supervise more diversified financial services firms, or
- the financial services regulatory framework in a particular jurisdiction may favor financial institutions that are based in that jurisdiction.
These types of differences in the regulatory framework can result in JPMorgan Chase losing market share to competitors that are less regulated or not subject to regulation, especially with respect to unregulated financial products.

There can also be significant differences in the ways that similar regulatory initiatives affecting the financial services industry are implemented in the U.S. and in other countries and regions in which JPMorgan Chase does business. For
example, when adopting rules that are intended to implement a global regulatory standard, a national regulator may introduce additional or more restrictive requirements, which can create competitive disadvantages for financial services firms, such as JPMorgan Chase, that may be subject to those enhanced regulations.

In addition, certain national and multi-national bodies and governmental agencies outside the U.S. have adopted laws, rules or regulations that may conflict with or prohibit JPMorgan Chase from complying with laws, rules and regulations to which it is otherwise subject, creating conflict of law issues that also increase its risks of non-compliance in those jurisdictions.

Legislative and regulatory initiatives outside the U.S. could require JPMorgan Chase to make significant modifications to its operations and legal entity structure in the relevant countries or regions in order to comply with those requirements. These include laws, rules and regulations that have been adopted or proposed relating to:

- the establishment of locally-based intermediate holding companies or operating subsidiaries
- requirements to maintain minimum amounts of capital or liquidity in locally-based subsidiaries
- to implement processes within locally-based subsidiaries to comply with local regulatory requirements
- the separation (or "ring fencing") of core banking products and services from markets activities
- the resolution of financial institutions
- requirements for executing or settling transactions on exchanges or through central counterparties ("CCPs")
- position limits and reporting rules for derivatives
- governance and accountability regimes
- conduct of business and control requirements, and
- restrictions on compensation.

These types of differences, inconsistencies and conflicts in financial services regulation have required and could in the future require JPMorgan Chase to:

- divest assets or restructure its operations
- absorb increased capital and liquidity costs
- incur higher operational and compliance costs
- change the prices that it charges for its products and services
- curtail the products and services that it offers to its customers and clients
- curtail other business opportunities, including acquisitions or principal investments, that it otherwise would have pursued
- become subject to regulatory fines, penalties or other sanctions, or
- incur higher costs for complying with different legal and regulatory frameworks.

Any or all of these factors could harm JPMorgan Chase's ability to compete against other firms that are not subject to the same laws, rules and regulations or supervisory oversight, or harm JPMorgan Chase's businesses, results of operations and profitability.

## Resolving regulatory investigations can subject JPMorgan Chase to significant penalties and collateral consequences, and could result in higher compliance costs or restrictions on its operations.

JPMorgan Chase is subject to heightened oversight and scrutiny from regulatory authorities in many jurisdictions. JPMorgan Chase has paid significant fines, provided other monetary relief, incurred other penalties and experienced other repercussions in connection with resolving investigations and enforcement actions by governmental agencies. JPMorgan Chase could become subject to similar regulatory or governmental resolutions or other actions in the future, and addressing the requirements of any such resolutions or actions could result in JPMorgan Chase incurring higher operational and compliance costs, including devoting substantial resources to the required remediation, or needing to comply with other restrictions.

In connection with resolving specific regulatory investigations or enforcement actions, certain regulators have required JPMorgan Chase and other financial institutions to admit wrongdoing with respect to the activities that gave rise to the resolution. These types of admissions can lead to:

- greater exposure in litigation
- damage to JPMorgan Chase's reputation
- disqualification from doing business with certain clients or customers, or in specific jurisdictions, or
- other direct and indirect adverse effects.

Furthermore, U.S. government officials have demonstrated a willingness to bring criminal actions against financial institutions and have required that institutions plead guilty to criminal offenses or admit other wrongdoing in connection with resolving regulatory investigations or enforcement actions. Resolutions of this type can have significant collateral consequences for the subject financial institution, including:

- loss of clients, customers and business
- restrictions on offering certain products or services, and
- Iosing permission to operate certain businesses, either temporarily or permanently.

JPMorgan Chase expects that:

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- it and other financial services firms will continue to be subject to heightened regulatory scrutiny and governmental investigations and enforcement actions
- governmental authorities will continue to require that financial institutions be penalized for actual or deemed violations of law with formal and punitive enforcement actions, including the imposition of significant monetary and other sanctions, rather than resolving these matters through informal supervisory actions; and
- governmental authorities will be more likely to pursue formal enforcement actions and resolutions against JPMorgan Chase to the extent that it has previously been subject to other governmental investigations or enforcement actions.

If JPMorgan Chase fails to meet the requirements of any resolution of a governmental investigation or enforcement action, or to maintain risk and control processes that meet the heightened standards and expectations of its regulators, it could be required to, among other things:

- enter into further resolutions of investigations or enforcement actions
- pay additional regulatory penalties or enter into judgments, or
- accept material regulatory restrictions on, or changes in the management of, its businesses.

In these circumstances, JPMorgan Chase could also become subject to other sanctions, or to prosecution or civil litigation with respect to the conduct that gave rise to an investigation or enforcement action.

JPMorgan Chase's operations and financial results can be negatively impacted in countries with less predictable legal and regulatory frameworks.
JPMorgan Chase conducts existing and new business in certain countries in which the application of the rule of law is inconsistent or less predictable, including with respect to:

- the absence of a statutory or regulatory basis or guidance for engaging in specific types of business or transactions
- conflicting or ambiguous laws, rules and regulations, or the inconsistent application or interpretation of existing laws, rules and regulations
- uncertainty concerning the enforceability of contractual, intellectual property or other obligations
- difficulty in competing in economies in which the government controls or protects all or a portion of the local economy or specific businesses, or where graft or corruption may be pervasive
- the threat of regulatory investigations, civil litigations or criminal prosecutions that are arbitrary or otherwise contrary to established legal principles in other parts of the world, and
- the termination of licenses required to operate in the local market or the suspension of business relationships with governmental bodies.

If the application of the laws, rules and regulations in any country is susceptible to producing inconsistent or unexpected outcomes, this can create a more difficult environment in which JPMorgan Chase conducts its business and could negatively affect JPMorgan Chase's operations and reduce its earnings with respect to that country. For example, conducting business could require JPMorgan Chase to devote significant additional resources to understanding, and monitoring changes in, local laws, rules and regulations, as well as structuring its operations to comply with local laws, rules and regulations and implementing and administering related internal policies and procedures.

There can be no assurance that JPMorgan Chase will always be successful in its efforts to fully understand and to conduct its business in compliance with the laws, rules and regulations of all of the jurisdictions in which it operates, and the risk of non-compliance can be greater in countries that have less predictable legal and regulatory frameworks.
Requirements for the orderly resolution of JPMorgan Chase could result in JPMorgan Chase having to restructure or reorganize its businesses and could increase its funding or operational costs or curtail its businesses.

JPMorgan Chase is required under Federal Reserve and FDIC rules to prepare and submit periodically to those agencies a detailed plan for rapid and orderly resolution in bankruptcy, without extraordinary government support, in the event of material financial distress or failure. The agencies' evaluation of JPMorgan Chase's resolution plan may change, and the requirements for resolution plans may be modified from time to time. Any such determinations or modifications could result in JPMorgan Chase needing to make changes to its legal entity structure or to certain internal or external activities, which could increase its funding or operational costs, or hamper its ability to serve clients and customers.

If the Federal Reserve and the FDIC were both to determine that a resolution plan submitted by JPMorgan Chase has deficiencies, they could jointly impose more stringent capital, leverage or liquidity requirements or restrictions on JPMorgan Chase's growth, activities or operations. The agencies could also require that JPMorgan Chase restructure, reorganize or divest assets or businesses in ways that could materially and adversely affect JPMorgan Chase's operations and strategy.
Holders of JPMorgan Chase \& Co.'s debt and equity securities will absorb losses if it were to enter into a resolution.

Federal Reserve rules require that JPMorgan Chase \& Co. (the "Parent Company") maintain minimum levels of unsecured external long-term debt and other loss-
absorbing capacity with specific terms ("eligible LTD") for purposes of recapitalizing JPMorgan Chase's operating subsidiaries if the Parent Company were to enter into a resolution either:

- in a bankruptcy proceeding under Chapter 11 of the U.S. Bankruptcy Code, or
- in a receivership administered by the FDIC under Title II of the Dodd-Frank Act ("Title II").

If the Parent Company were to enter into a resolution, holders of eligible LTD and other debt and equity securities of the Parent Company will absorb the losses of the Parent Company and its subsidiaries.

The preferred "single point of entry" strategy under JPMorgan Chase's resolution plan contemplates that only the Parent Company would enter bankruptcy proceedings. JPMorgan Chase's subsidiaries would be recapitalized, as needed, so that they could continue normal operations or subsequently be divested or wound down in an orderly manner. As a result, the Parent Company's losses and any losses incurred by its subsidiaries would be imposed first on holders of the Parent Company's equity securities and thereafter on its unsecured creditors, including holders of eligible LTD and other debt securities. Claims of holders of those securities would have a junior position to the claims of creditors of JPMorgan Chase's subsidiaries and to the claims of priority (as determined by statute) and secured creditors of the Parent Company.

Accordingly, in a resolution of the Parent Company in bankruptcy, holders of eligible LTD and other debt securities of the Parent Company would realize value only to the extent available to the Parent Company as a shareholder of JPMorgan Chase Bank, N.A. and its other subsidiaries, and only after any claims of priority and secured creditors of the Parent Company have been fully repaid.

The FDIC has similarly indicated that a single point of entry recapitalization model could be a desirable strategy to resolve a systemically important financial institution, such as the Parent Company, under Title II. However, the FDIC has not formally adopted a single point of entry resolution strategy.

If the Parent Company were to approach, or enter into, a resolution, none of the Parent Company, the Federal Reserve or the FDIC is obligated to follow JPMorgan Chase's preferred resolution strategy, and losses to holders of eligible LTD and other debt and equity securities of the Parent Company, under whatever strategy is ultimately followed, could be greater than they might have been under JPMorgan Chase's preferred strategy.

Political

## Economic uncertainty or instability caused by political developments can negatively impact JPMorgan Chase's businesses.

Political developments in the U.S. and other countries can cause uncertainty in the economic environment and market conditions in which JPMorgan Chase operates its businesses. Certain governmental policy initiatives, as well as heightened geopolitical tensions, could significantly affect U.S. and global economic growth and cause higher volatility in the financial markets, including:

- monetary policies and actions taken by the Federal Reserve and other central banks or governmental authorities, including any sustained large-scale asset purchases or any suspension or reversal of those actions
- fiscal policies, including with respect to taxation and spending
- actions that governments take or fail to take in response to the effects of health emergencies, the spread of infectious diseases, epidemics or pandemics, as well as the effectiveness of any actions taken
- governmental actions or initiatives relating to climate risk, or more generally, the impact of business activities on environmental, social and governance ("ESG") matters, and the management of climate and ESG-related risks
- isolationist foreign policies
- an outbreak or escalation of hostilities, or other geopolitical instabilities
- economic or financial sanctions
- the implementation of tariffs and other protectionist trade policies, or
- other governmental policies or actions adopted or taken in response to political or social pressures.

These types of political developments, and uncertainty about the possible outcomes of these developments, could:

- erode investor confidence in the U.S. economy and financial markets, which could potentially undermine the status of the U.S. dollar as a safe haven currency
- provoke retaliatory countermeasures by other countries and otherwise heighten tensions in regulatory, enforcement or diplomatic relations
- lead to the withdrawal of government support for agencies and enterprises such as the U.S. Federal National Mortgage Association and the U.S. Federal Home Loan Mortgage Corporation (together, the "U.S. GSEs")
- increase concerns about whether the U.S. government will be funded, and its outstanding debt serviced, at any particular time


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- result in periodic shutdowns of the U.S. government or governments in other countries
- increase investor reliance on actions by the Federal Reserve or other central banks, or influence investor perceptions concerning government support of sectors of the economy or the economy as a whole
- adversely affect the financial condition or credit ratings of clients and counterparties with which JPMorgan Chase does business, or
- cause JPMorgan Chase to refrain from engaging in business opportunities that it might otherwise pursue.

These factors could lead to:

- slower growth rates, rising inflation or recession
- greater market volatility
- a contraction of available credit and the widening of credit spreads
- erosion of adequate risk premium on certain financial assets
- diminished investor and consumer confidence
- lower investment growth
- large-scale sales of government debt and other debt and equity securities in the U.S. and other countries
- reduced commercial activity among trading partners
- the potential for a currency redenomination by a particular country
- the possible departure of a country from, or the dissolution of, a political or economic alliance or treaty
- potential expropriation or nationalization of assets, or
- other market dislocations, including the spread of unfavorable economic conditions from a particular country or region to other countries or regions.

Any of these potential outcomes could cause JPMorgan Chase to suffer losses on its market-making positions or in its investment portfolio, reduce its liquidity and capital levels, increase the allowance for credit losses or lead to higher net charge offs, hamper its ability to deliver products and services to its clients and customers, and weaken its results of operations and financial condition.

JPMorgan Chase's business and results of operations may also be adversely affected by actions or initiatives by national, state or local governmental authorities that:

- seek to discourage financial institutions from doing business with companies engaged in certain industries, or conversely, to penalize financial institutions that elect not to do business with such companies, or
- mandate specific business practices that companies operating in the relevant jurisdiction must adopt.

Because governmental policies in one jurisdiction may differ or conflict with those in other jurisdictions, JPMorgan Chase may face negative consequences regardless of the course of action it takes or elects not to take, including:

- restrictions or prohibitions on doing business within a particular jurisdiction, or with governmental entities in a jurisdiction
- the threat of enforcement actions, including under antitrust or other anti-competition laws, rules and regulations, and
- harm to its reputation arising from public criticism, including from politicians, activists and other stakeholders.

In addition, JPMorgan Chase's relationships or ability to transact with clients and customers, and with governmental or regulatory bodies in jurisdictions in which JPMorgan Chase does business, could be adversely affected if its decisions with respect to doing business with companies in certain sensitive industries are perceived to harm those companies or to align with particular political viewpoints. Furthermore, JPMorgan Chase's participation in or association with certain social and environmental industry groups or initiatives could be viewed by activists or governmental authorities as boycotting or other discriminatory business behavior.

## Market

## Economic and market events and conditions can materially affect JPMorgan Chase's businesses and investment and market-making positions.

JPMorgan Chase's results of operations can be negatively affected by adverse changes in any of the following:

- investor, consumer and business sentiment
- events that reduce confidence in the financial markets
- inflation, deflation or recession
- high unemployment or, conversely, a tightening labor market
- the availability and cost of capital, liquidity and credit
- levels and volatility of interest rates, credit spreads and market prices for currencies, equities and commodities, and the duration of any changes in levels or volatility
- the economic effects of an outbreak or escalation of hostilities, terrorism or other geopolitical instabilities, cyber attacks, climate change, natural disasters, severe weather conditions, health emergencies, the spread of infectious diseases, epidemics or pandemics or other extraordinary events beyond JPMorgan Chase's control, and
- the strength of the U.S. and global economies.

All of these are affected by global economic, market and political events and conditions, as well as regulatory restrictions.

In addition, JPMorgan Chase's investment portfolio and market-making businesses can suffer losses due to unanticipated market events, including:

- severe declines in asset values
- unexpected credit events
- unforeseen events or conditions that may cause previously uncorrelated factors to become correlated (and vice versa)
- the inability to effectively hedge market and other risks related to market-making and investment portfolio positions, or
- other market risks that may not have been appropriately taken into account in the development, structuring or pricing of a financial instrument.
If JPMorgan Chase experiences significant losses in its investment portfolio or from market-making activities, this could reduce JPMorgan Chase's profitability and its liquidity and capital levels, and thereby constrain the growth of its businesses.


## JPMorgan Chase's consumer businesses can be negatively affected by adverse economic conditions and governmental policies.

JPMorgan Chase's consumer businesses are particularly affected by U.S. and global economic conditions, including:

- personal and household income distribution
- unemployment or underemployment
- prolonged periods of exceptionally low or high interest rates
- housing prices
- the level of inflation and its effect on prices for goods and services
- consumer and small business confidence levels, and
- changes in consumer spending or in the level of consumer debt.

Heightened levels of unemployment or underemployment that result in reduced personal and household income could negatively affect consumer credit performance to the extent that consumers are less able to service their debts. In addition, sustained low growth, low or negative interest rates, inflationary pressures or recessionary conditions could diminish customer demand for the products and services offered by JPMorgan Chase's consumer businesses.

Adverse economic conditions could also lead to an increase in delinquencies, additions to the allowance for credit losses and higher net charge-offs, which can reduce JPMorgan Chase's earnings. These consequences could be significantly worse in certain geographies and industry segments where declining industrial or manufacturing activity has resulted in or could result in higher levels of unemployment, or where high levels of consumer debt, such as outstanding
student loans, could impair the ability of customers to pay their other consumer loan obligations.

JPMorgan Chase's earnings from its consumer businesses could also be adversely affected by governmental policies and actions that affect consumers, including:

- policies and initiatives relating to medical insurance, education, immigration, employment status and housing, and
- policies aimed at the economy more broadly, such as higher taxes and increased regulation which could result in reductions in consumer disposable income.


## Unfavorable market and economic conditions can have an adverse effect on JPMorgan Chase's wholesale businesses.

In JPMorgan Chase’s wholesale businesses, market and economic factors can affect the volume of transactions that JPMorgan Chase executes for its clients or for which it advises clients, and, therefore, the revenue that JPMorgan Chase receives from those transactions. These factors can also influence the willingness of other financial institutions and investors to participate in capital markets transactions that JPMorgan Chase manages, such as Ioan syndications or securities underwriting. Furthermore, if a significant and sustained deterioration in market conditions were to occur, the profitability of JPMorgan Chase's capital markets businesses, including its loan syndication, securities underwriting and leveraged lending activities, could be reduced to the extent that those businesses:

- earn less fee revenue due to lower transaction volumes, including when clients are unwilling or unable to refinance their outstanding debt obligations in unfavorable market conditions, or
- dispose of portions of credit commitments at a loss, or hold larger residual positions in credit commitments that cannot be sold at favorable prices.

An adverse change in market conditions in particular segments of the economy, such as a sudden and severe downturn in oil and gas prices or an increase in commodity prices, or sustained changes in consumer behavior that affect specific economic sectors, could have a material adverse effect on clients of JPMorgan Chase whose operations or financial condition are directly or indirectly dependent on the health or stability of those market segments or economic sectors, as well as clients that are engaged in related businesses. JPMorgan Chase could incur credit losses on its loans and other credit commitments to clients that operate in, or are dependent on, any sector of the economy that is under stress.

The fees that JPMorgan Chase earns from managing client assets or holding assets under custody for clients could be diminished by declining asset values or other adverse macroeconomic conditions. For example, higher interest rates or a downturn in financial markets could affect the valuations of client assets that JPMorgan Chase manages or

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holds under custody, which, in turn, could affect JPMorgan Chase's revenue from fees that are based on the amount of assets under management or custody. Similarly, adverse macroeconomic or market conditions could prompt outflows from JPMorgan Chase funds or accounts, or cause clients to invest in products that generate lower revenue. Substantial and unexpected withdrawals from a JPMorgan Chase fund can also hamper the investment performance of the fund, particularly if the outflows create the need for the fund to dispose of fund assets at disadvantageous times or prices, and could lead to further withdrawals based on the weaker investment performance.

An economic downturn or sustained changes in consumer behavior that results in shifts in consumer and business spending could also have a negative impact on certain of JPMorgan Chase's wholesale clients, and thereby diminish JPMorgan Chase's earnings from its wholesale operations. For example, the businesses of certain of JPMorgan Chase's wholesale clients are dependent on consistent streams of rental income from commercial real estate properties which are owned or being built by those clients. Sustained adverse economic conditions could result in reductions in the rental cash flows that owners or developers receive from their tenants which, in turn, could depress the values of the properties and impair the ability of borrowers to service or refinance their commercial real estate loans. These consequences could result in JPMorgan Chase experiencing increases in the allowance for credit losses, higher delinquencies, defaults and charge-offs within its commercial real estate loan portfolio and incurring higher costs for servicing a larger volume of delinquent loans in that portfolio, thereby reducing JPMorgan Chase's earnings from its wholesale businesses.

## Changes in interest rates and credit spreads can adversely affect JPMorgan Chase's earnings, its liquidity or its capital levels.

When interest rates are high or increasing, JPMorgan Chase can generally be expected to earn higher net interest income. However, higher interest rates can also lead to:

- fewer originations of commercial and residential real estate loans
- losses on underwriting exposures or incremental clientspecific downgrades, or increases in the allowance for credit losses and net charge-offs due to higher financing costs for clients
- the loss of deposits, particularly if customers withdraw deposits because they believe that interest rates offered by JPMorgan Chase are lower than those of competitors or if JPMorgan Chase makes incorrect assumptions about depositor behavior
- losses on available-for-sale ("AFS") securities held in the investment securities portfolio
- lower net interest income if central banks introduce interest rate increases more quickly than anticipated
and this results in a misalignment in the pricing of short-term and long-term borrowings
- less liquidity in the financial markets, and
- higher funding costs.

All of these outcomes could adversely affect JPMorgan Chase's earnings or its liquidity and capital levels. Higher interest rates can also negatively affect the payment performance on loans within JPMorgan Chase's consumer and wholesale loan portfolios that are linked to variable interest rates. If borrowers of variable rate loans are unable to afford higher interest payments, those borrowers may reduce or stop making payments, thereby causing JPMorgan Chase to incur losses and increased operational costs related to servicing a higher volume of delinquent loans.

On the other hand, a low or negative interest rate environment may cause:

- net interest margins to be compressed, which could reduce the amounts that JPMorgan Chase earns on its investment securities portfolio to the extent that it is unable to reinvest contemporaneously in higheryielding instruments
- unanticipated or adverse changes in depositor behavior, which could negatively affect JPMorgan Chase's broader asset and liability management strategy, and
- a reduction in the value of JPMorgan Chase's mortgage servicing rights ("MSRs") asset, thereby decreasing revenues.

When credit spreads widen, it becomes more expensive for JPMorgan Chase to borrow. JPMorgan Chase's credit spreads may widen or narrow not only in response to events and circumstances that are specific to JPMorgan Chase but also as a result of general economic and geopolitical events and conditions. Changes in JPMorgan Chase's credit spreads will affect, positively or negatively, JPMorgan Chase's earnings on certain liabilities, such as derivatives, that are recorded at fair value.

## JPMorgan Chase's results may be materially affected by market fluctuations and significant changes in the value of financial instruments.

The value of securities, derivatives and other financial instruments which JPMorgan Chase owns or in which it makes markets can be materially affected by market fluctuations. Market volatility, illiquid market conditions and other disruptions in the financial markets may make it extremely difficult to value certain financial instruments. Subsequent valuations of financial instruments in future periods, in light of factors then prevailing, may result in significant changes in the value of these instruments. In addition, at the time of any disposition of these financial instruments, the price that JPMorgan Chase ultimately realizes will depend on the demand and liquidity in the market at that time and may be materially lower than their
current fair value. Any of these factors could cause a decline in the value of financial instruments that JPMorgan Chase owns or in which it makes markets, which may have an adverse effect on JPMorgan Chase's results of operations.

JPMorgan Chase's risk management and monitoring processes, including its stress testing framework, seek to quantify and manage JPMorgan Chase's exposure to more extreme market moves. However, JPMorgan Chase's hedging and other risk management strategies may not be effective, and it could incur significant losses, if extreme market events were to occur.

Credit

## JPMorgan Chase can be negatively affected by adverse changes in the financial condition of clients, counterparties, custodians and CCPs.

JPMorgan Chase routinely executes transactions with clients and counterparties such as corporations, financial institutions, asset managers, hedge funds, securities exchanges and government entities within and outside the U.S. Many of these transactions expose JPMorgan Chase to the credit risk of its clients and counterparties, and can involve JPMorgan Chase in disputes and litigation if a client or counterparty defaults. JPMorgan Chase can also be subject to losses or liability where a financial institution that it has appointed to provide custodial services for client assets or funds becomes insolvent as a result of fraud or the failure to abide by existing laws and obligations, or where clients are unable to access assets held by JPMorgan Chase as custodian due to governmental actions or other factors.

A default by, or the financial or operational failure of, a CCP through which JPMorgan Chase executes contracts would require JPMorgan Chase to replace those contracts, thereby increasing its operational costs and potentially resulting in losses. In addition, JPMorgan Chase can be exposed to losses if a member of a CCP in which JPMorgan Chase is also a member defaults on its obligations to the CCP because of requirements that each member of the CCP absorb a portion of those losses. Furthermore, JPMorgan Chase can be subject to bearing its share of non-default losses incurred by a CCP, including losses from custodial, settlement or investment activities or due to cyber or other security breaches.

As part of its clearing services activities, JPMorgan Chase is exposed to the risk of nonperformance by its clients, which it seeks to mitigate by requiring clients to provide adequate collateral. JPMorgan Chase is also exposed to intra-day credit risk of its clients in connection with providing cash management, clearing, custodial and other transaction services to those clients. If a client for which JPMorgan Chase provides these services becomes bankrupt or insolvent, JPMorgan Chase may incur losses, become involved in disputes and litigation with one or more CCPs, the client's bankruptcy estate and other creditors, or be subject to regulatory investigations. All of the foregoing events can increase JPMorgan Chase's operational and
litigation costs, and JPMorgan Chase may suffer losses to the extent that any collateral that it has received is insufficient to cover those losses.

Transactions with government entities, including national, state, provincial, municipal and local authorities, can expose JPMorgan Chase to enhanced sovereign, credit, operational and reputation risks. Government entities may, among other things, claim that actions taken by government officials were beyond the legal authority of those officials or repudiate transactions authorized by a previous incumbent government. These types of actions have in the past caused, and could in the future cause, JPMorgan Chase to suffer losses or hamper its ability to conduct business in the relevant jurisdiction.

In addition, local laws, rules and regulations could limit JPMorgan Chase's ability to resolve disputes and litigation in the event of a counterparty default or unwillingness to make previously agreed-upon payments, which could subject JPMorgan Chase to losses.

Disputes may arise with counterparties to derivatives contracts with regard to the terms, the settlement procedures or the value of underlying collateral. The disposition of those disputes could cause JPMorgan Chase to incur unexpected transaction, operational and legal costs, or result in credit losses. These consequences can also impair JPMorgan Chase's ability to effectively manage its credit risk exposure from its market activities, or cause harm to JPMorgan Chase's reputation.

The financial or operational failure of a significant market participant, such as a major financial institution or a CCP, or concerns about the creditworthiness of such a market participant or its ability to fulfill its obligations, can cause substantial and cascading disruption within the financial markets, including in circumstances where coordinated action by multiple other market participants is required to address the failure or disruption. JPMorgan Chase's businesses could be significantly disrupted by such an event, particularly if it leads to other market participants incurring significant losses, experiencing liquidity issues or defaulting, and JPMorgan Chase is likely to have significant interrelationships with, and credit exposure to, such a significant market participant.

## JPMorgan Chase may suffer losses if the value of collateral declines in stressed market conditions.

During periods of market stress or illiquidity, JPMorgan Chase's credit risk may be further increased when:

- JPMorgan Chase fails to realize the fair value of the collateral it holds
- collateral is liquidated at prices that are not sufficient to recover the full amount owed to it, or
- counterparties are unable to post collateral, whether for operational or other reasons.

Furthermore, disputes with counterparties concerning the valuation of collateral may increase in times of significant

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market stress, volatility or illiquidity, and JPMorgan Chase could suffer losses during these periods if it is unable to realize the fair value of collateral or to manage declines in the value of collateral.

## JPMorgan Chase could incur significant losses arising from concentrations of credit and market risk.

JPMorgan Chase is exposed to greater credit and market risk to the extent that groupings of its clients or counterparties:

- engage in similar or related businesses, or in businesses in related industries
- do business in the same geographic region, or
- have business profiles, models or strategies that could cause their ability to meet their obligations to be similarly affected by changes in economic conditions.

For example, a significant deterioration in the credit quality of one of JPMorgan Chase's borrowers or counterparties could lead to concerns about the creditworthiness of other borrowers or counterparties in similar, related or dependent industries. This type of interrelationship could exacerbate JPMorgan Chase’s credit, liquidity and market risk exposure and potentially cause it to incur losses, including fair value losses in its market-making businesses and investment portfolios. In addition, JPMorgan Chase may be required to increase the allowance for credit losses with respect to certain clients or industries in order to align with directives or expectations of its banking regulators.

Similarly, challenging economic conditions that affect a particular industry or geographic area could lead to concerns about the credit quality of JPMorgan Chase's borrowers or counterparties not only in that particular industry or geography but in related or dependent industries, wherever located. These conditions could also heighten concerns about the ability of customers of JPMorgan Chase's consumer businesses who live in those areas or work in those affected industries or related or dependent industries to meet their obligations to JPMorgan Chase. JPMorgan Chase regularly monitors various segments of its credit and market risk exposures to assess the potential risks of concentration or contagion, but its ability to diversify or hedge its exposure against those risks may be limited.

JPMorgan Chase's consumer businesses can also be harmed by an excessive expansion of consumer credit by bank or non-bank competitors. Heightened competition for certain types of consumer loans could prompt industry-wide reactions such as significant reductions in the pricing or margins of those loans or the making of loans to lesscreditworthy borrowers. If large numbers of consumers subsequently default on their loans, whether due to weak credit profiles, an economic downturn or other factors, this could impair their ability to repay obligations owed to JPMorgan Chase and result in higher charge-offs and other credit-related losses. More broadly, widespread defaults on consumer debt could lead to recessionary conditions in the
U.S. economy, and JPMorgan Chase's consumer businesses may earn lower revenues in such an environment.

If JPMorgan Chase is unable to reduce positions effectively during a market dislocation, this can increase both the market and credit risks associated with those positions and the level of risk-weighted-assets ("RWA") that JPMorgan Chase holds on its balance sheet. These factors could adversely affect JPMorgan Chase's capital position, funding costs and the profitability of its businesses.

Liquidity

## JPMorgan Chase's ability to operate its businesses could be impaired if its liquidity is constrained.

JPMorgan Chase's liquidity could be impaired at any given time by factors such as:

- market-wide illiquidity or disruption
- unforeseen liquidity or capital requirements, including as a result of changes in laws, rules and regulations
- inability to sell assets, or to sell assets at favorable times or prices
- default by a CCP or other significant market participant
- unanticipated outflows of cash or collateral
- unexpected loss of consumer deposits or higher than anticipated draws on lending-related commitments, and
- lack of market or customer confidence in JPMorgan Chase or financial institutions in general.

A reduction in JPMorgan Chase's liquidity may be caused by events over which it has little or no control. For example, periods of market stress, low investor confidence and significant market illiquidity could result in higher funding costs for JPMorgan Chase and could limit its access to some of its traditional sources of liquidity.
JPMorgan Chase may need to raise funding from alternative sources if its access to stable and lower-cost sources of funding, such as deposits and borrowings from Federal Home Loan Banks, is reduced. Alternative sources of funding could be more expensive or limited in availability. JPMorgan Chase’s funding costs could also be negatively affected by actions that JPMorgan Chase may take in order to:

- satisfy applicable liquidity coverage ratio and net stable funding ratio requirements
- address obligations under its resolution plan, or
- satisfy regulatory requirements in jurisdictions outside the U.S. relating to the pre-positioning of liquidity in subsidiaries that are material legal entities.

More generally, if JPMorgan Chase fails to effectively manage its liquidity, this could constrain its ability to fund or invest in its businesses and subsidiaries, and thereby adversely affect its results of operations.

JPMorgan Chase \& Co. is a holding company and depends on the cash flows of its subsidiaries to make payments on its outstanding securities.

JPMorgan Chase \& Co. is a holding company that holds the stock of JPMorgan Chase Bank, N.A. and an intermediate holding company, JPMorgan Chase Holdings LLC (the "IHC"). The IHC in turn generally holds the stock of JPMorgan Chase's subsidiaries other than JPMorgan Chase Bank, N.A. and its subsidiaries. The IHC also owns other assets and provides intercompany lending to the holding company.

The holding company is obligated to contribute to the IHC substantially all the net proceeds received from securities issuances (including issuances of senior and subordinated debt securities and of preferred and common stock).

The ability of JPMorgan Chase Bank, N.A. and the IHC to make payments to the holding company is also limited. JPMorgan Chase Bank, N.A. is subject to regulatory restrictions on its dividend distributions, as well as capital adequacy requirements, such as the Supplementary Leverage Ratio ("SLR"), and liquidity requirements and other regulatory restrictions on its ability to make payments to the holding company. The IHC is prohibited from paying dividends or extending credit to the holding company if certain capital or liquidity thresholds are breached or if limits are otherwise imposed by JPMorgan Chase's management or Board of Directors.

As a result of these arrangements, the ability of the holding company to make various payments is dependent on its receiving dividends from JPMorgan Chase Bank, N.A. and dividends and borrowings from the IHC. These limitations could affect the holding company's ability to:

- pay interest on its debt securities
- pay dividends on its equity securities
- redeem or repurchase outstanding securities, and
- fulfill its other payment obligations.

These arrangements could also result in the holding company seeking protection under bankruptcy laws or otherwise entering into resolution proceedings at a time earlier than would have been the case absent the existence of the capital and liquidity thresholds to which the IHC is subject.

## Reductions in JPMorgan Chase's credit ratings may adversely affect its liquidity and cost of funding.

JPMorgan Chase \& Co. and certain of its principal subsidiaries are rated by credit rating agencies. Rating agencies evaluate general, firm-specific and industryspecific factors when determining credit ratings for a particular financial institution, including:

- expected future profitability
- risk management practices
- legal expenses
- ratings differentials between bank holding companies and their bank and non-bank subsidiaries
- regulatory developments
- assumptions about government support, and
- economic and geopolitical developments.

JPMorgan Chase closely monitors and manages, to the extent that it is able, factors that could influence its credit ratings. However, there is no assurance that JPMorgan Chase's credit ratings will not be lowered in the future. Furthermore, any such downgrade could occur at times of broader market instability when JPMorgan Chase's options for responding to events may be more limited and general investor confidence is low.

A reduction in JPMorgan Chase's credit ratings could curtail JPMorgan Chase's business activities and reduce its profitability in a number of ways, including:

- reducing its access to capital markets
- materially increasing its cost of issuing and servicing securities
- triggering additional collateral or funding requirements, and
- decreasing the number of investors and counterparties that are willing or permitted to do business with or lend to JPMorgan Chase.

Any rating reduction could also increase the credit spreads charged by the market for taking credit risk on JPMorgan Chase \& Co. and its subsidiaries. This could, in turn, adversely affect the value of debt and other obligations of JPMorgan Chase \& Co. and its subsidiaries.

## The transition to alternative reference rates could expose JPMorgan Chase to operational risks or litigation and other disputes.

Regulators, industry bodies and other market participants in the U.S. and other countries continue to engage in initiatives to introduce and encourage the use of alternative reference rates to replace certain interest rate indices that are deemed to be "benchmarks", and certain of these alternative rates have gained or are gaining acceptance among market participants. However, there is no assurance that:

- any of these new rates will be similar to, or produce the economic equivalent of, the benchmarks that they seek to replace
- arrangements by market participants to prepare for the discontinuation of certain benchmarks and the transition to alternative reference rates will be fully effective, or
- a particular alternative reference rate will be widely accepted by market participants, or that market acceptance of that rate will not be hindered by the introduction of other reference rates.


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For example, vast amounts of loans, mortgages, securities, derivatives and other financial instruments are still linked to the London Interbank Offered Rate ("LIBOR") benchmark, and significant progress has been made by regulators, industry bodies and market participants to introduce and implement the Secured Overnight Financing Rate ("SOFR") as a replacement rate for U.S. dollar LIBOR. However, if market participants have not implemented effective operational and other arrangements to address the transition from U.S. dollar LIBOR to SOFR, this could result in dislocation in the financial markets, volatility in the pricing of securities, derivatives and other instruments, and the suppression of capital markets activities, all of which could have a negative impact on JPMorgan Chase's results of operations and on U.S. dollar LIBOR-linked securities, credit or other instruments which are issued, funded, serviced or held by JPMorgan Chase.

JPMorgan Chase could also become involved in litigation and other types of disputes with clients, customers, counterparties and investors as a consequence of the transition from U.S. dollar LIBOR and other benchmark rates to replacement rates, including claims that JPMorgan Chase has:

- treated clients, customers, counterparties or investors unfairly, or caused them to experience losses, higher financing costs or lower returns on investments
- failed to appropriately communicate the effects of the transition from benchmark rates on the products that JPMorgan Chase has sold to its clients and customers, or failed to disclose purported conflicts of interest
- made inappropriate product recommendations to or investments on behalf of its clients, or sold products that did not serve their intended purpose, in connection with the transition from benchmark rates
- engaged in anti-competitive behavior, or in the manipulation of markets or specific benchmarks, in connection with the discontinuation of or transition from benchmark rates, or
- disadvantaged clients, customers, counterparties or investors when interpreting or making determinations under the terms of agreements or financial instruments.

These types of claims could subject JPMorgan Chase to higher legal expenses and operational costs, require it to pay significant amounts in connection with resolving litigation and other disputes, and harm its reputation.
Capital

## Maintaining the required level and composition of capital may impact JPMorgan Chase's ability to support business activities, meet evolving regulatory requirements and distribute capital to shareholders.

JPMorgan Chase is subject to various regulatory capital requirements, including leverage- and risk-based capital requirements. In addition, as a Globally Systemically

Important Bank ("GSIB"), JPMorgan Chase is required to hold additional capital buffers, including a GSIB surcharge, a Stress Capital Buffer ("SCB"), and a countercyclical buffer, each of which is reassessed at least annually. The amount of capital that JPMorgan Chase is required to hold in order to satisfy these leverage-and risk-based requirements could increase at any given time due to factors such as:

- actions by banking regulators, including changes in laws, rules, and regulations
- actions taken by the Federal Reserve or the U.S. government in response to the economic effects of systemic events, such as the actions taken in response to the COVID-19 pandemic which led to an expansion of the Federal Reserve balance sheet, growth in deposits held by JPMorgan Chase and other U.S. financial institutions and, consequently, an increase in leverage exposure and the GSIB surcharge
- changes in the composition of JPMorgan Chase's balance sheet or developments that could increase RWA, such as increased market risk, customer delinquencies, client credit rating downgrades or other factors, and
- increases in estimated stress losses as determined by the Federal Reserve under the Comprehensive Capital Analysis and Review, which could increase JPMorgan Chase's SCB.

Any failure by or inability of JPMorgan Chase to maintain the required level and composition of capital, or unfavorable changes in applicable capital requirements, could have an adverse impact on JPMorgan Chase's shareholders, such as:

- reducing the amount of common stock that JPMorgan Chase is permitted to repurchase
- requiring the issuance of, or prohibiting the redemption of, capital instruments in a manner inconsistent with JPMorgan Chase's capital management strategy
- constraining the amount of dividends that may be paid on common stock, or
- curtailing JPMorgan Chase's business activities or operations.


## Operational

## JPMorgan Chase's businesses are dependent on the effectiveness of its operational systems and those of other market participants.

JPMorgan Chase's businesses rely on the ability of JPMorgan Chase's financial, accounting, transaction execution, data processing and other operational systems to process, record, monitor and report a large number of transactions on a continuous basis, and to do so accurately, quickly and securely. In addition to proper design, installation, maintenance and training, the effective
functioning of JPMorgan Chase's operational systems depends on:

- the quality of the information contained in those systems, as inaccurate, outdated or corrupted data can significantly compromise the functionality or reliability of a particular system and other systems to which it transmits or from which it receives information, and
- the ability of JPMorgan Chase to appropriately maintain and upgrade its systems on a regular basis, and to ensure that any changes introduced to its systems are managed carefully to ensure security and operational continuity and adherence to all applicable legal and regulatory requirements.

JPMorgan Chase also depends on its ability to access and use the operational systems of third parties, including its custodians, vendors (such as those that provide data and cloud computing services, and security and technology services) and other market participants (such as clearing and payment systems, CCPs and securities exchanges).

The ineffectiveness, failure or other disruption of operational systems upon which JPMorgan Chase depends, including due to a systems malfunction, cyberbreach or other systems failure, could result in unfavorable ripple effects in the financial markets and for JPMorgan Chase and its clients and customers, including:

- delays or other disruptions in providing services, liquidity or information to clients and customers
- the inability to settle transactions or obtain access to funds and other assets, including those for which physical settlement and delivery is required
- failure to timely settle or confirm transactions
- the possibility that funds transfers, capital markets trades or other transactions are executed erroneously, as a result of illegal conduct or with unintended consequences
- financial losses, including due to loss-sharing requirements of CCPs, payment systems or other market infrastructures, or as possible restitution to clients and customers
- higher operational costs associated with replacing services provided by a system that is unavailable
- client or customer dissatisfaction with JPMorgan Chase's products and services
- limitations on JPMorgan Chase's ability to collect data as required in connection with regulatory or other investigations
- regulatory fines, penalties, or other sanctions against JPMorgan Chase
- loss of confidence in the ability of JPMorgan Chase, or financial institutions generally, to protect against and withstand operational disruptions, or
- harm to JPMorgan Chase's reputation.

As the speed, frequency, volume, interconnectivity and complexity of transactions continue to increase, it can become more challenging to effectively maintain and upgrade JPMorgan Chase's operational systems and infrastructure, especially due to the heightened risks that:

- attempts by third parties to defraud JPMorgan Chase or its clients and customers may increase, evolve or become more complex, particularly during periods of market disruption or economic uncertainty
- errors made by JPMorgan Chase or another market participant, whether inadvertent or malicious, cause widespread system disruption
- isolated or seemingly insignificant errors in operational systems compound, or migrate to other systems over time, to become larger issues
- failures in synchronization or encryption software, or degraded performance of microprocessors, could cause disruptions in operational systems, or the inability of systems to communicate with each other, and
- third parties may attempt to block the use of key technology solutions by claiming that the use infringes on their intellectual property rights.
If JPMorgan Chase's operational systems, or those of newlyacquired businesses or of external parties on which JPMorgan Chase's businesses depend, are unable to meet the requirements of JPMorgan Chase's businesses and operations or bank regulatory standards, or if they fail or have other significant shortcomings, JPMorgan Chase could be materially and adversely affected.


## A successful cyber attack affecting JPMorgan Chase could cause significant harm to JPMorgan Chase and its clients and customers.

JPMorgan Chase experiences numerous cyber attacks on its computer systems, software, networks and other technology assets on a daily basis from various actors, including groups acting on behalf of hostile countries, cyber-criminals, "hacktivists" (i.e., individuals or groups that use technology to promote a political agenda or social change) and others. These cyber attacks can take many forms, including attempts to introduce computer viruses or malicious code, which are commonly referred to as "malware," into JPMorgan Chase's systems. These attacks are often designed to:

- obtain unauthorized access to confidential information belonging to JPMorgan Chase or its clients, customers, counterparties or employees
- manipulate data
- destroy data or systems with the aim of rendering services unavailable
- disrupt, sabotage or degrade service on JPMorgan Chase's systems


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- steal money, or
- extort money through the use of so-called "ransomware."

JPMorgan Chase has also experienced:

- $\quad$ significant distributed denial-of-service attacks intended to disrupt online banking services and other business activities, and
- a higher volume and complexity of cyber attacks against the backdrop of heightened geopolitical tensions.

JPMorgan Chase has experienced security breaches due to cyber attacks in the past, and it is inevitable that additional breaches will occur in the future. Any such breach could result in serious and harmful consequences for JPMorgan Chase or its clients and customers.

A principal reason that JPMorgan Chase cannot provide absolute security against cyber attacks is that it may not always be possible to anticipate, detect or recognize threats to JPMorgan Chase's systems, or to implement effective preventive measures against all breaches because:

- the techniques used in cyber attacks evolve frequently and are increasingly sophisticated, and therefore may not be recognized until launched
- cyber attacks can originate from a wide variety of sources, including JPMorgan Chase's own employees, cyber-criminals, hacktivists, groups linked to terrorist organizations or hostile countries, or third parties whose objective is to disrupt the operations of financial institutions more generally
- JPMorgan Chase does not have control over the cybersecurity of the systems of the large number of clients, customers, counterparties and third-party service providers with which it does business, and
- it is possible that a third party, after establishing a foothold on an internal network without being detected, might obtain access to other networks and systems.

The risk of a security breach due to a cyber attack could increase in the future due to factors such as:

- JPMorgan Chase's ongoing expansion of its mobile banking and other internet-based product offerings and its internal use of internet-based products and applications, including those that use cloud computing services
- the acquisition and integration of new businesses, and
- the increased use of remote access and third party video conferencing solutions to facilitate work-fromhome arrangements for employees.

In addition, a third party could misappropriate confidential information obtained by intercepting signals or
communications from mobile devices used by JPMorgan Chase's employees.

A successful penetration or circumvention of the security of JPMorgan Chase's systems or the systems of a vendor, governmental body or another market participant could cause serious negative consequences, including:

- significant disruption of JPMorgan Chase's operations and those of its clients, customers and counterparties, including losing access to operational systems
- misappropriation of confidential information of JPMorgan Chase or that of its clients, customers, counterparties, employees or regulators
- disruption of or damage to JPMorgan Chase's systems and those of its clients, customers and counterparties
- the inability, or extended delays in the ability, to fully recover and restore data that has been stolen, manipulated or destroyed, or the inability to prevent systems from processing fraudulent transactions
- violations by JPMorgan Chase of applicable privacy and other laws
- financial loss to JPMorgan Chase or to its clients, customers, counterparties or employees
- Ioss of confidence in JPMorgan Chase's cybersecurity and business resiliency measures
- dissatisfaction among JPMorgan Chase’s clients, customers or counterparties
- significant exposure to litigation and regulatory fines, penalties or other sanctions, and
- harm to JPMorgan Chase's reputation.

The extent of a particular cyber attack and the steps that JPMorgan Chase may need to take to investigate the attack may not be immediately clear, and it may take a significant amount of time before such an investigation can be completed. While such an investigation is ongoing, JPMorgan Chase may not necessarily know the full extent of the harm caused by the cyber attack, and that damage may continue to spread. These factors may inhibit JPMorgan Chase's ability to provide rapid, full and reliable information about the cyber attack to its clients, customers, counterparties and regulators, as well as the public. Furthermore, it may not be clear how best to contain and remediate the harm caused by the cyber attack, and certain errors or actions could be repeated or compounded before they are discovered and remediated. Any or all of these factors could further increase the costs and consequences of a cyber attack.

## JPMorgan Chase can be negatively affected if it fails to identify and address operational risks associated with the introduction of or changes to products, services and delivery platforms.

When JPMorgan Chase launches a new product or service, introduces a new platform for the delivery or distribution of products or services (including mobile connectivity, electronic trading and cloud computing), acquires or invests in a business or makes changes to an existing product, service or delivery platform, it may not fully appreciate or identify new operational risks that may arise from those changes, or may fail to implement adequate controls to mitigate the risks associated with those changes. Any significant failure in this regard could diminish JPMorgan Chase's ability to operate one or more of its businesses or result in:

- potential liability to clients, counterparties and customers
- increased operating expenses
- higher litigation costs, including regulatory fines, penalties and other sanctions
- damage to JPMorgan Chase's reputation
- impairment of JPMorgan Chase's liquidity
- regulatory intervention, or
- weaker competitive standing.

Any of the foregoing consequences could materially and adversely affect JPMorgan Chase's businesses and results of operations.

## JPMorgan Chase's operational costs and customer satisfaction could be adversely affected by the failure of an external operational system.

External operational systems with which JPMorgan is connected, whether directly or indirectly, can be sources of operational risk to JPMorgan Chase. JPMorgan Chase may be exposed not only to a systems failure or cyber attack that may be experienced by a vendor or market infrastructure with which JPMorgan Chase is directly connected, but also to a systems breakdown or cyber attack involving another party to which such a vendor or infrastructure is connected. Similarly, retailers, payment systems and processors, data aggregators and other external parties with which JPMorgan Chase's customers do business can increase JPMorgan Chase's operational risk. This is particularly the case where activities of customers or other parties are beyond JPMorgan Chase's security and control systems, including through the use of the internet, cloud computing services, and personal smart phones and other mobile devices or services.

If an external party obtains access to customer account data on JPMorgan Chase's systems, whether authorized or unauthorized, and that party experiences a cyberbreach of its own systems or misappropriates that data, this could
result in a variety of negative outcomes for JPMorgan Chase and its clients and customers, including:

- heightened risk that external parties will be able to execute fraudulent transactions using JPMorgan Chase's systems
- losses from fraudulent transactions, as well as potential liability for losses that exceed thresholds established in consumer protection laws, rules and regulations
- increased operational costs to remediate the consequences of the external party's security breach, and
- reputational harm arising from the perception that JPMorgan Chase's systems may not be secure.

As JPMorgan Chase's interconnectivity with clients, customers and other external parties continues to expand, JPMorgan Chase increasingly faces the risk of operational failure or cyber attacks with respect to the systems of those parties. Security breaches affecting JPMorgan Chase's clients or customers, or systems breakdowns or failures, security breaches or human error or misconduct affecting other external parties, may require JPMorgan Chase to take steps to protect the integrity of its own operational systems or to safeguard confidential information, including restricting the access of customers to their accounts. These actions can increase JPMorgan Chase's operational costs and potentially diminish customer satisfaction and confidence in JPMorgan Chase.

Furthermore, the widespread and expanding interconnectivity among financial institutions, clearing banks, CCPs, payments processors, financial technology companies, securities exchanges, clearing houses and other financial market infrastructures increases the risk that the disruption of an operational system involving one institution or entity, including due to a cyber attack, may cause industry-wide operational disruptions that could materially affect JPMorgan Chase's ability to conduct business.

## JPMorgan Chase's business and operations rely on its ability, and the ability of key external parties, to maintain appropriately-staffed workforces, and on the competence, trustworthiness, health and safety of employees.

JPMorgan Chase's ability to operate its businesses efficiently and profitably, to offer products and services that meet the expectations of its clients and customers, and to maintain an effective risk management framework is highly dependent on its ability to staff its operations appropriately and on the competence, integrity, health and safety of its employees. JPMorgan Chase's businesses and operations similarly rely on the workforces of third parties, including employees of vendors, custodians and financial markets infrastructures, and of businesses that it may seek to acquire. JPMorgan Chase's businesses could be materially and adversely affected by:

- the ineffective implementation of business decisions


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- any failure to institute controls that appropriately address risks associated with business activities, or to appropriately train employees with respect to those risks and controls
- staffing shortages, particularly in tight labor markets
- the possibility that significant portions of JPMorgan Chase's workforce are unable to work effectively, including because of illness, quarantines, shelter-inplace arrangements, government actions or other restrictions in connection with health emergencies, the spread of infectious diseases, epidemics or pandemics
- a significant operational breakdown or failure, theft, fraud or other unlawful conduct, or
- other negative outcomes caused by human error or misconduct by an employee of JPMorgan Chase or of another party on which JPMorgan Chase's businesses or operations depend.

JPMorgan Chase's operations could also be impaired if the measures taken by it or by governmental authorities to help ensure the health and safety of its employees are ineffective, or if any external party on which JPMorgan Chase relies fails to take appropriate and effective actions to protect the health and safety of its employees.

## JPMorgan Chase faces substantial legal and operational risks in the processing and safeguarding of personal information.

JPMorgan Chase's businesses and operations are subject to complex and evolving laws, rules and regulations, both within and outside the U.S., governing the privacy and protection of personal information of individuals. Governmental authorities around the world have adopted and are considering the adoption of numerous legislative and regulatory initiatives concerning privacy, data protection and security. Litigation or enforcement actions relating to these laws, rules and regulations could result in fines or orders requiring that JPMorgan Chase change its data-related practices, which could have an adverse effect on JPMorgan Chase's ability to provide products and otherwise harm its business operations.

Implementing processes relating to JPMorgan Chase's collection, use, sharing and storage of personal information to comply with all applicable laws, rules and regulations in all relevant jurisdictions, including where the laws of different jurisdictions are in conflict, can:

- increase JPMorgan Chase's compliance and operating costs
- hinder the development of new products or services, curtail the offering of existing products or services, or affect how products and services are offered to clients and customers
- demand significant oversight by JPMorgan Chase's management, and
- require JPMorgan Chase to structure its businesses, operations and systems in less efficient ways.

Not all of JPMorgan Chase's clients, customers, vendors, counterparties and other external parties may have appropriate controls in place to protect the confidentiality, integrity or availability of the information exchanged between them and JPMorgan Chase, particularly where information is transmitted by electronic means. JPMorgan Chase could be exposed to litigation or regulatory fines, penalties or other sanctions if personal information of clients, customers, employees or others were to be mishandled or misused, such as situations where such information is:

- erroneously provided to parties who are not permitted to have the information, or
- intercepted or otherwise compromised by unauthorized third parties.

Concerns regarding the effectiveness of JPMorgan Chase's measures to safeguard personal information, or even the perception that those measures are inadequate, could cause JPMorgan Chase to lose existing or potential clients and customers or employees, and thereby reduce JPMorgan Chase's revenues. Furthermore, any failure or perceived failure by JPMorgan Chase to comply with applicable privacy or data protection laws, rules and regulations may subject it to inquiries, examinations and investigations that could result in requirements to modify or cease certain operations or practices, significant liabilities or regulatory fines, penalties or other sanctions. Any of these could damage JPMorgan Chase's reputation and otherwise adversely affect its businesses.

In recent years, well-publicized incidents involving the inappropriate collection, use, sharing or storage of personal information have led to expanded governmental scrutiny of practices relating to the processing or safeguarding of personal information by companies in the U.S. and other countries. That scrutiny has in some cases resulted in, and could in the future lead to, the adoption of stricter laws, rules and regulations relating to the collection, use, sharing and storage of personal information. These types of laws, rules and regulations could prohibit or significantly restrict financial services firms such as JPMorgan Chase from transferring information across national borders or sharing information among affiliates or with third parties such as vendors, thereby increase compliance costs, or could restrict JPMorgan Chase's use of personal information when developing or offering products or services to customers. Some countries are considering or have adopted legislation implementing data protection requirements or requiring local storage and processing of data which could increase the cost and complexity of JPMorgan Chase's delivery of products and services. These restrictions could also inhibit JPMorgan Chase's development or marketing of certain products or services, or increase the costs of offering them to customers.

## JPMorgan Chase's operations, results and reputation could be harmed by occurrences of extraordinary events beyond its control.

JPMorgan Chase's business and operational systems could be seriously disrupted, and its reputation could be harmed, by events or contributing factors that are wholly or partially beyond its control, including material instances of:

- cyber attacks
- security breaches of its physical premises, including threats to health and safety
- power, telecommunications or internet outages, or shutdowns of mass transit
- failure of, or loss of access to, technology or operational systems, including any resulting loss of critical data
- damage to or loss of property or assets of JPMorgan Chase or third parties, and any consequent injuries, including in connection with any construction projects undertaken by JPMorgan Chase
- effects of climate change
- natural disasters or severe weather conditions
- accidents such as explosions or structural failures
- health emergencies, the spread of infectious diseases, epidemics or pandemics, or
- events arising from local or larger-scale civil or political unrest, any outbreak or escalation of hostilities, or terrorist acts.

JPMorgan Chase maintains a Firmwide resiliency program that is intended to enable it to recover critical business functions and supporting assets, including staff, technology and facilities, in the event of a business disruption, including due to the occurrence of an extraordinary event beyond its control. There can be no assurance that JPMorgan Chase's resiliency plans will fully mitigate all potential business continuity risks to JPMorgan Chase, its clients, and customers and third parties with which it does business, or that its resiliency plans will be adequate to address the effects of simultaneous occurrences of multiple business disruption events. In addition, JPMorgan Chase's ability to respond effectively to a business disruption event could be hampered to the extent that the members of its workforce, physical assets or systems and other support infrastructure needed to address the event are geographically dispersed, or conversely, if such an event were to occur in an area in which they are concentrated. Further, should extraordinary events or the factors that cause or contribute to those events become more chronic, the disruptive effects of those events on JPMorgan Chase's business and operations, and on its clients, customers, counterparties and employees, could become more significant and long-lasting.

Any significant failure or disruption of JPMorgan Chase's operations or operational systems, or the occurrence of one or more extraordinary events that are beyond its control, could:

- hinder JPMorgan Chase's ability to provide services to its clients and customers or to transact with its counterparties
- require it to expend significant resources to correct the failure or disruption or to address the event
- cause it to incur losses or liabilities, including from loss of revenue, damage to or loss of property, or injuries
- disrupt market infrastructure systems on which JPMorgan Chase's businesses rely
- expose it to litigation or regulatory fines, penalties or other sanctions, and
- harm its reputation.


## Enhanced regulatory and other standards for the oversight of vendors and other service providers can result in higher costs and other potential exposures.

JPMorgan Chase must comply with enhanced regulatory and other standards associated with doing business with vendors and other service providers, including standards relating to the outsourcing of functions as well as the performance of significant banking and other functions by subsidiaries. JPMorgan Chase incurs significant costs and expenses in connection with its initiatives to address the risks associated with oversight of its internal and external service providers. JPMorgan Chase's failure to appropriately assess and manage these relationships, especially those involving significant banking functions, shared services or other critical activities, could materially adversely affect JPMorgan Chase. Specifically, any such failure could result in:

- potential harm to clients and customers, and any liability associated with that harm
- regulatory fines, penalties or other sanctions
- lower revenues, and the opportunity cost from lost revenues
- increased operational costs, or
- harm to JPMorgan Chase's reputation.


## JPMorgan Chase's risk management framework may not be effective in identifying and mitigating every risk to JPMorgan Chase.

Any inadequacy or lapse in JPMorgan Chase's risk management framework, governance structure, practices, models or reporting systems could expose it to unexpected losses, and its financial condition or results of operations could be materially and adversely affected. Any such inadequacy or lapse could:

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- hinder the timely escalation of material risk issues to JPMorgan Chase's senior management and Board of Directors
- lead to business decisions that have negative outcomes for JPMorgan Chase
- require significant resources and time to remediate
- lead to non-compliance with laws, rules and regulations
- attract heightened regulatory scrutiny
- expose JPMorgan Chase to litigation, regulatory investigations or regulatory fines, penalties or other sanctions
- lead to potential harm to customers and clients, and any liability associated with that harm
- harm its reputation, or
- otherwise diminish confidence in JPMorgan Chase.

JPMorgan Chase relies on data to assess its various risk exposures. Any deficiencies in the quality or effectiveness of JPMorgan Chase's data gathering, analysis and validation processes could result in ineffective risk management practices. These deficiencies could also result in inaccurate or untimely risk reporting.
Many of JPMorgan Chase's risk management strategies and techniques consider historical market behavior and to some degree are based on management's subjective judgment or assumptions. For example, many models used by JPMorgan Chase are based on assumptions regarding historical correlations among prices of various asset classes or other market indicators. In times of market stress, including difficult or less liquid market environments, or in the event of other unforeseen circumstances, previously uncorrelated indicators may become correlated. Conversely, previouslycorrelated indicators may become uncorrelated at those times. Sudden market movements and unanticipated market or economic movements could, in some circumstances, limit the effectiveness of JPMorgan Chase's risk management strategies, causing it to incur losses.

JPMorgan Chase could recognize unexpected losses, its capital levels could be reduced and it could face greater regulatory scrutiny if its models, estimations or judgments, including those used in its financial statements, prove to be inadequate or incorrect.

JPMorgan Chase has developed and uses a variety of models and other analytical and judgment-based estimations to measure, monitor and implement controls over its market, credit, capital, liquidity, operational and other risks. JPMorgan Chase also uses internal models and estimations as a basis for its stress testing and in connection with the preparation of its financial statements under U.S. generally accepted accounting principles ("U.S. GAAP").

These models and estimations are based on a variety of assumptions and historical trends, and are periodically
reviewed and modified as necessary. The models and estimations that JPMorgan Chase uses may not be effective in all cases to identify, observe and mitigate risk due to a variety of factors, such as:

- reliance on historical trends that may not persist in the future, including assumptions underlying the models and estimations such as correlations among certain market indicators or asset prices
- inherent limitations associated with forecasting uncertain economic and financial outcomes
- historical trend information may be incomplete, or may not be indicative of severely negative market conditions such as extreme volatility, dislocation or lack of liquidity
- sudden illiquidity in markets or declines in prices of certain loans and securities may make it more difficult to value certain financial instruments
- technology that is introduced to run models or estimations may not perform as expected, or may not be well understood by the personnel using the technology
- models and estimations may contain erroneous data, valuations, formulas or algorithms, and
- review processes may fail to detect flaws in models and estimations.

JPMorgan Chase may experience unexpected losses if models, estimates or judgments used or applied in connection with its risk management activities or the preparation of its financial statements prove to have been inadequate or incorrect. For example, where quoted market prices are not available for certain financial instruments that require a determination of their fair value, JPMorgan Chase may make fair value determinations based on internally developed models or other means which ultimately rely to some degree on management estimates and judgment.

Similarly, JPMorgan Chase establishes an allowance for expected credit losses related to its credit exposures which requires significant judgments, including forecasts of how macroeconomic conditions might impair the ability of JPMorgan Chase's clients and customers to repay their loans or other obligations. These types of estimates and judgments may not prove to be accurate due to a variety of factors, as noted above. This is particularly true when the current and forecasted environments are significantly different from the historical environments upon which the models were developed, as JPMorgan Chase experienced during the early stages of the COVID-19 pandemic. The increased uncertainty may necessitate a greater degree of judgment and analytics to inform any adjustments that JPMorgan Chase may make to model outputs than would otherwise be the case.

Some of the models and other analytical and judgmentbased estimations used by JPMorgan Chase in managing
risks are subject to review by, and require the approval of, JPMorgan Chase's regulators. These reviews are required before JPMorgan Chase may use those models and estimations for calculating market risk RWA, credit risk RWA and operational risk RWA under Basel III. If JPMorgan Chase's models or estimations are not approved by its regulators, it may be subject to higher capital charges, which could adversely affect its financial results or limit the ability to expand its businesses.
Lapses in controls over disclosure or financial reporting could materially affect JPMorgan Chase's profitability or reputation.

There can be no assurance that JPMorgan Chase's disclosure controls and procedures will be effective in every circumstance, or that a material weakness or significant deficiency in internal control over financial reporting will not occur. Any such lapses or deficiencies could result in inaccurate financial reporting which, in turn, could:

- materially and adversely affect JPMorgan Chase's business and results of operations or financial condition
- restrict its ability to access the capital markets
- require it to expend significant resources to correct the lapses or deficiencies
- expose it to litigation or regulatory fines, penalties or other sanctions
- harm its reputation, or
- otherwise diminish investor confidence in JPMorgan Chase.


## Strategic

If JPMorgan Chase's management fails to develop and execute effective business strategies, and to anticipate changes affecting those strategies, JPMorgan Chase's competitive standing and results could suffer.

JPMorgan Chase's business strategies significantly affect its competitive standing and operations. These strategies relate to:

- the products and services that JPMorgan Chase offers
- the geographies in which it operates
- the types of clients and customers that it serves
- the businesses that it acquires or in which it invests
- the counterparties with which it does business, and
- the methods and distribution channels by which it offers products and services.

If management makes choices about these strategies and goals that prove to be incorrect, are based on incomplete, inaccurate or fraudulent information, do not accurately assess the competitive landscape and industry trends, or fail to address changing regulatory and market environments or the expectations of clients, customers,
investors, employees and other stakeholders, then the franchise values and growth prospects of JPMorgan Chase's businesses may suffer and its earnings could decline.

JPMorgan Chase's growth prospects also depend on management's ability to develop and execute effective business plans to address these strategic priorities, both in the near term and over longer time horizons. Management's effectiveness in this regard will affect JPMorgan Chase's ability to develop and enhance its resources, control expenses and return capital to shareholders. Each of these objectives could be adversely affected by any failure on the part of management to:

- devise effective business plans and strategies
- offer products and services that meet changing expectations of clients and customers
- allocate capital in a manner that promotes long-term stability to enable JPMorgan Chase to build and invest in market-leading businesses, even in a highly stressed environment
- allocate capital appropriately due to imprecise modeling or subjective judgments made in connection with those allocations
- conduct appropriate due diligence on prospective business acquisitions or investments, or effectively integrate newly-acquired businesses
- appropriately address concerns of clients, customers, investors, employees and other stakeholders, including with respect to ESG matters
- react quickly to changes in market conditions or market structures, or
- develop and enhance the operational, technology, risk, financial and managerial resources necessary to grow and manage JPMorgan Chase's businesses.
Furthermore, JPMorgan Chase may incur costs in connection with disposing of excess properties, premises and facilities, and those costs could be material to its results of operations in a given period.

JPMorgan Chase faces significant and increasing competition in the rapidly evolving financial services industry.

JPMorgan Chase operates in a highly competitive environment in which it must evolve and adapt to the significant changes as a result of changes in financial regulation, technological advances, increased public scrutiny and changes in economic conditions. JPMorgan Chase expects that competition in the U.S. and global financial services industry will continue to be intense. Competitors include:

- other banks and financial institutions
- trading, advisory and investment management firms
- finance companies


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- technology companies, and
- other nonbank firms that are engaged in providing similar as well as new products and services.

JPMorgan Chase cannot provide assurance that the significant competition in the financial services industry will not materially and adversely affect its future results of operations. For example, aggressive or less disciplined lending practices by nonbank competitors could lead to a loss of market share for traditional banks, and in an economic downturn could result in instability in the financial services industry and adversely impact other market participants, including JPMorgan Chase.

New competitors in the financial services industry continue to emerge. For example, technological advances and the growth of e-commerce have made it possible for nondepository institutions to offer products and services that traditionally were banking products. These advances have also allowed financial institutions and other companies to provide electronic and internet-based financial solutions, including electronic securities and cryptocurrency trading, lending and other extensions of credit to consumers, payments processing and online automated algorithmicbased investment advice. Furthermore, both financial institutions and their non-banking competitors face the risk that payments processing and other products and services, including deposits and other traditional banking products, could be significantly disrupted by the use of new technologies, such as cryptocurrencies and other applications using secure distributed ledgers, that require no intermediation. New technologies have required and could require JPMorgan Chase to spend more to modify or adapt its products to attract and retain clients and customers or to match products and services offered by its competitors, including technology companies. In addition, new technologies may be used by customers, or breached or infiltrated by third parties, in unexpected ways, which can increase JPMorgan Chase's costs for complying with laws, rules and regulations that apply to the offering of products and services through those technologies and reduce the income that JPMorgan Chase earns from providing products and services through those technologies.

Ongoing or increased competition may put pressure on the pricing for JPMorgan Chase's products and services or may cause JPMorgan Chase to lose market share, particularly with respect to traditional banking products. This competition may be on the basis of quality and variety of products and services offered, transaction execution, innovation, reputation and price. The failure of any of JPMorgan Chase's businesses to meet the expectations of clients and customers, whether due to general market conditions, under-performance, a decision not to offer a particular product or service, changes in client and customer expectations or other factors, could affect JPMorgan Chase's ability to attract or retain clients and customers. Any such impact could, in turn, reduce JPMorgan Chase's revenues. Increased competition also
may require JPMorgan Chase to make additional capital investments in its businesses, or to extend more of its capital on behalf of its clients in order to remain competitive.

## The effects of climate change could adversely affect JPMorgan Chase's business and operations, both directly and as a result of impacts on its clients and customers.

JPMorgan Chase operates in many regions, countries and communities around the world where its business, and the activities of its clients and customers, could be adversely affected by climate change. Climate change could manifest as a financial risk to JPMorgan Chase either through changes in the physical climate or from the process of transitioning to a lower-carbon economy. Both physical risks and transition risks associated with climate change could have negative impacts on the financial condition or creditworthiness of JPMorgan's clients and customers, and on its exposure to those clients and customers.

Climate-related physical risks include the increased frequency or severity of acute weather events, such as floods, wildfires and tropical storms, and chronic shifts in the climate, such as persistent changes in precipitation levels, rising sea levels, or increases in average ambient temperature.Potential adverse impacts of climate-related physical risks include:

- declines in asset values, including due to the destruction or degradation of property
- reduced availability or increased cost of insurance for clients of JPMorgan Chase
- interruptions to business operations, including supply chain disruption, and
- population migration or unemployment in affected regions.
Transition risks arise from societal adjustment to a lowercarbon economy, such as changes in public policy, adoption of new technologies or changes in consumer preferences towards low-carbon goods and services. These risks could also be influenced by changes in the physical climate. Potential adverse impacts of transition risks include:
- sudden devaluation of assets, including unanticipated write-downs ("stranded assets")
- increased operational and compliance costs driven by changes in climate policy
- increased energy costs driven by governmental actions and initiatives such as higher taxation and accelerated decarbonization policies
- negative consequences to business models, and the need to make changes in response to those consequences, and
- damage to JPMorgan Chase's reputation, including due to any perception that its business practices are
contrary to public policy or the preferences of different stakeholders.

Climate risks can also arise from the inconsistencies and conflicts in the manner in which climate policy and financial regulation is implemented in the many regions where JPMorgan Chase operates, including initiatives to apply and enforce policy and regulation with extraterritorial effect.

Conduct

## Conduct failure by JPMorgan Chase employees can harm clients and customers, impact market integrity, damage JPMorgan Chase's reputation and trigger litigation and regulatory action.

JPMorgan Chase's employees interact with clients, customers and counterparties, and with each other, every day. All employees are expected to demonstrate values and exhibit the behaviors that are an integral part of JPMorgan Chase's Code of Conduct and How We Do Business Principles, including JPMorgan Chase’s commitment to "do first class business in a first class way." JPMorgan Chase endeavors to embed conduct risk management throughout an employee's life cycle, including recruiting, onboarding, training and development, and performance management. Conduct risk management is also an integral component of JPMorgan Chase's promotion and compensation processes.

Notwithstanding these expectations, policies and practices, certain employees have engaged in improper or illegal conduct in the past. These instances of misconduct have resulted in litigation, and resolutions of governmental investigations or enforcement actions involving consent orders, deferred prosecution agreements, non-prosecution agreements and other civil or criminal sanctions. There is no assurance that further inappropriate or unlawful actions by employees have not occurred or will not occur, lead to a violation of the terms of these resolutions (and associated consequences), or that any such actions will always be detected, deterred or prevented.

JPMorgan Chase's reputation could be harmed, and collateral consequences could result, from a failure by one or more employees to conduct themselves in accordance with JPMorgan Chase's expectations, policies and practices, including by acting in ways that harm clients, customers, other market participants, employees or others. Some examples of this include:

- improperly selling and marketing JPMorgan Chase’s products or services
- engaging in insider trading, market manipulation or unauthorized trading
- engaging in improper or fraudulent behavior in connection with government relief programs
- facilitating a transaction where a material objective is to achieve a particular tax, accounting or financial disclosure treatment that may be subject to scrutiny by governmental or regulatory authorities, or where the
proposed treatment is unclear or may not reflect the economic substance of the transaction
- failing to fulfill fiduciary obligations or other duties owed to clients or customers
- violating antitrust or anti-competition laws by colluding with other market participants
- using electronic communications channels that have not been approved by JPMorgan Chase
- engaging in discriminatory behavior or harassment with respect to clients, customers or employees, or acting contrary to JPMorgan Chase's goal of fostering a diverse and inclusive workplace
- managing or reporting risks in ways that subordinate JPMorgan Chase's risk appetite to business performance goals or employee compensation objectives, and
- misappropriating property, confidential or proprietary information, or technology assets belonging to JPMorgan Chase, its clients and customers or third parties.

The consequences of any failure by one or more employees to conduct themselves in accordance with JPMorgan Chase's expectations, policies or practices could include litigation, or regulatory or other governmental investigations or enforcement actions. Any of these proceedings or actions could result in judgments, settlements, fines, penalties or other sanctions, or lead to:

- financial losses
- increased operational and compliance costs
- greater scrutiny by regulators and other parties
- regulatory actions that require JPMorgan Chase to restructure, curtail or cease certain of its activities
- the need for significant oversight by JPMorgan Chase's management
- loss of clients or customers, and
- harm to JPMorgan Chase’s reputation.

The foregoing risks could be heightened with respect to newly-acquired businesses if JPMorgan Chase fails to successfully integrate employees of those businesses or any of those employees do not conduct themselves in accordance with JPMorgan Chase's expectations, policies and practices.

## Reputation

## Damage to JPMorgan Chase's reputation could harm its businesses.

Maintaining trust in JPMorgan Chase is critical to its ability to attract and retain clients, customers, investors and employees. Damage to JPMorgan Chase's reputation can therefore cause significant harm to JPMorgan Chase's

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business and prospects, and can arise from numerous sources, including:

- employee misconduct, including discriminatory behavior or harassment with respect to clients, customers or employees, or actions that are contrary to JPMorgan Chase's goal of fostering a diverse and inclusive workplace
- security breaches, including as a result of cyber attacks
- failure to safeguard client, customer or employee information
- failure to manage risks associated with its business activities or those of its clients, including those that may be unpopular among one or more constituencies
- failure to meet publicly-announced commitments to support ESG initiatives
- non-compliance with laws, rules, and regulations
- operational failures
- litigation or regulatory fines, penalties or other sanctions
- actions taken in executing regulatory and governmental requirements during a global or regional health emergency, spread of infectious disease, epidemic or pandemic
- regulatory investigations or enforcement actions, or resolutions of these matters, and
- failure or perceived failure to comply with laws, rules or regulations by JPMorgan Chase or its clients, customers, counterparties or other parties, including newly-acquired businesses, companies in which JPMorgan Chase has made principal investments, parties to joint ventures with JPMorgan Chase, and vendors with which JPMorgan Chase does business.
JPMorgan Chase's reputation may be significantly damaged by adverse publicity or negative information regarding JPMorgan Chase, whether or not true, that may be published or broadcast by the media or posted on social media, non-mainstream news services or other parts of the internet. This latter risk can be magnified by the speed and pervasiveness with which information is disseminated through those channels.
Social and environmental activists have been increasingly targeting JPMorgan Chase and other financial services firms with public criticism concerning their business practices, including business relationships with clients that are engaged in certain sensitive industries, such as companies :
- whose products are or are perceived to be harmful to human health, or
- whose activities negatively affect or are perceived to negatively affect the environment, workers' rights or communities.

Activists have also taken actions intended to change or influence JPMorgan Chase's business practices with respect to ESG matters, including public protests at JPMorgan Chase's headquarters and other properties, and submitting specific ESG-related proposals for a vote by JPMorgan Chase's shareholders.

These and other types of activist criticism and actions directed at JPMorgan Chase could potentially engender dissatisfaction among clients, customers, investors and employees with how JPMorgan Chase addresses ESG concerns in its business activities. In all of these cases, the resulting harm to JPMorgan Chase's reputation could:

- attract scrutiny from governmental or regulatory bodies
- cause certain clients and customers to cease doing business with JPMorgan Chase
- impair JPMorgan Chase’s ability to attract new clients and customers, or to expand its relationships with existing clients and customers
- diminish JPMorgan Chase's ability to hire or retain employees
- prompt JPMorgan Chase to cease doing business with certain clients or customers
- cause certain investors to divest from investments in securities of JPMorgan Chase, or
- otherwise negatively affect JPMorgan Chase's business and results of operations.

Actions by the financial services industry generally or individuals in the industry can also affect JPMorgan Chase's reputation. For example, the reputation of the industry as a whole can be damaged by concerns that:

- consumers have been treated unfairly by a financial institution, or
- a financial institution has acted inappropriately with respect to the methods used to offer products to customers.

If JPMorgan Chase is perceived to have engaged in these types of behaviors, this could weaken its reputation among clients or customers.

## Failure to effectively manage potential conflicts of interest or to satisfy fiduciary obligations can result in litigation and enforcement actions, as well as damage JPMorgan Chase's reputation.

JPMorgan Chase's ability to manage potential conflicts of interest is highly complex due to the broad range of its business activities which encompass a variety of transactions, obligations and interests with and among JPMorgan Chase's clients and customers. JPMorgan Chase can become subject to litigation, enforcement actions, and heightened regulatory scrutiny, and its reputation can be damaged, by the failure or perceived failure to:

- adequately address or appropriately disclose conflicts of interest, including potential conflicts of interest that may arise in connection with providing multiple products and services in, or having one or more investments related to, the same transaction
- identify and address any conflict of interest that a third party with which it is does business may have with respect to a transaction involving JPMorgan Chase
- deliver appropriate standards of service and quality
- treat clients and customers fairly and with the appropriate standard of care
- use client and customer data responsibly and in a manner that meets legal requirements and regulatory expectations
- provide fiduciary products or services in accordance with the applicable legal and regulatory standards, or
- handle or use confidential information of customers or clients appropriately and in compliance with applicable data protection and privacy laws, rules and regulations.
A failure or perceived failure to appropriately address conflicts of interest or fiduciary obligations could result in customer dissatisfaction, litigation and regulatory fines, penalties or other sanctions, and heightened regulatory scrutiny and enforcement actions, all of which can lead to lost revenue and higher operating costs and cause serious harm to JPMorgan Chase's reputation.


## Country

## An outbreak or escalation of hostilities between countries or within a country or region could have a material adverse effect on the global economy and on JPMorgan Chase's businesses within the affected region or globally.

Aggressive actions by hostile governments or groups, including armed conflict or intensified cyber attacks, could expand in unpredictable ways by drawing in other countries or escalating into full-scale war with potentially catastrophic consequences, particularly if one or more of the combatants possess nuclear weapons. Depending on the scope of the conflict, the hostilities could result in:

- worldwide economic disruption
- heightened volatility in financial markets
- severe declines in asset values, accompanied by widespread sell-offs of investments
- substantial depreciation of local currencies, potentially leading to defaults by borrowers and counterparties in the affected region
- disruption of global trade, and
- diminished consumer, business and investor confidence.
Any of the above consequences could have significant negative effects on JPMorgan Chase's operations and
earnings, both in the countries or regions directly affected by the hostilities or globally. Further, if the U.S. were to become directly involved in such a conflict, this could lead to a curtailment of any operations that JPMorgan Chase may have in the affected countries or region, as well as in any nation that is aligned against the U.S. in the hostilities. JPMorgan Chase could also experience more numerous and aggressive cyber attacks launched by or under the sponsorship of one or more of the adversaries in such a conflict.


## JPMorgan Chase's business and operations in certain countries can be adversely affected by local economic, political, regulatory and social factors.

Some of the countries in which JPMorgan Chase conducts business have economies or markets that are less developed and more volatile or may have political, legal and regulatory regimes that are less established or predictable than other countries in which JPMorgan Chase operates. In addition, in some jurisdictions in which JPMorgan Chase conducts business, the local economy and business activities are subject to substantial government influence or control. Some of these countries have in the past experienced economic disruptions, including:

- extreme currency fluctuations
- high inflation
- Iow or negative growth, and
- defaults or reduced ability to service sovereign debt.

The governments in these countries have sometimes reacted to these developments by imposing restrictive policies that adversely affect the local and regional business environment, such as:

- price, capital or exchange controls, including imposition of punitive transfer and convertibility restrictions or forced currency exchange
- expropriation or nationalization of assets or confiscation of property, including intellectual property, and
- changes in laws, rules and regulations.

The impact of these actions could be accentuated in trading markets that are smaller, less liquid and more volatile than more-developed markets. These types of government actions can negatively affect JPMorgan Chase's operations in the relevant country, either directly or by suppressing the business activities of local clients or multi-national clients that conduct business in the jurisdiction.
In addition, emerging markets countries, as well as more developed countries, have been susceptible to unfavorable social developments arising from poor economic conditions or governmental actions, including:

- widespread demonstrations, civil unrest or general strikes
- crime and corruption


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- security and personal safety issues
- an outbreak or escalation of hostilities, or other geopolitical instabilities
- overthrow of incumbent governments
- terrorist attacks, and
- other forms of internal discord.

These economic, political, regulatory and social developments have in the past resulted in, and in the future could lead to, conditions that can adversely affect JPMorgan Chase's operations in those countries and impair the revenues, growth and profitability of those operations. In addition, any of these events or circumstances in one country can affect JPMorgan Chase's operations and investments in another country or countries, including in the U.S.

## People

## JPMorgan Chase's ability to attract and retain qualified and diverse employees is critical to its success.

JPMorgan Chase's employees are its most important resource, and in many areas of the financial services industry, competition for qualified personnel is intense. JPMorgan Chase endeavors to attract talented and diverse new employees and retain, develop and motivate its existing employees. JPMorgan Chase's efforts to retain talented and diverse employees can be particularly challenging when members of its workforce are targeted for recruitment by competitors. If JPMorgan Chase were unable to continue to attract or retain qualified and diverse employees, including successors to the Chief Executive Officer, members of the Operating Committee and other senior leaders, JPMorgan Chase's performance, including its competitive position, could be materially and adversely affected.

JPMorgan Chase's increased use of hybrid work models could result in deterioration in employee performance or degradation of JPMorgan Chase's control environment which may have a material and adverse effect on its business and operations. Alternatively, discontinuing hybrid work models could harm JPMorgan Chase's ability to attract and retain employees.

## Unfavorable changes in immigration or travel policies could adversely affect JPMorgan Chase's businesses and operations.

JPMorgan Chase relies on the skills, knowledge and expertise of employees located throughout the world. Changes in immigration or travel policies in the U.S. and other countries that unduly restrict or otherwise make it more difficult for employees or their family members to work in, or travel to or transfer between, jurisdictions in which JPMorgan Chase has operations or conducts its business could inhibit JPMorgan Chase's ability to attract and retain qualified employees, and thereby dilute the quality of its workforce, or could prompt JPMorgan Chase to
make structural changes to its worldwide or regional operating models that cause its operations to be less efficient or more costly.

## Legal

## JPMorgan Chase faces significant legal risks from litigation and formal and informal regulatory and government investigations.

JPMorgan Chase is named as a defendant or is otherwise involved in many legal proceedings, including class actions and other litigation or disputes with third parties. Actions currently pending against JPMorgan Chase may result in judgments, settlements, fines, penalties or other sanctions adverse to JPMorgan Chase. Any of these matters could materially and adversely affect JPMorgan Chase's business, financial condition or results of operations, or cause serious reputational harm. As a participant in the financial services industry, it is likely that JPMorgan Chase will continue to experience a high level of litigation and regulatory and government investigations related to its businesses and operations.

Regulators and other government agencies conduct examinations of JPMorgan Chase and its subsidiaries both on a routine basis and in targeted exams, and JPMorgan Chase's businesses and operations are subject to heightened regulatory oversight. This heightened regulatory scrutiny, or the results of such an investigation or examination, may lead to additional regulatory investigations or enforcement actions. There is no assurance that those actions will not result in resolutions or other enforcement actions against JPMorgan Chase. Furthermore, a single event involving a potential violation of law or regulation may give rise to numerous and overlapping investigations and proceedings, either by multiple federal, state or local agencies and officials in the U.S. or, in some instances, regulators and other governmental officials in non-U.S. jurisdictions.

If another financial institution violates a law or regulation relating to a particular business activity or practice, this will often give rise to an investigation by regulators and other governmental agencies of the same or similar activity or practice by JPMorgan Chase.

These and other initiatives by U.S. and non-U.S. governmental authorities may subject JPMorgan Chase to judgments, settlements, fines, penalties or other sanctions, and may require JPMorgan Chase to restructure its operations and activities or to cease offering certain products or services. All of these potential outcomes could harm JPMorgan Chase's reputation or lead to higher operational costs, thereby reducing JPMorgan Chase's profitability, or result in collateral consequences. In addition, the extent of JPMorgan Chase's exposure to legal and regulatory matters can be unpredictable and could, in some cases, exceed the amount of reserves that JPMorgan Chase has established for those matters.

## Item 1B. Unresolved Staff Comments.

None.

## Item 2. Properties.

JPMorgan Chase's headquarters is located in New York City at 383 Madison Avenue, a 47 -story office building that it owns. The demolition of the Firm's former headquarters at 270 Park Avenue in New York City was completed in 2021, and construction of a new headquarters on the same site is underway.

The Firm owned or leased facilities in the following locations at December 31, 2022.

| December 31, 2022 (in millions) | Approximate square footage |
| :---: | :---: |
| United States ${ }^{(a)}$ |  |
| New York City, New York |  |
| 383 Madison Avenue, New York, New York | 1.1 |
| All other New York City locations | 5.7 |
| Total New York City, New York | 6.8 |
| Other U.S. locations |  |
| Columbus/Westerville, Ohio | 3.5 |
| Chicago, Illinois | 2.7 |
| Dallas/Plano/Fort Worth, Texas | 2.5 |
| Wilmington/Newark, Delaware | 2.2 |
| Houston, Texas | 1.6 |
| Phoenix/Tempe, Arizona | 1.5 |
| Jersey City, New Jersey | 1.4 |
| All other U.S. locations | 32.9 |
| Total United States | 55.1 |
| Europe, the Middle East and Africa ("EMEA") |  |
| 25 Bank Street, London, U.K. | 1.4 |
| All other U.K. locations | 2.9 |
| All other EMEA locations | 1.5 |
| Total EMEA | 5.8 |
| Asia-Pacific, Latin America and Canada |  |
| India | 6.5 |
| Philippines | 1.1 |
| All other locations | 2.8 |
| Total Asia-Pacific, Latin America and Canada | 10.4 |
| Total | 71.3 |
| (a) At December 31, 2022, the Firm owned or leased 4,787 retail branches in 48 states and Washington D.C. |  |
| The premises and facilities occupied by JPMorgan Chase are used across all of the Firm's business segments and for |  |
| corporate purposes. JPMorgan Chase continues to evaluate its current and projected space requirements and may determine from time to time that certain of its properties |  |
| longer necessary for its operations. There is no assurance that the Firm will be able to dispose of any such excess |  |
| costs in connection with such dispositions. Such disposition | not incur |
| costs may be material to the Firm's results of operations in |  |

a given period. Refer to the Consolidated Results of Operations on pages 51-54 for information on occupancy expense.

## Item 3. Legal Proceedings.

Refer to Note 30 for a description of the Firm's material legal proceedings.
Item 4. Mine Safety Disclosures.
Not applicable.

## Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

## Market for registrant's common equity

JPMorgan Chase's common stock is listed and traded on the New York Stock Exchange. Refer to "Five-year stock performance," on page 45 for a comparison of the cumulative total return for JPMorgan Chase common stock with the comparable total return of the S\&P 500 Index, the KBW Bank Index and the S\&P Financials Index over the fiveyear period ended December 31, 2022.

Refer to Capital actions in the Capital Risk Management section of Management's discussion and analysis on page 94 for information on the common dividend payout ratio. Refer to Note 21 for a discussion of restrictions on dividend payments. On January 31, 2023, there were 203,141 holders of record of JPMorgan Chase common stock. Refer to Part III, Item 12 on page 37 for information regarding securities authorized for issuance under the Firm's employee share-based incentive plans.
Repurchases under the common share repurchase program
Refer to Capital actions in the Capital Risk Management section of Management's discussion and analysis on page 94 for information regarding repurchases under the Firm's common share repurchase program.

Effective May 1, 2022, the Firm is authorized to purchase up to $\$ 30$ billion of common shares under its common share repurchase program, which superseded the previously approved repurchase program under which the Firm was authorized to purchase up to $\$ 30$ billion of common shares.
On July 14, 2022, the Firm announced that it had temporarily suspended share repurchases in anticipation of the increase in the Firm's regulatory capital requirements. The Firm had set a target for achieving CET1 capital of $13.0 \%$ by the first quarter of 2023. The Firm met and exceeded that target in the fourth quarter of 2022, and resumed repurchasing shares under its common share repurchase program in the first quarter of 2023.
Shares repurchased pursuant to the common share repurchase program during 2022 were as follows.

| Year ended December 31, 2022 | Total number of shares of common stock repurchased | Average price paid per share of common stock ${ }^{(\mathrm{a})}$ |  | Aggregate purchase price of common stock repurchases (in millions) ${ }^{(\mathrm{a})}$ |  | Dollar value of remaining authorized repurchase (in millions) ${ }^{(a)}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| First quarter | 18,106,991 | \$ | 138.04 | \$ | 2,500 | \$ | 9,052 |  |
| Second quarter | 4,981,047 |  | 124.88 |  | 622 |  | 29,633 | (b)(c) |
| Third quarter | - |  | - |  | - |  | - |  |
| October | - |  | - |  | - |  | - |  |
| November | - |  | - |  | - |  | - |  |
| December | - |  | - |  | - |  | - |  |
| Fourth quarter | - |  | - |  | - |  | - |  |
| Year-to-date | 23,088,038 | \$ | 135.20 | \$ | 3,122 | \$ | 29,633 | (c) |

(a) Excludes commissions cost.
(b) The remaining amount of $\$ 8.8$ billion under the prior Board authorization was canceled when the $\$ 30$ billion repurchase program was authorized by the Board of Directors effective May 1, 2022.
(c) Represents the amount remaining under the $\$ 30$ billion repurchase program.

## Item 6. Reserved

## Item 7. Management's Discussion and Analysis of

 Financial Condition and Results of Operations.Management's discussion and analysis of financial condition and results of operations, entitled "Management's discussion and analysis," appears on pages 46-154. Such information should be read in conjunction with the Consolidated Financial Statements and Notes thereto, which appear on pages 159-291.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk.

Refer to the Market Risk Management section of Management's discussion and analysis on pages 131-138 for a discussion of quantitative and qualitative disclosures about market risk.

## Item 8. Financial Statements and Supplementary

 Data.The Consolidated Financial Statements, together with the Notes thereto and the report thereon dated February 21, 2023, of PricewaterhouseCoopers LLP, the Firm's independent registered public accounting firm (PCAOB ID 238), appear on pages 156-291.

The "Glossary of Terms and Acronyms" is included on pages 297-303.

Item 9. Changes in and Disagreements With Accountants on Accounting and Financial Disclosure.

None.

## Item 9A. Controls and Procedures.

The internal control framework promulgated by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"), "Internal Control - Integrated Framework" ("COSO 2013"), provides guidance for designing, implementing and conducting internal control and assessing its effectiveness. The Firm used the COSO 2013 framework to assess the effectiveness of the Firm's internal control over financial reporting as of December 31, 2022. Refer to "Management's report on internal control over financial reporting" on page 155.
As of the end of the period covered by this report, an evaluation was carried out under the supervision and with the participation of the Firm's management, including its Chairman and Chief Executive Officer and its Chief Financial Officer, of the effectiveness of its disclosure controls and procedures (as defined in Rule 13a-15(e) under the Securities Exchange Act of 1934). Based on that evaluation, the Chairman and Chief Executive Officer and the Chief Financial Officer concluded that these disclosure controls and procedures were effective. Refer to Exhibits 31.1 and 31.2 for the Certifications furnished by the Chairman and Chief Executive Officer and Chief Financial Officer, respectively.
The Firm is committed to maintaining high standards of internal control over financial reporting. Nevertheless, because of its inherent limitations, internal control over financial reporting may not prevent or detect all misstatements. Deficiencies or lapses in internal controls may occur from time to time, and there can be no assurance that any such deficiencies will not result in significant deficiencies or material weaknesses in internal control in the future and collateral consequences therefrom. Refer to "Management's report on internal control over financial reporting" on page 155 for further information. There was no change in the Firm's internal control over financial reporting (as defined in Rule 13a-15(f) under the Securities Exchange Act of 1934) that occurred during the three months ended December 31, 2022, that has materially affected, or is reasonably likely to
materially affect, the Firm's internal control over financial reporting.

Item 9B. Other Information.
None.
Item 9 C . Disclosure regarding Foreign Jurisdictions that Prevent Inspections. Not applicable.

## Parts III and IV

## Item 10. Directors, Executive Officers and Corporate Governance.

## Executive officers of the registrant

| Age |  |  |
| :---: | :---: | :---: |
| Name | (at December 31, 2022) | Positions and offices |
| James Dimon | 66 | Chairman of the Board since December 2006 and Chief Executive Officer since December 2005. |
| Ashley Bacon | 53 | Chief Risk Officer since June 2013. |
| Jeremy Barnum | 50 | Chief Financial Officer since May 2021, prior to which he was Head of Global Research for the Corporate \& Investment Bank since February 2021. He previously served as Chief Financial Officer of the Corporate \& Investment Bank from July 2013 until February 2021. |
| Lori A. Beer | 55 | Chief Information Officer since September 2017, prior to which she had been Chief Information Officer of the Corporate \& Investment Bank since June 2016. |
| Mary Callahan Erdoes | 55 | Chief Executive Officer of Asset \& Wealth Management since September 2009. |
| Stacey Friedman | 54 | General Counsel since January 2016. |
| Marianne Lake | 53 | Co-Chief Executive Officer of Consumer \& Community Banking since May 2021, prior to which she had been Chief Executive Officer of Consumer Lending since May 2019. She was Chief Financial Officer from January 2013 until May 2019. |
| Robin Leopold | 58 | Head of Human Resources since January 2018, prior to which she had been Head of Human Resources for the Corporate \& Investment Bank since August 2012. |
| Douglas B. Petno | 57 | Chief Executive Officer of Commercial Banking since January 2012. |
| Jennifer A. Piepszak | 52 | Co-Chief Executive Officer of Consumer \& Community Banking since May 2021, prior to which she had been Chief Financial Officer since May 2019. She previously served as Chief Executive Officer for Card Services from February 2017 until May 2019. |
| Daniel E. Pinto | 60 | President and Chief Operating Officer since January 2022 and Chief Executive Officer of the Corporate \& Investment Bank since March 2014, having previously served as Co-President and Co-Chief Operating Officer since January 2018. |
| Peter L. Scher | 61 | Vice Chairman since March 2021. He previously served as Chairman of the MidAtlantic Region from February 2015 until December 2022 and Head of Corporate Responsibility from April 2011 until September 2021. |

Unless otherwise noted, during the five fiscal years ended December 31, 2022, all of JPMorgan Chase's above-named executive officers have continuously held senior-level positions with JPMorgan Chase. There are no family relationships among the foregoing executive officers. Information to be provided in Items $10,11,12,13$ and 14 of this 2022 Form 10-K and not otherwise included herein is incorporated by reference to the Firm's Definitive Proxy Statement for its 2023 Annual Meeting of Stockholders to be held on May 16, 2023, which will be filed with the SEC within 120 days of the end of the Firm's fiscal year ended December 31, 2022.

## Item 11. Executive Compensation.

Refer to Item 10.
Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

Refer to Item 10 for security ownership of certain beneficial owners and management.
The following table sets forth the total number of shares available for issuance under JPMorgan Chase's employee share-based incentive plans (including shares available for issuance to non-employee directors). The Firm is not authorized to grant sharebased incentive awards to non-employees, other than to non-employee directors.

| December 31, 2022 | Number of shares to be issued upon exercise of outstanding options/ stock appreciation rights | Weighted-average exercise price of outstanding options/stock appreciation rights | Number of shares remaining available for future issuance under stock incentive plans |
| :---: | :---: | :---: | :---: |
| Plan category |  |  |  |
| Employee share-based incentive plans approved by shareholders | 2,511,444 ${ }^{\text {(a) }}$ | \$ 141.19 | 69,327,901 ${ }^{\text {(b) }}$ |
| Total | 2,511,444 | \$ 141.19 | 69,327,901 |

(a) Does not include restricted stock units or performance stock units granted under the shareholder-approved Long-Term Incentive Plan ("LTIP"), as amended and restated effective May 18, 2021. Refer to Note 9 for further discussion.
(b) Represents shares available for future issuance under the shareholder-approved LTIP.

All shares available for future issuance will be issued under the shareholder-approved LTIP. Refer to Note 9 for further discussion.

## Item 13. Certain Relationships and Related

 Transactions, and Director Independence.Refer to Item 10.
Item 14. Principal Accounting Fees and Services.
Refer to Item 10.

Item 15. Exhibits, Financial Statement Schedules.

| 1 | Financial statements |
| :---: | :---: |
|  | The Consolidated Financial Statements, the Notes thereto and the report of the Independent Registered Public Accounting Firm thereon listed in Item 8 are set forth commencing on page 156. |
| 2 | Financial statement schedules |
| 3 | Exhibits |
| 3.1 | Restated Certificate of Incorporation of JPMorgan Chase \& Co., effective April 5, 2006 (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K of JPMorgan Chase \& Co. (File No. 1-5805) filed April 7, 2006). |
| 3.2 | Amendment to the Restated Certificate of Incorporation of JPMorgan Chase \& Co., effective June 7, 2013 (incorporated by reference to Appendix F to the Proxy Statement on Schedule 14A of JPMorgan Chase \& Co. (File No. 1-5805) filed April 10, 2013). |
| 3.3 | Certificate of Designations for Fixed-toFloating Rate Non-Cumulative Preferred Stock, Series Q (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K of JPMorgan Chase \& Co. (File No. 1-5805) filed April 23, 2013). |
| 3.4 | Certificate of Designations for Fixed-to- <br> Floating Rate Non-Cumulative Preferred Stock, Series R (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K of JPMorgan Chase \& Co. (File No. 1-5805) filed July 29, 2013). |
| 3.5 | Certificate of Designations for Fixed-to- <br> Floating Rate Non-Cumulative Preferred Stock, <br> Series S (incorporated by reference to Exhibit <br> 3.1 to the Current Report on Form 8-K of <br> JPMorgan Chase \& Co. (File No. 1-5805) filed January 22, 2014). |
| 3.6 | Certificate of Designations for Fixed-toFloating Rate Non-Cumulative Preferred Stock, Series U (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K of JPMorgan Chase \& Co. (File No. 1-5805) filed on March 10, 2014). |
| 3.7 | Certificate of Designations for Fixed-to- <br> Floating Rate Non-Cumulative Preferred Stock, <br> Series X (incorporated by reference to Exhibit <br> 3.1 to the Current Report on Form 8-K of JPMorgan Chase \& Co. (File No. 1-5805) filed on September 23, 2014). |

3.8 Certificate of Designations for Fixed-to-

Floating Rate Non-Cumulative Preferred Stock, Series CC (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K of JPMorgan Chase \& Co. (File No. 1-5805) filed October 20, 2017).
$3.9 \quad$ Certificate of Designations for 5.75\% Non-
Cumulative Preferred Stock, Series DD
(incorporated by reference to Exhibit 3.1 to
the Current Report on Form 8-K of JPMorgan Chase \& Co. (File No. 1-5805) filed September 21, 2018).
$3.10 \quad$ Certificate of Designations for 6.00\% Non-
Cumulative Preferred Stock, Series EE
(incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K of JPMorgan Chase \& Co. (File No. 1-5805) filed January
24, 2019).
3.11 Certificate of Designations for Fixed-to-

Floating Rate Non-Cumulative Preferred Stock, Series FF (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K of JPMorgan Chase \& Co. (File No. 1-5805) filed July 31, 2019).

Certificate of Designations for $4.75 \%$ NonCumulative Preferred Stock, Series GG (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K of JPMorgan Chase \& Co. (File No. 1-5805) filed November 7, 2019).

Certificate of Designations for Fixed-toFloating Rate Non-Cumulative Preferred Stock, Series HH (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K of JPMorgan Chase \& Co. (File No. 1-5805) filed January 23, 2020).

Certificate of Designations for Fixed-toFloating Rate Non-Cumulative Preferred Stock, Series II (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K of JPMorgan Chase \& Co. (File No. 1-5805) filed February 24, 2020).
$3.15 \quad$ Certificate of Designations for $4.55 \%$ NonCumulative Preferred Stock, Series JJ
(incorporated by reference to Exhibit 3.1 to
the Current Report on Form 8-K of JPMorgan Chase \& Co. (File No. 1-5805) filed March 17, 2021).

Certificate of Designations for 3.65\% FixedRate Reset Non-Cumulative Preferred Stock, Series KK (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K of JPMorgan Chase \& Co. (File No. 1-5805) filed May 12, 2021).
3.17 Certificate of Designations for $4.625 \%$ NonCumulative Preferred Stock, Series LL (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K of JPMorgan Chase \& Co. (File No. 1-5805) filed May 20, 2021).


| 10.6 | Excess Retirement Plan of JPMorgan Chase |
| :---: | :---: |
|  | Co., restated and amended as of |
|  | December 31, 2008, as amended |
|  | (incorporated by reference to Exhibit 10.7 to |
|  | the Annual Report on Form 10-K of JPMorgan |
|  | Chase \& Co. (File No. 1-5805) for the year |
|  | ended December 31, 2009). |
| 10.7 | Executive Retirement Plan of JPMorgan Chase |
|  | \& Co., as amended and restated December 31, |
|  | 2008 (incorporated by reference to Exhibit |
|  | 10.9 to the Annual Report on Form 10-K of |
|  | JPMorgan Chase \& Co. (File No. 1-5805) for |
|  | the year ended December 31, 2008). ${ }^{\text {(a) }}$ |
| 10.8 | Bank One Corporation Supplemental Savings |
|  | and Investment Plan, as amended and restated |
|  | effective December 31, 2008 (incorporated by |
|  | reference to Exhibit 10.13 to the Annual |
|  | Report on Form 10-K of JPMorgan Chase \& Co. |
|  | (File No. 1-5805) for the year ended |
|  | December 31, 2008). ${ }^{\text {(a) }}$ |
| 10.9 | Forms of JPMorgan Chase \& Co. Long-Term |
|  | Incentive Plan Terms and Conditions for |
|  | performance share units and restricted stock |
|  | units for Operating Committee members (U.S. |
|  | and U.K.), dated as of January 17, 2017 |
|  | (incorporated by reference to Exhibit 10.23 to |
|  | the Annual Report on Form 10-K of JPMorgan |
|  | Chase \& Co. (File No. 1-5805) for the vear |
|  | ended December 31, 2016). ${ }^{\text {(a) }}$ |
| 10.10 | Forms of JPMorgan Chase \& Co. Long-Term |
|  | Incentive Plan Terms and Conditions for |
|  | performance share units and restricted stock |
|  | units for Operating Committee members (U.S. |
|  | and U.K.), dated as of January 16, 2018 |
|  | (incorporated by reference to Exhibit 10.19 to |
|  | the Annual Report on Form 10-K of JPMorgan |
|  | Chase \& Co. (File No. 1-5805) for the year |
|  | ended December 31, 2017). ${ }^{\text {(a) }}$ |
| 10.11 | Forms of JPMorgan Chase \& Co. Long-Term |
|  | Incentive Plan Terms and Conditions for |
|  | restricted stock units for Operating Committee |
|  | members (U.S. and U.K.), dated as of January |
|  | 15, 2019 (incorporated by reference to |
|  | Exhibit 10.18 to the Annual Report on Form |
|  | 10-K of JPMorgan Chase \& Co. (File No. |
|  | 1-5805) for the year ended December 31, |
|  | 2018).(a) |
| 10.12 | Form of JPMorgan Chase \& Co. Long-Term |
|  | Incentive Plan Terms and Conditions of |
|  | Performance Share Unit Award Operating |
|  | Committee (U.K.) (incorporated by reference |
|  | to Exhibit 10.2 to the Current Report on Form |
|  | 8-K of JPMorgan Chase \& Co. (File No. 1-5805) |
|  | filed March 15, 2019). ${ }^{\text {(a) }}$ |

### 10.13 Forms of JPMorgan Chase \& Co. Long-Term

 Incentive Plan Terms and Conditions for restricted stock units and performance share unit awards for Operating Committee members (U.S. and U.K.), dated as of January 21, 2020 (incorporated by reference to Exhibit 10.18 to the Annual Report on Form $10-\mathrm{K}$ of JPMorgan Chase \& Co. (File No. 1-5805) for the year ended December 31, 2019). ${ }^{\text {(a) }}$10.14 Forms of JPMorgan Chase \& Co. Long-Term Incentive Plan Terms and Conditions for restricted stock units and performance share unit awards for Operating Committee members (U.S. and U.K.), dated as of January 19, 2021(incorporated by reference to Exhibit 10.17 to the Annual Report on Form 10-K of JPMorgan Chase \& Co. (File No. 1-5805) for the year ended December 31, 2020). ${ }^{\text {(a) }}$
10.15 Form of JPMorgan Chase \& Co. Long-Term Incentive Plan Terms and Conditions for stock appreciation rights for Chairman/Chief Executive Officer, dated July 20, 2021 (incorporated by reference to Exhibit 99 to the Current Report on Form 8-K of JPMorgan Chase \& Co. (File No. 1-5805) filed July 20, 2021). ${ }^{\text {(a) }}$
10.16 Form of JPMorgan Chase \& Co. Long-Term Incentive Plan Terms and Conditions for stock appreciation rights for President and Chief Operating Officer, dated December 14, 2021 (incorporated by reference to Exhibit 99 to the Current Report on Form 8-K of JPMorgan Chase \& Co. (File No. 1-5805) filed December 15, 2021). ${ }^{\text {. }}$
10.17 Forms of JPMorgan Chase \& Co. Long-Term Incentive Plan Terms and Conditions for restricted stock units and performance share unit awards for Operating Committee members (U.S. and U.K.), dated as of January 18, 2022 (incorporated by reference to Exhibit 10.20 to the Annual Report on Form 10-K of JPMorgan Chase \& Co. (File No. 1-5808) for the year ended December 31, 2021). ${ }^{\text {(a) }}$
10.18 Forms of JPMorgan Chase \& Co. Long-Term Incentive Plan Terms and Conditions for restricted stock units and performance share unit awards for Operating Committee members (U.S. and U.K.), dated as of January 17,2023. ${ }^{\text {(a) }(0)}$
10.19 Employee Stock Purchase Plan of JPMorgan

Chase \& Co., as amended and restated effective as of January 1, 2019 (incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q of JPMorgan Chase \& Co. (File No. 1-5805) for the quarter ended September 30, 2019).

| 10.20 | Form of JPMorgan Chase \& Co. PerformanceBased Incentive Compensation Plan, effective as of January 1, 2021, as amended (incorporated by reference to Exhibit 10.23 to the Annual Report on Form 10-K of JPMorgan Chase \& Co. (File No. 1-5808) for the year ended December 31, 2021). |
| :---: | :---: |
| 21 | List of subsidiaries of JPMorgan Chase \& Co. ${ }^{\text {(b) }}$ |
| 22.1 | Annual Report on Form 11-K of The JPMorgan Chase 401(k) Savings Plan for the year ended December 31, 2019 (to be filed pursuant to Rule 15d-21 under the Securities Exchange Act of 1934). |
| 22.2 | Subsidiary Guarantors and Issuers of Guaranteed Securities. ${ }^{\text {(b) }}$ |
| 23 | Consent of independent registered public accounting firm. |
| 31.1 | Certification. ${ }^{(b)}$ |
| 31.2 | Certification. ${ }^{\text {(b) }}$ |
| 32 | Certification pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. |
| 101.INS | The instance document does not appear in the interactive data file because its XBRL tags are embedded within the Inline XBRL document. ${ }^{\text {(d) }}$ |
| 101.SCH | XBRL Taxonomy Extension Schema Document. ${ }^{\text {(b) }}$ |
| 101.CAL | XBRL Taxonomy Extension Calculation Linkbase Document. ${ }^{\text {(b) }}$ |
| 101.DEF | XBRL Taxonomy Extension Definition Linkbase Document. ${ }^{\text {(b) }}$ |
| 101.LAB | XBRL Taxonomy Extension Label Linkbase Document. ${ }^{\text {(b) }}$ |
| 101.PRE | XBRL Taxonomy Extension Presentation Linkbase Document. ${ }^{\text {(b) }}$ |
| 104 | Cover Page Interactive Data File (embedded within the Inline XBRL document and included in Exhibit 101). |
| (a) This exhibit is a management contract or compensatory plan or arrangement. <br> (b) Filed herewith. <br> (c) Furnished herewith. This exhibit shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, or otherwise subject to the liability of that Section. Such exhibit shall not be deemed incorporated into any filing under the Securities Act of 1933 or the Securities Exchange Act of 1934. |  |
|  |  |

(d) Pursuant to Rule 405 of Regulation $\mathrm{S}-\mathrm{T}$, includes the following financial information included in the Firm's Form 10-K for the year ended December 31, 2022, formatted in XBRL (eXtensible Business Reporting Language) interactive data files: (i) the Consolidated statements of income for the years ended December 31, 2022, 2021 and 2020, (ii) the Consolidated statements of comprehensive income for the years ended December 31, 2022, 2021 and 2020, (iii) the Consolidated balance sheets as of December 31, 2022 and 2021, (iv) the Consolidated statements of changes in stockholders' equity for the years ended December 31, 2022, 2021 and 2020, (v) the Consolidated statements of cash flows for the years ended December 31, 2022, 2021 and 2020, and (vi) the Notes to Consolidated Financial Statements.
page 42 not used

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## Financial

THREE-YEAR SUMMARY OF CONSOLIDATED FINANCIAL HIGHLIGHTS (unaudited)

| As of or for the year ended December 31, (in millions, except per share, ratio, headcount data and where otherwise noted) | 2022 |  | 2021 |  | 2020 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Selected income statement data |  |  |  |  |  |  |
| Total net revenue | \$ | 128,695 | \$ | 121,649 | \$ | 119,951 |
| Total noninterest expense |  | 76,140 |  | 71,343 |  | 66,656 |
| Pre-provision profit ${ }^{(\text {a) }}$ |  | 52,555 |  | 50,306 |  | 53,295 |
| Provision for credit losses |  | 6,389 |  | $(9,256)$ |  | 17,480 |
| Income before income tax expense |  | 46,166 |  | 59,562 |  | 35,815 |
| Income tax expense |  | 8,490 |  | 11,228 |  | 6,684 |
| Net income | \$ | 37,676 | \$ | 48,334 | \$ | 29,131 |
| Earnings per share data |  |  |  |  |  |  |
| Net income: Basic | \$ | 12.10 | \$ | 15.39 | \$ | 8.89 |
| Diluted |  | 12.09 |  | 15.36 |  | 8.88 |
| Average shares: Basic |  | 2,965.8 |  | 3,021.5 |  | 3,082.4 |
| Diluted |  | 2,970.0 |  | 3,026.6 |  | 3,087.4 |
| Market and per common share data |  |  |  |  |  |  |
| Market capitalization | \$ | 393,484 | \$ | 466,206 | \$ | 387,492 |
| Common shares at period-end |  | 2,934.2 |  | 2,944.1 |  | 3,049.4 |
| Book value per share |  | 90.29 |  | 88.07 |  | 81.75 |
| Tangible book value per share ("TBVPS") ${ }^{(a)}$ |  | 73.12 |  | 71.53 |  | 66.11 |
| Cash dividends declared per share |  | 4.00 |  | 3.80 |  | 3.60 |
| Selected ratios and metrics |  |  |  |  |  |  |
| Return on common equity ("ROE") ${ }^{\text {(b) }}$ |  | 14 \% |  | 19 \% |  | 12 \% |
| Return on tangible common equity ("ROTCE") ${ }^{(a)(b)}$ |  | 18 |  | 23 |  | 14 |
| Return on assets ("ROA") ${ }^{(a)}$ |  | 0.98 |  | 1.30 |  | 0.91 |
| Overhead ratio |  | 59 |  | 59 |  | 56 |
| Loans-to-deposits ratio |  | 49 |  | 44 |  | 47 |
| Firm Liquidity coverage ratio ("LCR") (average) ${ }^{(c)}$ |  | 112 |  | 111 |  | 110 |
| JPMorgan Chase Bank, N.A. LCR (average) ${ }^{(c)}$ |  | 151 |  | 178 |  | 160 |
| Common equity Tier 1 ("CET1") capital ratio ${ }^{(d)}$ |  | 13.2 |  | 13.1 |  | 13.1 |
| Tier 1 capital ratio ${ }^{(d)}$ |  | 14.9 |  | 15.0 |  | 15.0 |
| Total capital ratio ${ }^{(d)}$ |  | 16.8 |  | 16.8 |  | 17.3 |
| Tier 1 leverage ratio ${ }^{(c)(d)}$ |  | 6.6 |  | 6.5 |  | 7.0 |
| Supplementary leverage ratio ("SLR") ${ }^{(c)(d)}$ |  | 5.6 |  | 5.4 |  | 6.9 |
| Selected balance sheet data (period-end) |  |  |  |  |  |  |
| Trading assets | \$ | 453,799 | \$ | 433,575 | \$ | 503,126 |
| Investment securities, net of allowance for credit losses |  | 631,162 |  | 672,232 |  | 589,999 |
| Loans |  | 1,135,647 |  | 1,077,714 |  | 1,012,853 |
| Total assets |  | 3,665,743 |  | 3,743,567 |  | 3,384,757 |
| Deposits |  | 2,340,179 |  | 2,462,303 |  | 2,144,257 |
| Long-term debt |  | 295,865 |  | 301,005 |  | 281,685 |
| Common stockholders' equity |  | 264,928 |  | 259,289 |  | 249,291 |
| Total stockholders' equity |  | 292,332 |  | 294,127 |  | 279,354 |
| Headcount |  | 293,723 |  | 271,025 |  | 255,351 |
| Credit quality metrics |  |  |  |  |  |  |
| Allowances for loan losses and lending-related commitments | \$ | 22,204 | \$ | 18,689 | \$ | 30,815 |
| Allowance for loan losses to total retained loans |  | 1.81 \% |  | 1.62 \% |  | 2.95 \% |
| Nonperforming assets | \$ | 7,247 | \$ | 8,346 | \$ | 10,906 |
| Net charge-offs |  | 2,853 |  | 2,865 |  | 5,259 |
| Net charge-off rate |  | 0.27 \% |  | 0.30 \% |  | 0.55 \% |

(a) Pre-provision profit, TBVPS and ROTCE are each non-GAAP financial measures. Tangible common equity ("TCE") is also a non-GAAP financial measure. Refer to Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 58-60 for a discussion of these measures.
(b) Quarterly ratios are based upon annualized amounts.
(c) For the years ended December 31, 2022, 2021 and 2020, the percentage represents average ratios for the three months ended December 31, 2022, 2021 and 2020.
(d) As of December 31, 2022, 2021 and 2020, the capital metrics reflect the relief provided by the Federal Reserve Board in response to the COVID-19 pandemic, including the Current Expected Credit Losses ("CECL") capital transition provisions. As of December 31, 2020, the SLR reflected the temporary exclusions of U.S. Treasury securities and deposits at Federal Reserve Banks, which became effective April 1, 2020 and remained in effect through March 31, 2021. Refer to Capital Risk Management on pages 86-96 for additional information.

## FIVE-YEAR STOCK PERFORMANCE

The following table and graph compare the five-year cumulative total return for JPMorgan Chase \& Co. ("JPMorgan Chase" or the "Firm") common stock with the cumulative return of the S\&P 500 Index, the KBW Bank Index and the S\&P Financials Index. The S\&P 500 Index is a commonly referenced equity benchmark in the United States of America ("U.S."), consisting of leading companies from different economic sectors. The KBW Bank Index seeks to reflect the performance of banks and thrifts that are publicly traded in the U.S. and is composed of leading national money center and regional banks and thrifts. The S\&P Financials Index is an index of financial companies, all of which are components of the S\&P 500. The Firm is a component of all three industry indices.

The following table and graph assume simultaneous investments of $\$ 100$ on December 31, 2017, in JPMorgan Chase common stock and in each of the above indices. The comparison assumes that all dividends were reinvested.

| December 31, <br> (in dollars) | 2017 | 2018 | 2019 | 2020 | $\mathbf{2 0 2 1}$ |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| JPMorgan Chase | $\$ 100.00$ | $\$$ | 93.35 | $\$ 137.48$ | $\$$ | 129.89 | $\$ 165.91$ |
| KBW Bank Index | 100.00 | 82.29 | 112.01 | 100.47 | 138.99 |  |  |
| S\&P Financials Index | 100.00 | 86.96 | 114.87 | 112.85 | 152.20 | $\mathbf{1 0 9 . 2 5}$ |  |
| S\&P 500 Index | 100.00 | 95.61 | 125.70 | 148.82 | 191.49 | $\mathbf{1 5 6 . 1 7}$ |  |

December 31, (in dollars)


## Management's discussion and analysis

The following is Management's discussion and analysis of the financial condition and results of operations ("MD\&A") of JPMorgan Chase for the year ended December 31, 2022. The MD\&A is included in both JPMorgan Chase's Annual Report for the year ended December 31, 2022 ("Annual Report") and its Annual Report on Form 10-K for the year ended December 31, 2022 ("2022 Form 10-K" or "Form 10-K") filed with the Securities and Exchange Commission ("SEC"). Refer to the Glossary of terms and acronyms on pages 297-303 for definitions of terms and acronyms used throughout the Annual Report and the 2022 Form 10-K.

This Form 10-K contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These forward-looking statements are based on the current beliefs and expectations of JPMorgan Chase's management, speak only as of the date of this Form 10-K and are subject to significant risks and uncertainties. Refer to Forward-looking Statements on page 154 and Part 1, Item 1A: Risk factors in this Form 10-K on pages $9-32$ for a discussion of certain of those risks and uncertainties and the factors that could cause JPMorgan Chase's actual results to differ materially because of those risks and uncertainties. There is no assurance that actual results will be in line with any outlook information set forth herein, and the Firm does not undertake to update any forward-looking statements.

## INTRODUCTION

JPMorgan Chase \& Co. (NYSE: JPM), a financial holding company incorporated under Delaware law in 1968, is a leading financial services firm based in the United States of America ("U.S."), with operations worldwide. JPMorgan Chase had $\$ 3.7$ trillion in assets and $\$ 292.3$ billion in stockholders' equity as of December 31, 2022. The Firm is a leader in investment banking, financial services for consumers and small businesses, commercial banking, financial transaction processing and asset management. Under the J.P. Morgan and Chase brands, the Firm serves millions of customers, predominantly in the U.S., and many of the world's most prominent corporate, institutional and government clients globally.
JPMorgan Chase's principal bank subsidiary is JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank, N.A."), a national banking association with U.S. branches in 48 states and Washington, D.C. JPMorgan Chase's principal nonbank subsidiary is J.P. Morgan Securities LLC ("J.P. Morgan Securities"), a U.S. broker-dealer. The bank and non-bank subsidiaries of JPMorgan Chase operate nationally as well as through overseas branches and subsidiaries, representative offices and subsidiary foreign banks. The Firm's principal operating subsidiaries outside the U.S. are J.P. Morgan Securities plc and J.P. Morgan SE ("JPMSE"), which are subsidiaries of JPMorgan Chase Bank, N.A. and are based in the United Kingdom ("U.K.") and Germany, respectively.

For management reporting purposes, the Firm's activities are organized into four major reportable business segments, as well as a Corporate segment. The Firm's consumer business is the Consumer \& Community Banking ("CCB") segment. The Firm's wholesale business segments are the Corporate \& Investment Bank ("CIB"), Commercial Banking ("CB"), and Asset \& Wealth Management ("AWM"). Refer to Business Segment Results on pages 61-80, and Note 32 for a description of the Firm's business segments, and the products and services they provide to their respective client bases.

The Firm's website is www.jpmorganchase.com. JPMorgan Chase makes available on its website, free of charge, annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934, as soon as reasonably practicable after it electronically files or furnishes such material to the U.S. Securities and Exchange Commission (the "SEC") at www.sec.gov. JPMorgan Chase makes new and important information about the Firm available on its website at https://www.jpmorganchase.com, including on the Investor Relations section of its website at https://www.jpmorganchase.com/ir. Information on the Firm's website is not incorporated by reference into this 2022 Form 10-K or the Firm's other filings with the SEC.

This executive overview of the MD\&A highlights selected information and does not contain all of the information that is important to readers of this 2022 Form 10-K. For a complete description of the trends and uncertainties, as well as the risks and critical accounting estimates affecting the Firm, this 2022 Form 10-K should be read in its entirety.

Financial performance of JPMorgan Chase

| Year ended December 31, (in millions, except per share data and ratios) |  | 2022 |  | 2021 | Change |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Selected income statement data |  |  |  |  |  |
| Noninterest revenue | \$ | 61,985 | \$ | 69,338 | (11)\% |
| Net interest income | \$ | 66,710 | \$ | 52,311 | 28 \% |
| Total net revenue | \$ | 128,695 | \$ | 121,649 | 6 \% |
| Total noninterest expense |  | 76,140 |  | 71,343 | 7 |
| Pre-provision profit |  | 52,555 |  | 50,306 | 4 |
| Provision for credit losses |  | 6,389 |  | $(9,256)$ | NM |
| Net income |  | 37,676 |  | 48,334 | (22) |
| Diluted earnings per share |  | 12.09 |  | 15.36 | (21) |
| Selected ratios and metrics |  |  |  |  |  |
| Return on common equity |  |  |  | 19 |  |
| Return on tangible common equity |  | 18 |  | 23 |  |
| Book value per share | \$ | 90.29 | \$ | 88.07 | 3 |
| Tangible book value per share |  | 73.12 |  | 71.53 | 2 |
| Capital ratios ${ }^{(a)}$ |  |  |  |  |  |
| CET1 capital |  | 13.2 |  | 13.1 |  |
| Tier 1 capital |  | 14.9 |  | 15.0 |  |
| Total capital |  | 16.8 |  | 16.8 |  |
| Memo: |  |  |  |  |  |
| NII excluding Markets ${ }^{(\text {b }}$ | \$ | 62,355 | \$ | 44,498 | 40 |
| NIR excluding Markets ${ }^{(\mathrm{b})}$ |  | 40,938 |  | 53,412 | (23) |
| Markets ${ }^{(b)}$ |  | 28,984 |  | 27,394 | 6 |
| Total net revenue - managed basis | \$ | 132,277 | \$ | 125,304 | 6 |

(a) The ratios reflect the CECL capital transition provisions. Refer to Capital Risk Management on pages 86-96 for additional information.
(b) NII and NIR refer to net interest income and noninterest revenue, respectively. Markets consists of CIB's Fixed Income Markets and Equity Markets businesses.
Comparisons noted in the sections below are for the full year of 2022 versus the full year of 2021, unless otherwise specified.

## Firmwide overview

JPMorgan Chase reported net income of $\$ 37.7$ billion for 2022, down $22 \%$, earnings per share of $\$ 12.09$, ROE of $14 \%$ and ROTCE of $18 \%$.

- Total net revenue was \$128.7 billion, up 6\%, reflecting:
- Net interest income of $\$ 66.7$ billion, up $28 \%$, driven by higher rates and loan growth, partially offset by lower Markets net interest income. Net interest income excluding Markets was $\$ 62.4$ billion, up $40 \%$.
- Noninterest revenue of $\$ 62.0$ billion, down $11 \%$, driven by lower Investment Banking fees, $\$ 2.4$ billion of net investment securities losses in Treasury and CIO, lower net production revenue in Home Lending and lower auto operating lease income, largely offset by higher CIB Markets revenue and a $\$ 914$ million gain on the sale of Visa Class B common shares ("Visa B shares") in Corporate.
- Noninterest expense was $\$ 76.1$ billion, up $7 \%$, driven by higher structural expense and continued investments in the business, including compensation, technology and marketing, partially offset by lower volume- and revenuerelated expense.
- The provision for credit losses was $\$ 6.4$ billion, reflecting:
- a net addition of $\$ 3.5$ billion to the allowance for credit losses, consisting of $\$ 2.3$ billion in wholesale and $\$ 1.2$ billion in consumer, driven by loan growth and deterioration in the Firm's macroeconomic outlook, partially offset by a reduction in the allowance related to a decrease in uncertainty associated with borrower behavior as the effects of the pandemic gradually recede, and
- $\$ 2.9$ billion of net charge-offs.

The prior year provision was a net benefit of $\$ 9.3$ billion, reflecting a net reduction to the allowance for credit losses of $\$ 12.1$ billion.

- The total allowance for credit losses was $\$ 22.2$ billion at December 31, 2022. The Firm had an allowance for loan losses to retained loans coverage ratio of $1.81 \%$, compared with $1.62 \%$ in the prior year.
- The Firm's nonperforming assets totaled $\$ 7.2$ billion at December 31, 2022, a net decrease of $\$ 1.1$ billion, predominantly driven by lower consumer nonaccrual loans, reflecting improved credit performance and loan sales.
- Firmwide average loans of \$1.1 trillion were up 6\%, driven by higher loans across the LOBs.
- Firmwide average deposits of $\$ 2.5$ trillion were up $5 \%$, reflecting:
- growth in CCB from existing and new accounts, and net inflows in AWM resulting from the residual effects of certain government actions, partially offset by the impact of growth in customer spending in CCB and migration into investments in AWM, and
- reductions in CIB and CB due to attrition driven by the rising interest rate environment.
Selected capital and other metrics
- CET1 capital was $\$ 219$ billion, and the Standardized and Advanced CET1 ratios were $13.2 \%$ and $13.6 \%$, respectively.
- SLR was 5.6\%.
- TBVPS grew by $2 \%$, ending 2022 at $\$ 73.12$.


## Management's discussion and analysis

- As of December 31, 2022, the Firm had average eligible High Quality Liquid Assets ("HQLA") of approximately $\$ 733$ billion and unencumbered marketable securities with a fair value of approximately $\$ 694$ billion, resulting in approximately \$1.4 trillion of liquidity sources. Refer to Liquidity Risk Management on pages 97-104 for additional information.

Refer to Consolidated Result of Operations and Consolidated Balance Sheets Analysis on pages 51-54 and pages 55-56, respectively, for a further discussion of the Firm's results.
Pre-provision profit, ROTCE, TCE, TBVPS, NII and NIR excluding Markets, and total net revenue on a managed basis are non-GAAP financial measures. Refer to Explanation and Reconciliation of the Firm's Use of NonGAAP Financial Measures on pages 58-60 for a further discussion of each of these measures.

Business segment highlights
Selected business metrics for each of the Firm's four LOBs are presented below for the full year of 2022.

| $\begin{aligned} & \text { CCB } \\ & \text { ROE } \\ & 29 \% \end{aligned}$ | - Average deposits up $10 \%$; client investment assets down 10\% <br> - Average loans up 1\%; Card Services net charge-off rate of $1.47 \%$ <br> - Debit and credit card sales volume ${ }^{(a)}$ up $14 \%$ <br> - Active mobile customers ${ }^{(b)}$ up 9\% |
| :---: | :---: |
| $\begin{aligned} & \text { CIB } \\ & \text { ROE } \\ & 14 \% \end{aligned}$ | - \#1 ranking for Global Investment Banking fees with $8.0 \%$ wallet share for the year <br> - Total Markets revenue of $\$ 29.0$ billion, up $6 \%$, with Fixed Income Markets up 10\% and Equity Markets down 2\% |
| $\begin{aligned} & \text { CB } \\ & \text { ROE } \\ & 16 \% \end{aligned}$ | - Gross Investment Banking revenue of $\$ 3.0$ billion, down 42\% <br> - Average deposits down 2\%; average loans up 9\% |
| AWM ROE <br> 25\% | - Assets under management ("Aum") of $\$ 2.8$ trillion, down 11\% <br> - Average deposits up $14 \%$; average loans up 9\% |

(a) Excludes Commercial Card.
(b) Users of all mobile platforms who have logged in within the past 90 days.

Refer to the Business Segment Results on pages 61-62 for a detailed discussion of results by business segment.

Credit provided and capital raised JPMorgan Chase continues to support consumers, businesses and communities around the globe. The Firm provided new and renewed credit and raised capital for wholesale and consumer clients during 2022, consisting of:

```
$2.4
trillion
```

Total credit provided and capital raised (including loans and commitments) ${ }^{(a)}$
$\$ 250$
billion
Credit for consumers
\$33
billion
Credit for U.S. small businesses
\$1.1
trillion
Credit for corporations
$\$ 1.0$
trillion
Capital raised for corporate clients and non-U.S. government entities

## \$65

billion

Credit and capital raised for nonprofit and U.S. government entities ${ }^{(\mathrm{a})}$
(a) Includes states, municipalities, hospitals and universities.

## Recent events

- On January 20, 2023, JPMorgan Chase announced that J.P. Morgan Asset Management had received regulatory approval from the China Securities Regulatory Commission to complete its acquisition of China International Fund Management Co., Ltd.
- On January 17, 2023, JPMorgan Chase announced that Alicia Boler Davis had been elected as a director of the Firm, effective March 20, 2023. Ms. Davis serves as Chief Executive Officer of Alto Pharmacy.

Outlook
These current expectations are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Such forward-looking statements are based on the current beliefs and expectations of JPMorgan Chase's management, speak only as of the date of this Form 10-K, and are subject to significant risks and uncertainties. Refer to Forward-Looking Statements on page 154, and the Risk Factors section on pages 9-32 of this Form 10-K for a further discussion of certain of those risks and uncertainties and the other factors that could cause JPMorgan Chase's actual results to differ materially because of those risks and uncertainties. There is no assurance that actual results in 2023 will be in line with the outlook information set forth below, and the Firm does not undertake to update any forward-looking statements.
JPMorgan Chase's current outlook for full-year 2023 should be viewed against the backdrop of the global and U.S. economies, financial markets activity, the geopolitical environment, the competitive environment, client and customer activity levels, and regulatory and legislative developments in the U.S. and other countries where the Firm does business. Each of these factors will affect the performance of the Firm. The Firm will continue to make appropriate adjustments to its businesses and operations in response to ongoing developments in the business, economic, regulatory and legal environments in which it operates.
Full-year 2023

- Management expects net interest income to be approximately $\$ 73$ billion, market dependent.
- Management expects net interest income excluding Markets to be approximately $\$ 74$ billion, market dependent.
- Management expects adjusted expense to be approximately $\$ 81$ billion, market dependent.
- Management expects the net charge-off rate in Card Services to be approximately $2.6 \%$.
Net interest income excluding Markets and adjusted expense are non-GAAP financial measures. Refer to Explanation and Reconciliation of the Firm's Use of NonGAAP Financial Measures on pages 58-60.


## Management's discussion and analysis

## Business Developments

## War in Ukraine

The duration and potential outcomes of the war in Ukraine remain uncertain. The Firm has taken and continues to take steps to close positions and reduce certain of its business activities and exposures connected with the war, and to assist clients with fulfilling any pre-existing obligations and managing their Russia-related risks.

The Firm's exposure to Russia and Russia-associated clients and counterparties is not material to its financial condition or results of operations. However, the Firm continues to monitor potential secondary impacts of the war, including increased market volatility, inflationary pressures and the effects of financial and economic sanctions imposed by various governments, that could have adverse effects on the Firm's businesses.

The Firm also continues to monitor and manage the operational risks associated with the war, including compliance with the financial and economic sanctions and the increased risk of cyber attacks.

Refer to Wholesale Credit Portfolio on pages 116-126, Allowance for Credit Losses on pages 127-129, Market Risk Management on pages 131-138, Country Risk Management on pages 139-140 and Operational Risk Management on pages 142-144 for additional information.
For purposes of this Form 10-K, "Russia" refers to exposure to clients and counterparties of the Firm for which the largest proportion of their assets is located, or the largest proportion of their revenue is derived, in Russia, based on the Firm's internal country risk management framework; and "Russia-associated" refers to exposure to clients and counterparties of the Firm with respect to which economic or financial sanctions relating to the war in Ukraine have been imposed or which have close association with Russia.

Interbank Offered Rate ("IBOR") transition
The Firm and other market participants are preparing for the final stages of the transition from the use of the London Interbank Offered Rate ("LIBOR") and other IBORs in accordance with the International Organization of Securities Commission's standards for transaction-based benchmark rates. The cessation of the publication of the remaining principal tenors of U.S. dollar LIBOR (i.e., overnight, onemonth, three-month, six-month and 12-month LIBOR) ("LIBOR Cessation") is scheduled for June 30, 2023.
As of December 31, 2022, the Firm had significantly reduced the notional amount of its exposure to contracts that reference U.S. dollar LIBOR, including in derivatives, bilateral and syndicated loans, securities, and debt and preferred stock issuances, and is on-track to meet both its internal milestones for contract remediation as well as the industry milestones and recommendations published by National Working Groups, including the Alternative Reference Rates Committee in the U.S. The Firm also continues to engage with clients to assist them with transitioning their U.S. dollar LIBOR-linked contracts to replacement rates in anticipation of LIBOR Cessation. The majority of the Firm's remaining LIBOR exposure is to derivative contracts. The Firm will be participating in initiatives by the principal central counterparties ("CCPs") to convert cleared derivatives contracts linked to U.S. dollar LIBOR in the second quarter of 2023 which will remediate approximately 40\% of the Firm's remaining U.S. dollar LIBOR derivatives exposure. The Firm expects that the majority of the remaining derivatives exposure will be remediated predominantly through contractual fallback provisions.

On March 15, 2022, the Adjustable Interest Rate (LIBOR) Act ("LIBOR Act") was signed into law in the U.S. The LIBOR Act provides a framework for replacing U.S. dollar LIBOR as the reference rate in legacy financial contracts that may not otherwise transition to a replacement rate upon LIBOR Cessation. In addition, the U.K. Financial Conduct Authority is proposing that the administrator of LIBOR be required to continue to publish the one-month, three-month and sixmonth tenors of U.S. dollar LIBOR on a "synthetic" basis which would allow market participants to use such rates through September 30, 2024. This proposal would apply to contracts that are outside the scope of the LIBOR Act, including U.S. dollar LIBOR-linked contracts that are not governed by U.S. law. Both the LIBOR Act and the proposed publication of "synthetic" LIBOR are intended to facilitate, and reduce the risks associated with, the transition from LIBOR, including the potential for disputes or litigation.

The Firm continues to make necessary changes to its risk management systems in connection with the transition from LIBOR, including modifications to its operational systems and models. In addition, the Firm continues to monitor and evaluate client, industry, market, regulatory and legislative developments relating to the transition from LIBOR. Refer to Part 1, Item 1A: Risk Factors on pages 9-32 of the 2022 Form $10-\mathrm{K}$ and to Accounting and Reporting Developments on page 153 for additional information.

| This section provides a comparative discussion of JPMorgan Chase's Consolidated Results of Operations on a reported basis for the two-year period ended December 31, 2022, unless otherwise specified. Refer to Consolidated Results of Operations on pages 52-54 of the Firm's Annual Report on Form 10-K for the year ended December 31, 2021 (the "2021 Form 10-K") for a discussion of the 2021 versus 2020 results. Factors that relate primarily to a single business segment are discussed in more detail within that business segment's results. Refer to pages 149-152 for a discussion of the Critical Accounting Estimates Used by the Firm that affect the Consolidated Results of Operations. |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Revenue |  |  |  |  |  |  |
| Year ended December 31, (in millions) |  |  |  |  |  |  |
| Investment banking fees |  | 6,686 | \$ | 13,216 |  | 9,486 |
| ncipal transactions |  | 19,912 |  | 16,304 |  | 8,0 |
| Lending- and deposit-related fees |  | 7,098 |  | 7,032 |  | 6,51 |
| Asset management, administration <br> and commissions 20,677 21,029 18,177 |  |  |  |  |  |  |
| Investment securities gains/(losses) |  | $(2,380)$ |  | (345) |  | 802 |
| Mortgage fees and related income |  | 1,250 |  | 2,170 |  | 3,091 |
| Card income |  | 4,420 |  | 5,102 |  | 4,435 |
| Other income ${ }^{(\mathrm{a})}$ |  | 4,322 |  | 4,830 |  | 4,865 |
| Noninterest revenue |  | 61,985 |  | 69,338 |  | 65,388 |
| Net interest income |  | 66,710 |  | 52,311 |  | 54,563 |
| Total net revenue |  | 128,695 |  | 121,649 |  | 119,951 |

(a) Included operating lease income of $\$ 3.7$ billion, $\$ 4.9$ billion and $\$ 5.5$ billion for the years ended December 31, 2022, 2021 and 2020, respectively. Also includes losses on tax-oriented investments. Refer to Note 6 for additional information.

## 2022 compared with 2021

Investment banking fees decreased in CIB, as volatile market conditions resulted in:

- lower equity and debt underwriting fees due to lower issuance activity, and
- lower advisory fees driven by a lower level of announced deals.

Refer to CIB segment results on pages 67-72 and Note 6 for additional information.
Principal transactions revenue increased, reflecting:

- higher net revenue in Fixed Income Markets, driven by a strong performance in the macro businesses amid volatile market conditions, particularly Currencies \& Emerging Markets and Rates, partially offset by lower revenue in Securitized Products and Credit, and
- higher revenue associated with Equity Derivatives and Prime Finance in Equity Markets,
largely offset by
- a loss of $\$ 836$ million in Credit Adjustments \& Other in CIB, compared with a gain of $\$ 250$ million in the prior year. The loss in the current year reflected funding spread widening and, to a lesser extent, losses on exposures relating to commodities and Russia and Russiaassociated counterparties,
- net markdowns recorded in the second quarter of 2022 on held-for-sale positions, primarily unfunded commitments, in the bridge financing portfolio in CIB and CB,
- higher net losses on certain legacy private equity investments in Corporate, and
- net losses in Treasury and CIO related to cash deployment transactions, which were more than offset by the related net interest income earned on those transactions.
Principal transactions revenue in CIB may in certain cases have offsets across other revenue lines, including net interest income. The Firm assesses the performance of its CIB Markets business on a total revenue basis.
Refer to CIB, CB and Corporate segment results on pages 67-72, pages 73-75 and pages 79-80, respectively, and Note 6 for additional information.

Lending- and deposit-related fees increased due to higher service fee volume in CCB, predominantly offset by lower cash management fees in CB and CIB due to a higher level of credits earned by clients and applied against such fees. Refer to CCB, CIB and CB segment results on pages 63-66, pages 67-72 and pages 73-75, respectively, and Note 6 for additional information.

Asset management, administration and commissions revenue decreased driven by:

- Iower asset management fees in AWM resulting from lower average market levels, predominantly offset by the removal of most money market fund fee waivers, and net long-term inflows,
- lower custody fees in Securities Services, primarily associated with lower average market values of assets under custody, and
- lower brokerage commissions, largely in AWM, reflecting reduced volumes,
partially offset by
- higher commissions on travel-related services and annuity sales in CCB.
Refer to CCB, CIB and AWM segment results on pages 63-66, pages 67-72 and pages 76-78, respectively, and Note 6 for additional information.


## Management's discussion and analysis

Investment securities gains/(losses) reflected higher net losses on sales of U.S. GSE and government agency MBS and U.S. Treasuries, associated with repositioning the investment securities portfolio in Treasury and CIO. Refer to Corporate segment results on pages 79-80 and Note 10 for additional information.
Mortgage fees and related income decreased driven by Home Lending, reflecting:

- lower production revenue due to lower margins and volume,
largely offset by
- higher net mortgage servicing revenue, reflecting
- the absence of a net loss in MSR risk management in the prior year primarily driven by updates to model inputs related to prepayment expectations, and
- higher operating revenue due to a higher level of thirdparty loans serviced.
Refer to CCB segment results on pages 63-66, Note 6 and 15 for further information.
Card income decreased driven by higher amortization related to new account origination costs, partially offset by higher annual fees in CCB, and higher payments revenue on volume growth in commercial cards in CIB and CB.
Refer to CCB, CIB and CB segment results on pages 63-66, pages 67-72 and pages 73-75, respectively, and Note 6 for further information.
Other income decreased reflecting:
- lower auto operating lease income in CCB as a result of a decline in volume, and
- net losses on certain investments in CIB and AWM, compared with net gains in the prior year,
partially offset by
- an increase in Other Corporate from:
- a gain of \$914M on the sale of Visa B shares,
- higher net gains related to certain other investments, and
- proceeds from an insurance settlement in the first quarter of 2022,
- a gain on an equity-method investment received in partial satisfaction of a loan in CB,
- the impact of movements in foreign exchange rates related to net investment hedges in Treasury and CIO, primarily as a result of the strengthening of the U.S. dollar, and
- the absence of weather-related write-downs recorded in the prior year on certain renewable energy investments in CIB.
Refer to Note 2 for additional information on Visa B shares.

Net interest income increased driven by higher rates and Ioan growth, partially offset by lower Markets NII.
The Firm's average interest-earning assets were \$3.3 trillion, up $\$ 133$ billion, and the yield was $2.78 \%$, up 97 basis points ("bps"). The net yield on these assets, on an FTE basis, was $2.00 \%$, an increase of 36 bps. The net yield excluding Markets was $2.60 \%$, up 69 bps.
Refer to the Consolidated average balance sheets, interest and rates schedule on pages 292-296 for further information. Net yield excluding Markets is a non-GAAP financial measure. Refer to Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages $58-60$ for a further discussion of Net yield excluding Markets.

Provision for credit losses

| Year ended December 31, |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: |
| (in millions) |  | $\mathbf{2 0 2 2}$ | 2021 | 2020 |  |
| Consumer, excluding credit card | $\$$ | 506 | $\$(1,933)$ | $\$$ | 1,016 |
| Credit card | $\mathbf{3 , 3 5 3}$ | $(4,838)$ | 10,886 |  |  |
| Total consumer | $\mathbf{3 , 8 5 9}$ | $(6,771)$ | 11,902 |  |  |
| Wholesale | $\mathbf{2 , 4 7 6}$ | $(2,449)$ | 5,510 |  |  |
| Investment securities |  | $\mathbf{5 4}$ | $(36)$ | 68 |  |
| Total provision for credit losses | $\$$ | $\mathbf{6 , 3 8 9}$ | $\$(9,256)$ | $\$ 17,480$ |  |

2022 compared with 2021
The provision for credit losses was $\$ 6.4$ billion, reflecting a net addition of $\$ 3.5$ billion to the allowance for credit losses and $\$ 2.9$ billion of net charge-offs. The net addition to the allowance for credit losses consisted of:

- $\$ 2.3$ billion in wholesale, driven by deterioration in the Firm's macroeconomic outlook, and loan growth predominantly in CB and CIB, and
- \$1.2 billion in consumer, predominantly driven by Card Services, reflecting higher outstanding balances and deterioration in the Firm's macroeconomic outlook, partially offset by a reduction in the allowance related to a decrease in uncertainty associated with borrower behavior as the effects of the pandemic gradually recede.
The prior year included a $\$ 12.1$ billion net reduction in the allowance for credit losses.
Deterioration in the Firm's macroeconomic outlook included both updates to the central scenario in the fourth quarter of 2022, which now reflects a mild recession, as well as the impact of the increased weight placed on the adverse scenarios beginning in the first quarter of 2022 due to the effects associated with higher inflation, changes in monetary policy, and geopolitical risks, including the war in Ukraine.

Net charge-offs were $\$ 2.9$ billion, flat compared with 2021, and included:

- a $\$ 309$ million decrease in Card Services, reflecting the ongoing financial strength of U.S. consumers. However, median deposit balances declined in the second half of 2022, impacted by the growth in consumer spending,


## offset by

- a $\$ 190$ million increase in net charge-offs in Auto and Banking \& Wealth Management ("BWM") as net chargeoffs in the prior year benefited from government stimulus and payment assistance programs, and an increase of $\$ 76$ million in CIB.
Refer to the segment discussions of CCB on pages 63-66, CIB on pages 67-72, CB on pages 73-75, AWM on pages 76-78, the Allowance for Credit Losses on pages 127-129, and Notes 1,10 and 13 for further discussion of the credit portfolio and the allowance for credit losses.

| Year ended December 31, (in millions) |  | 2022 |  | 2021 |  | 2020 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Compensation expense | \$ | 41,636 | \$ | 38,567 | \$ | 34,988 |
| Noncompensation expense: |  |  |  |  |  |  |
| Occupancy |  | 4,696 |  | 4,516 |  | 4,449 |
| Technology, communications and equipment ${ }^{\text {(a) }}$ |  | 9,358 |  | 9,941 |  | 10,338 |
| Professional and outside services |  | 10,174 |  | 9,814 |  | 8,464 |
| Marketing |  | 3,911 |  | 3,036 |  | 2,476 |
| Other ${ }^{(b)}$ |  | 6,365 |  | 5,469 |  | 5,941 |
| Total noncompensation expense |  | 34,504 |  | 32,776 |  | 31,668 |
| Total noninterest expense | \$ | 76,140 | \$ | 71,343 | \$ | 66,656 |

(a) Includes depreciation expense associated with auto operating lease assets.
(b) Included Firmwide legal expense of $\$ 266$ million, $\$ 426$ million and $\$ 1.1$ billion for the years ended December 31, 2022, 2021 and 2020, respectively.

## 2022 compared with 2021

Compensation expense increased driven by additional headcount, primarily in technology and operations, as well as front office, and the impact of inflation, partially offset by lower revenue-related compensation in CIB.
Noncompensation expense increased as a result of:

- higher investments in the business, including marketing and technology, and
- higher structural expense, including travel and entertainment; regulatory assessments; occupancy expense associated with higher utilities and exit costs of certain leases; and other employee-related expense,
partially offset by
- lower volume-related expense, reflecting lower depreciation expense on lower Auto lease assets; and lower distribution fees in AWM, partially offset by higher operating losses and outside services, both in CCB; and
- lower legal expense.

The prior year included a $\$ 550$ million contribution to the Firm's Foundation.

Income tax expense

| Year ended December 31, <br> (in millions, except rate) | $\mathbf{2 0 2 2}$ | 2021 | 2020 |
| :--- | :---: | :---: | :---: |
| Income before income tax <br> expense | $\mathbf{\$ 4 6 , 1 6 6}$ | $\$ 59,562$ | $\$ 35,815$ |
| Income tax expense | $\mathbf{8 , 4 9 0}$ | 11,228 | 6,684 |
| Effective tax rate | $\mathbf{1 8 . 4} \%$ | $18.9 \%$ | $18.7 \%$ |

2022 compared with 2021
The effective tax rate decreased driven by income tax benefits compared with income tax expense in the prior year related to tax audit settlements, largely offset by other tax adjustments and a change in the level and mix of income and expenses subject to U.S. federal and state and local taxes. Refer to Note 25 for further information.

## Consolidated balance sheets analysis

The following is a discussion of the significant changes between December 31, 2022 and 2021.
Selected Consolidated balance sheets data

| December 31, (in millions) | 2022 |  | 2021 |  | Change |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Assets |  |  |  |  |  |
| Cash and due from banks | \$ | 27,697 | \$ | 26,438 | 5 \% |
| Deposits with banks |  | 539,537 |  | 714,396 | (24) |
| Federal funds sold and securities purchased under resale agreements |  | 315,592 |  | 261,698 | 21 |
| Securities borrowed |  | 185,369 |  | 206,071 | (10) |
| Trading assets |  | 453,799 |  | 433,575 | 5 |
| Available-for-sale securities |  | 205,857 |  | 308,525 | (33) |
| Held-to-maturity securities |  | 425,305 |  | 363,707 | 17 |
| Investment securities, net of allowance for credit losses |  | 631,162 |  | 672,232 | (6) |
| Loans |  | 1,135,647 |  | 1,077,714 | 5 |
| Allowance for loan losses |  | $(19,726)$ |  | $(16,386)$ | 20 |
| Loans, net of allowance for loan losses |  | 1,115,921 |  | 1,061,328 | 5 |
| Accrued interest and accounts receivable |  | 125,189 |  | 102,570 | 22 |
| Premises and equipment |  | 27,734 |  | 27,070 | 2 |
| Goodwill, MSRs and other intangible assets |  | 60,859 |  | 56,691 | 7 |
| Other assets |  | 182,884 |  | 181,498 | 1 |
| Total assets | \$ | 3,665,743 | \$ | 3,743,567 | (2)\% |

Cash and due from banks and deposits with banks decreased primarily as a result of lower deposits across the LOBs and loan growth. Deposits with banks reflect the Firm's placement of its excess cash with various central banks, including the Federal Reserve Banks.
Federal funds sold and securities purchased under resale agreements increased, reflecting:

- the impact of a lower level of netting on client-driven market-making activities and on collateral requirements in Markets,
- higher demand for securities to cover short positions in Fixed Income Markets, and
- an increase in the deployment of cash in Treasury and CIO.

Securities borrowed decreased driven by Markets, reflecting lower client-driven activities and lower demand for securities to cover short positions in Equity Markets.
Refer to Note 11 for additional information on securities purchased under resale agreements and securities borrowed. Trading assets increased due to:

- higher derivative receivables, primarily in foreign exchange, as a result of market movements, and
- an increase in the deployment of cash in Treasury and CIO.

Refer to Notes 2 and 5 for additional information.
Investment securities decreased, driven by lower available-for-sale ("AFS") securities, partially offset by higher held-tomaturity ("НTM") securities, which includes the impact of the transfer of $\$ 78.3$ billion of securities from AFS to HTM in 2022, for capital management purposes.

- The decrease in AFS securities was also due to paydowns, as well as unrealized losses, which are recognized in accumulated other comprehensive income ("AOCI"),
largely offset by net purchases, and
- the increase in HTM securities also reflected purchases partially offset by paydowns.

Refer to Corporate segment results on pages 79-80, Investment Portfolio Risk Management on page 130 and Notes 2 and 10 for additional information on investment securities.
Loans increased, reflecting:

- higher balances in Card Services driven by higher consumer spending and net new originations,
- higher originations and revolver utilization in CB, and
- higher wholesale Ioans in CIB,
partially offset by
- lower mortgage warehouse loans in Home Lending as sales outpaced originations due to higher interest rates, and
- the impact from PPP loan forgiveness in BWM.

The allowance for loan losses increased, reflecting a net addition of $\$ 3.3$ billion to the allowance for loan losses, consisting of:

- \$2.1 billion in wholesale, resulting from deterioration in the Firm's macroeconomic outlook, and loan growth predominantly in CB and CIB, and
- $\$ 1.2$ billion in consumer, predominantly driven by Card Services, reflecting higher outstanding balances, and deterioration in the Firm's macroeconomic outlook, partially offset by a reduction in the allowance related to a decrease in uncertainty associated with borrower behavior as the effects of the pandemic gradually recede.
There was also a $\$ 121$ million addition to the allowance for lending-related commitments recognized in other liabilities


## Management's discussion and analysis

on the Consolidated balance sheets, and a $\$ 54$ million addition to the allowance for investment securities.
Refer to Credit and Investment Risk Management on pages 106-130, and Notes 1, 2, 3, 12 and 13 for further discussion of loans and the allowance for loan losses.
Accrued interest and accounts receivable increased due to higher client receivables related to client-driven activities in Markets, as well as higher receivables in Payments related to the timing of payment activities, with December 31, 2022 falling on a weekend.
Premises and equipment, refer to Note 16 and 18 for additional information.

Goodwill, MSRs and other intangibles increased reflecting:

- higher MSRs as a result of higher market interest rates and net additions, partially offset by the realization of expected cash flows, and
- additions to goodwill associated with the acquisitions of Renovite Technologies, Inc. in the fourth quarter of 2022, Global Shares PLC and Figg, Inc. in the third quarter of 2022, and Frosch Travel Group, LLC and Volkswagen Payments S.A. in the second quarter of 2022.
Refer to Note 15 for additional information.
Other assets increased predominantly due to the impact of securities financing activities in Markets, offset by lower auto operating lease assets in CCB.

Selected Consolidated balance sheets data

| December 31, (in millions) | $\mathbf{2 0 2 2}$ | 2021 | Change |  |
| :--- | ---: | ---: | ---: | :---: |
| Liabilities |  |  |  |  |
| Deposits | $\mathbf{2 , 3 4 0 , 1 7 9}$ | $\$$ | $2,462,303$ | (5) |
| Federal funds purchased and securities loaned or sold under repurchase agreements | $\mathbf{2 0 2 , 6 1 3}$ | 194,340 | 4 |  |
| Short-term borrowings | $\mathbf{4 4 , 0 2 7}$ | 53,594 | $(18)$ |  |
| Trading liabilities | $\mathbf{1 7 7 , 9 7 6}$ | 164,693 | 8 |  |
| Accounts payable and other liabilities | $\mathbf{3 0 0 , 1 4 1}$ | 262,755 | 14 |  |
| Beneficial interests issued by consolidated variable interest entities ("VIEs") | $\mathbf{1 2 , 6 1 0}$ | 10,750 | 17 |  |
| Long-term debt | $\mathbf{2 9 5 , 8 6 5}$ | 301,005 | (2) |  |
| Total liabilities | $\mathbf{3 , 3 7 3 , 4 1 1}$ | $\mathbf{3 , 4 4 9 , 4 4 0}$ | (2) |  |
| Stockholders' equity | $\mathbf{2 9 2 , 3 3 2}$ | 294,127 | (1) |  |
| Total liabilities and stockholders' equity | $\$$ | $\mathbf{3 , 6 6 5 , 7 4 3}$ | $\$$ | $\mathbf{3 , 7 4 3 , 5 6 7}$ |

## Deposits decreased reflecting:

- attrition in CB and CIB, particularly non-operating deposits in CB, partially offset by net issuances of structured notes in Markets,
- net outflows into investments in AWM amid the rising interest rate environment, and
- a decline in balances in existing accounts in CCB due to higher customer spending, predominantly offset by net inflows into new accounts.
Federal funds purchased and securities loaned or sold under repurchase agreements increased due to:
- higher secured financing of trading assets in Markets, partially offset by
- lower secured financing of AFS investment securities in Treasury and CIO.
Short-term borrowings decreased predominantly as a result of lower financing requirements in Markets.
Refer to Liquidity Risk Management on pages 97-104 for additional information on deposits, federal funds purchased and securities loaned or sold under repurchase agreements, and short-term borrowings; and also to Notes 2 and 17 for deposits and Note 11 for federal funds purchased and securities loaned or sold under repurchase agreements. Trading liabilities increased due to client-driven marketmaking activities, which resulted in higher levels of short positions in Markets. Refer to Notes 2 and 5 for additional information.

Accounts payable and other liabilities increased due to higher client payables related to client-driven activities in Markets, including Prime Finance, as well as higher payables in Payments related to the timing of payment activities, with December 31, 2022 falling on a weekend. Refer to Note 19 for additional information.

Beneficial interests issued by consolidated VIEs increased driven by higher issuance of commercial paper as a result of an increase in Ioan balances in the Firm-administered multiseller conduits. Refer to Liquidity Risk Management on pages 97-104; and Notes 14 and 28 for additional information on Firm-sponsored VIEs and Ioan securitization trusts.

Long-term debt decreased driven by:

- fair value hedge accounting adjustments in Treasury and CIO as a result of higher rates, and a decline in the fair value of structured notes in Markets,
largely offset by
- net issuances of senior debt in Treasury and CIO and structured notes in Markets. Refer to Liquidity Risk Management on pages 97-104 and Note 20 for additional information.
Stockholders' equity reflects net unrealized losses in AOCI, predominantly driven by the impact of higher interest rates on the AFS portfolio and cash flow hedges in Treasury and CIO. Refer to Consolidated Statements of Changes in Stockholders' Equity on page 162, Capital Actions on page 94, and Note 24 for additional information.


## Consolidated cash flows analysis

The following is a discussion of cash flow activities during the years ended December 31, 2022 and 2021. Refer to Consolidated cash flows analysis on page 57 of the Firm's 2021 Form 10-K for a discussion of the 2020 activities.

|  | Year ended December 31, |  |  |
| :--- | :---: | :---: | :---: |
| (in millions) | $\mathbf{2 0 2 2}$ | 2021 | 2020 |
| Net cash provided by/(used in) |  |  |  |
| Operating activities | $\mathbf{\$ 1 0 7 , 1 1 9}$ | $\$$ | 78,084 |
| Investing activities | $\mathbf{( 1 3 7 , 8 1 9 )}$ | $(129,344)$ | $(261,912)$ |
| Financing activities | $\mathbf{( 1 2 6 , 2 5 7 )}$ | 275,993 | 596,645 |
| Effect of exchange rate <br> changes on cash | $\mathbf{( 1 6 , 6 4 3 )}$ | $(11,508)$ | 9,155 |
| Net increase/(decrease) in <br> cash and due from banks and <br> deposits with banks | $\mathbf{\$ ( 1 7 3 , 6 0 0 )}$ | $\$ 213,225$ | $\$ 263,978$ |

## Operating activities

JPMorgan Chase's operating assets and liabilities primarily support the Firm's lending and capital markets activities. These assets and liabilities can vary significantly in the normal course of business due to the amount and timing of cash flows, which are affected by client-driven and risk management activities and market conditions. The Firm believes that cash flows from operations, available cash and other liquidity sources, and its capacity to generate cash through secured and unsecured sources, are sufficient to meet its operating liquidity needs.

- In 2022, cash provided resulted from higher accounts payable and other liabilities, lower securities borrowed, and net proceeds from sales, securitizations, and paydowns of loans held-for-sale, partially offset by higher trading assets.
- In 2021, cash provided resulted from lower trading assets and higher accounts payable and other liabilities, partially offset by higher securities borrowed and lower trading liabilities.


## Investing activities

The Firm's investing activities predominantly include originating held-for-investment loans, investing in the investment securities portfolio and other short-term instruments.

- In 2022, cash used resulted from net originations of loans and higher securities purchased under resale agreements, partially offset by net proceeds from investment securities.
- In 2021, cash used resulted from net purchases of investment securities and higher net originations of loans, partially offset by lower securities purchased under resale agreements.


## Financing activities

The Firm's financing activities include acquiring customer deposits and issuing long-term debt and preferred stock.

- In 2022, cash used reflected lower deposits, partially offset by net proceeds from long- and short-term borrowings.
- In 2021, cash provided reflected higher deposits and net proceeds from long- and short-term borrowings, partially offset by a decrease in securities loaned or sold under repurchase agreements.
- For both periods, cash was used for repurchases of common stock and cash dividends on common and preferred stock.

Refer to Consolidated Balance Sheets Analysis on pages 55-56, Capital Risk Management on pages 86-96, and Liquidity Risk Management on pages 97-104, and the Consolidated Statements of Cash Flows on page 163 for a further discussion of the activities affecting the Firm's cash flows.

## Management's discussion and analysis

## EXPLANATION AND RECONCILIATION OF THE FIRM'S USE OF NON-GAAP FINANCIAL MEASURES

## Non-GAAP financial measures

The Firm prepares its Consolidated Financial Statements in accordance with U.S. GAAP; these financial statements appear on pages $159-163$. That presentation, which is referred to as "reported" basis, provides the reader with an understanding of the Firm's results that can be tracked consistently from year-to-year and enables a comparison of the Firm's performance with the U.S. GAAP financial statements of other companies.

In addition to analyzing the Firm's results on a reported basis, management reviews Firmwide results, including the overhead ratio, on a "managed" basis; these Firmwide managed basis results are non-GAAP financial measures. The Firm also reviews the results of the LOBs on a managed basis. The Firm's definition of managed basis starts, in each case, with the reported U.S. GAAP results and includes certain reclassifications to present total net revenue for the Firm (and each of the reportable business segments) on an FTE basis. Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented in the managed results on a basis comparable to taxable investments and securities. These financial measures allow
management to assess the comparability of revenue from year-to-year arising from both taxable and tax-exempt sources. The corresponding income tax impact related to tax-exempt items is recorded within income tax expense. These adjustments have no impact on net income as reported by the Firm as a whole or by the LOBs.

Management also uses certain non-GAAP financial measures at the Firm and business-segment level because these other non-GAAP financial measures provide information to investors about the underlying operational performance and trends of the Firm or of the particular business segment, as the case may be, and therefore facilitate a comparison of the Firm or the business segment with the performance of its relevant competitors. Refer to Business Segment Results on pages 61-80 for additional information on these non-GAAP measures. Non-GAAP financial measures used by the Firm may not be comparable to similarly named non-GAAP financial measures used by other companies.

The following summary table provides a reconciliation from the Firm's reported U.S. GAAP results to managed basis.

|  | 2022 |  |  |  | 2021 |  |  |  | 2020 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year ended December 31, (in millions, except ratios) | Reported | Fully taxableequivalent adjustments ${ }^{(\text {a) }}$ |  | Managed basis | Reported | Fully taxableequivalent adjustments ${ }^{(\mathrm{a})}$ |  | Managed basis | Reported | Fully taxableequivalent adjustments ${ }^{\text {(a) }}$ |  | Managed basis |
| Other income | \$ 4,322 | \$ | 3,148 | \$ 7,470 | \$ 4,830 | \$ | 3,225 | \$ 8,055 | \$ 4,865 | \$ | 2,560 | \$ 7,425 |
| Total noninterest revenue | 61,985 |  | 3,148 | 65,133 | 69,338 |  | 3,225 | 72,563 | 65,388 |  | 2,560 | 67,948 |
| Net interest income | 66,710 |  | 434 | 67,144 | 52,311 |  | 430 | 52,741 | 54,563 |  | 418 | 54,981 |
| Total net revenue | 128,695 |  | 3,582 | 132,277 | 121,649 |  | 3,655 | 125,304 | 119,951 |  | 2,978 | 122,929 |
| Total noninterest expense | 76,140 |  | NA | 76,140 | 71,343 |  | NA | 71,343 | 66,656 |  | NA | 66,656 |
| Pre-provision profit | 52,555 |  | 3,582 | 56,137 | 50,306 |  | 3,655 | 53,961 | 53,295 |  | 2,978 | 56,273 |
| Provision for credit losses | 6,389 |  | NA | 6,389 | $(9,256)$ |  | NA | $(9,256)$ | 17,480 |  | NA | 17,480 |
| Income before income tax expense | 46,166 |  | 3,582 | 49,748 | 59,562 |  | 3,655 | 63,217 | 35,815 |  | 2,978 | 38,793 |
| Income tax expense | 8,490 |  | 3,582 | 12,072 | 11,228 |  | 3,655 | 14,883 | 6,684 |  | 2,978 | 9,662 |
| Net income | \$ 37,676 |  | NA | \$ 37,676 | \$ 48,334 |  | NA | \$48,334 | \$ 29,131 |  | NA | \$ 29,131 |
| Overhead ratio | 59 \% |  | NM | 58 \% | 59 \% |  | NM | 57 \% | 56 \% |  | NM | 54 \% |

(a) Predominantly recognized in CIB, CB and Corporate.

Net interest income, net yield, and noninterest revenue excluding CIB Markets
In addition to reviewing net interest income, net yield, and noninterest revenue on a managed basis, management also reviews these metrics excluding CIB Markets, as shown below. CIB Markets consists of Fixed Income Markets and Equity Markets. These metrics, which exclude CIB Markets, are non-GAAP financial measures. Management reviews these metrics to assess the performance of the Firm's lending, investing (including asset-liability management) and deposit-raising activities, apart from any volatility associated with CIB Markets activities. In addition, management also assesses CIB Markets business performance on a total revenue basis as offsets may occur across revenue lines. Management believes that these measures provide investors and analysts with alternative measures to analyze the revenue trends of the Firm.

| Year ended December 31, (in millions, except rates) |  | 2022 |  | 2021 |  | 2020 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net interest income reported | \$ | 66,710 | \$ | 52,311 | \$ | 54,563 |
| Fully taxable-equivalent adjustments |  | 434 |  | 430 |  | 418 |
| Net interest income managed basis ${ }^{(\mathrm{a})}$ | \$ | 67,144 | \$ | 52,741 | \$ | 54,981 |
| Less: Markets net interest income ${ }^{(b)}$ |  | 4,789 |  | 8,243 |  | 8,374 |
| Net interest income excluding Markets ${ }^{(a)}$ | \$ | 62,355 | \$ | 44,498 | \$ | 46,607 |
| Average interest-earning assets |  | ,349,079 |  | 215,942 |  | 79,710 |
| Less: Average Markets interest-earning assets ${ }^{(b)}$ |  | 953,195 |  | 888,238 |  | 751,131 |
| Average interest-earning assets excluding Markets |  | 2,395,884 |  | 327,704 |  | 28,579 |
| Net yield on average interest-earning assets managed basis |  | 2.00 \% |  | 1.64 \% |  | 1.98 \% |
| Net yield on average Markets interest-earning assets ${ }^{(b)}$ |  | 0.50 |  | 0.93 |  | 1.11 |
| Net yield on average interest-earning assets excluding Markets |  | 2.60 \% |  | 1.91 \% |  | 2.30 \% |
| Noninterest revenue reported | \$ | 61,985 | \$ | 69,338 | \$ | 65,388 |
| Fully taxable-equivalent adjustments |  | 3,148 |  | 3,225 |  | 2,560 |
| Noninterest revenue managed basis | \$ | 65,133 | \$ | 72,563 |  | 67,948 |
| Less: Markets noninterest revenue ${ }^{(b)}$ |  | 24,195 |  | 19,151 |  | 21,109 |
| Noninterest revenue excluding Markets | \$ | 40,938 | \$ | 53,412 | \$ | 46,839 |
| Memo: Total Markets net revenue ${ }^{(b)}$ | \$ | 28,984 | \$ | 27,394 | \$ | 29,483 |

(a) Interest includes the effect of related hedges. Taxable-equivalent amounts are used where applicable.
(b) Refer to pages 70-71 for further information on CIB Markets.

Calculation of certain U.S. GAAP and non-GAAP financial measures
Certain U.S. GAAP and non-GAAP financial measures are calculated as follows:

Book value per share ("BVPS")
Common stockholders' equity at period-end /
Common shares at period-end
Overhead ratio
Total noninterest expense / Total net revenue
ROA
Reported net income / Total average assets
ROE
Net income* / Average common stockholders' equity
ROTCE
Net income* / Average tangible common equity
TBVPS
Tangible common equity at period-end / Common shares at period-end

* Represents net income applicable to common equity

In addition, the Firm reviews other non-GAAP measures such as

- Adjusted expense, which represents noninterest expense excluding Firmwide legal expense, and
- Pre-provision profit, which represents total net revenue less total noninterest expense.
Management believes that these measures help investors understand the effect of these items on reported results and provide an alternative presentation of the Firm's performance.
The Firm also reviews the allowance for loan losses to period-end loans retained excluding trade finance and conduits, a non-GAAP financial measure, to provide a more meaningful assessment of CIB's allowance coverage ratio.


## TCE, ROTCE and TBVPS

TCE, ROTCE and TBVPS are each non-GAAP financial measures. TCE represents the Firm's common stockholders' equity (i.e., total stockholders' equity less preferred stock) less goodwill and identifiable intangible assets (other than MSRs), net of related deferred tax liabilities. ROTCE measures the Firm's net income applicable to common equity as a percentage of average TCE. TBVPS represents the Firm's TCE at period-end divided by common shares at period-end. TCE, ROTCE and TBVPS are utilized by the Firm, as well as investors and analysts, in assessing the Firm's use of equity.
The following summary table provides a reconciliation from the Firm's common stockholders' equity to TCE.

| (in millions, except per share and ratio data) | Period-end |  |  |  | Average |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { Dec 31, } \\ 2022 \end{gathered}$ |  | $\begin{gathered} \text { Dec 31, } \\ 2021 \end{gathered}$ |  | Year ended December 31, |  |  |
|  |  |  | 2022 | 2021 | 2020 |
| Common stockholders' equity | \$ | 264,928 |  |  | \$ | 259,289 | \$ 253,068 | \$ 250,968 | \$ 236,865 |
| Less: Goodwill |  | 51,662 |  | 50,315 | 50,952 | 49,584 | 47,820 |
| Less: Other intangible assets |  | 1,224 |  | 882 | 1,112 | 876 | 781 |
| Add: Certain deferred tax liabilities ${ }^{(\mathrm{a})}$ |  | 2,510 |  | 2,499 | 2,505 | 2,474 | 2,399 |
| Tangible common equity | \$ | 214,552 | \$ | 210,591 | \$ 203,509 | \$ 202,982 | \$ 190,663 |
| Return on tangible common equity | NA |  |  | NA | 18 \% | 23 \% | $14 \%$ |
| Tangible book value per share | \$ | 73.12 | \$ | 71.53 | NA | NA | NA |

(a) Represents deferred tax liabilities related to tax-deductible goodwill and to identifiable intangibles created in nontaxable transactions, which are netted against goodwill and other intangibles when calculating TCE.

The Firm is managed on an LOB basis. There are four major reportable business segments - Consumer \& Community Banking, Corporate \& Investment Bank, Commercial Banking and Asset \& Wealth Management. In addition, there is a Corporate segment.

The business segments are determined based on the products and services provided, or the type of customer served, and they reflect the manner in which financial information is evaluated by the Firm's Operating Committee. Segment results are presented on a managed basis. Refer to Explanation and Reconciliation of the Firm's use of Non-GAAP Financial Measures, on pages 58-60 for a definition of managed basis.

| JPMorgan Chase |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Consumer Businesses |  |  | Wholesale Businesses |  |  |  |
| Consumer \& Community Banking |  |  | Corporate \& Investment Bank |  | Commercial Banking | Asset \& Wealth Management |
| Banking \& Wealth Management ${ }^{(a)}$ | Home Lending | Card Services \& Auto ${ }^{\text {(b) }}$ | Banking | Markets \& Securities Services | - Middle Market Banking | - Asset Management |
| - Consumer Banking <br> - J.P. Morgan Wealth Management <br> - Business Banking | - Home Lending Production <br> - Home Lending Servicing <br> - Real Estate Portfolios | - Card Services <br> - Auto | - Investment Banking <br> - Payments <br> - Lending | - Fixed Income Markets <br> - Equity Markets <br> - Securities Services <br> - Credit Adjustments \& Other | - Corporate Client Banking <br> - Commercial Real Estate Banking | - Global Private Bank |

(a) In the fourth quarter of 2022, Consumer \& Business Banking was renamed Banking \& Wealth Management ("BWM").
(b) In the fourth quarter of 2022, Card \& Auto was renamed Card Services \& Auto.

Description of business segment reporting methodology Results of the business segments are intended to present each segment as if it were a stand-alone business. The management reporting process that derives business segment results includes the allocation of certain income and expense items. The Firm also assesses the level of capital required for each LOB on at least an annual basis. The Firm periodically assesses the assumptions, methodologies and reporting classifications used for segment reporting, and further refinements may be implemented in future periods. The Firm's LOBs also provide various business metrics which are utilized by the Firm and its investors and analysts in assessing performance.

## Revenue sharing

When business segments join efforts to sell products and services to the Firm's clients and customers, the participating business segments may agree to share revenue from those transactions. Revenue is generally recognized in the segment responsible for the related product or service, with allocations to the other segment(s) involved in the transaction. The segment results reflect these revenue-sharing agreements.

## Expense Allocation

Where business segments use services provided by corporate support units, or another business segment, the costs of those services are allocated to the respective business segments. The expense is generally
allocated based on the actual cost and use of services provided. In contrast, certain costs and investments related to corporate support units, technology and operations that are not currently utilized by any LOB, are not allocated to the business segments and are retained in Corporate. Expense retained in Corporate generally includes costs that would not be incurred if the segments were stand-alone businesses, and other items not aligned with a particular business segment.

## Funds transfer pricing

Funds transfer pricing ("FTP") is the process by which the Firm allocates interest income and expense to the LOBs and Other Corporate and transfers the primary interest rate risk and liquidity risk to Treasury and CIO.

The funds transfer pricing process considers the interest rate and liquidity risk characteristics of assets and liabilities and off-balance sheet products. Periodically, the methodology and assumptions utilized in the FTP process are adjusted to reflect economic conditions and other factors, which may impact the allocation of net interest income to the segments.
As a result of the rising interest rate environment, the cost of funds for assets and the credits earned for liabilities have generally increased, impacting the business segments' net interest income. During the period ended December 31, 2022, this has resulted in higher cost of funds for loans and contributed to margin expansion on deposits.

## Management's discussion and analysis

## Foreign exchange risk

Foreign exchange risk is transferred from the LOBs and Other Corporate to Treasury and CIO for certain revenues and expenses. Treasury and CIO manages these risks centrally and reports the impact of foreign exchange rate movements related to the transferred risk in its results. Refer to Market Risk Management on page 137 for additional information.

## Debt expense and preferred stock dividend allocation

 As part of the funds transfer pricing process, almost all of the cost of the credit spread component of outstanding unsecured long-term debt and preferred stock dividends is allocated to the reportable business segments, while the balance of the cost is retained in Corporate. The methodology to allocate the cost of unsecured long-term debt and preferred stock dividends to the business segments is aligned with the relevant regulatory capital requirements and funding needs of the LOBs, as applicable. The allocated cost of unsecured long-term debt is included in a business segment's net interest income, and net income is reduced by preferred stock dividends to arrive at abusiness segment's net income applicable to common equity.
Refer to Capital Risk Management on pages 86-96 for additional information.

## Capital allocation

The amount of capital assigned to each business segment is referred to as equity. The Firm's allocation methodology incorporates Basel III Standardized Risk-weighted assets ("RWA"), Basel III Advanced RWA, the global systemically important banks ("GSIB") surcharge, and a simulation of capital in a severe stress environment. At least annually, the assumptions, judgments and methodologies used to allocate capital are reassessed and, as a result, the capital allocated to the LOBs may change. As of January 1, 2023, the Firm has changed its line of business capital allocations primarily as a result of updates to the Firm's capital requirements and changes in RWA for each LOB.

Refer to Line of business equity on page 93 for additional information on capital allocation.

Segment Results - Managed Basis
The following tables summarize the Firm's results by segment for the periods indicated.

| Year ended December 31, | Consumer \& Community Banking |  |  | Corporate \& Investment Bank |  |  | Commercial Banking |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (in millions, except ratios) | 2022 | 2021 | 2020 | 2022 | 2021 | 2020 | 2022 | 2021 | 2020 |
| Total net revenue | \$ 55,017 | \$ 50,073 | \$ 51,268 | \$47,899 | \$ 51,749 | \$ 49,284 | \$ 11,533 | \$ 10,008 | \$ 9,313 |
| Total noninterest expense | 31,471 | 29,256 | 27,990 | 27,087 | 25,325 | 23,538 | 4,719 | 4,041 | 3,798 |
| Pre-provision profit/(loss) | 23,546 | 20,817 | 23,278 | 20,812 | 26,424 | 25,746 | 6,814 | 5,967 | 5,515 |
| Provision for credit losses | 3,813 | $(6,989)$ | 12,312 | 1,158 | $(1,174)$ | 2,726 | 1,268 | (947) | 2,113 |
| Net income/(loss) | 14,871 | 20,930 | 8,217 | 14,970 | 21,134 | 17,094 | 4,213 | 5,246 | 2,578 |
| Return on equity ("ROE") | 29\% | 41\% | 15\% | 14 \% | 25\% | 20\% | 16 \% | 21\% | 11\% |
| Year ended December 31, | Asset 8 | Wealth Man | ement |  | Corporate |  |  | Total |  |
| (in millions, except ratios) | 2022 | 2021 | 2020 | 2022 | 2021 | 2020 | 2022 | 2021 | 2020 |
| Total net revenue | \$17,748 | \$ 16,957 | \$ 14,240 | \$ 80 | \$ $(3,483)$ | \$ $(1,176)$ | \$ 132,277 | \$ 125,304 | \$ 122,929 |
| Total noninterest expense | 11,829 | 10,919 | 9,957 | 1,034 | 1,802 | 1,373 | 76,140 | 71,343 | 66,656 |
| Pre-provision profit/(loss) | 5,919 | 6,038 | 4,283 | (954) | $(5,285)$ | $(2,549)$ | 56,137 | 53,961 | 56,273 |
| Provision for credit losses | 128 | (227) | 263 | 22 | 81 | 66 | 6,389 | $(9,256)$ | 17,480 |
| Net income/(loss) | 4,365 | 4,737 | 2,992 | (743) | $(3,713)$ | $(1,750)$ | 37,676 | 48,334 | 29,131 |
| Return on equity ("ROE") | 25 \% | 33\% | 28\% | NM | NM | NM | 14\% | 19\% | 12\% |

## Selected Firmwide Metrics

The following tables present key metrics for Wealth Management, which consists of the Global Private Bank in AWM and J.P. Morgan Wealth Management in CCB; and total revenue and key metrics for J.P. Morgan Payments, which consists of payments activities in CIB and CB. This presentation is intended to provide investors with additional information concerning Wealth Management and J.P. Morgan Payments, each of which consists of similar business activities conducted across LOBs to serve different types of clients and customers.

## Selected metrics - Wealth Management

| Year ended December 31, | $\mathbf{2 0 2 2}$ | 2021 | 2020 |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Client assets (in billions) $^{(\mathrm{a})}$ | $\mathbf{\$}$ | $\mathbf{2 , 4 3 8}$ | $\mathbf{\$}$ | 2,456 | $\$$ |
| Number of client advisors |  | $\mathbf{8 , 1 6 6}$ |  | $\mathbf{7 , 4 6 3}$ |  |

(a) Consists of Global Private Bank in AWM and client investment assets in J.P. Morgan Wealth Management in CCB.

## Selected metrics - J.P. Morgan Payments

| (in millions, except where otherwise noted) |  |  |  |
| :--- | ---: | ---: | ---: |
| Year ended December 31, | 2022 | 2021 | 2020 |
| Total net revenue | $\mathbf{\$ 1 3 , 9 0 9}$ | $\$ 9,861$ | $\$ 9,599$ |
| Merchant processing volume (in billions) | $\mathbf{2 , 1 5 8 . 4}$ | $1,886.7$ | $1,597.3$ |
| Average deposits (in billions) | $\mathbf{7 7 9}$ | 800 | 651 |

The following sections provide a comparative discussion of the Firm's results by segment as of or for the years ended December 31, 2022 and 2021.

Consumer \& Community Banking offers products and services to consumers and small businesses through bank branches, ATMs, digital (including mobile and online) and telephone banking. CCB is organized into Banking \& Wealth Management (including Consumer Banking, J.P. Morgan Wealth Management and Business Banking), Home Lending (including Home Lending Production, Home Lending Servicing and Real Estate Portfolios) and Card Services \& Auto. Banking \& Wealth Management offers deposit, investment and lending products, cash management, payments and services. Home Lending includes mortgage origination and servicing activities, as well as portfolios consisting of residential mortgages and home equity loans. Card Services issues credit cards and offers travel services. Auto originates and services auto loans and leases.

(a) Included operating lease income of $\$ 3.6$ billion, $\$ 4.8$ billion and $\$ 5.4$ billion for the years ended December 31, 2022, 2021 and 2020, respectively.
(b) Included depreciation expense on leased assets of $\$ 2.4$ billion, $\$ 3.3$ billion and $\$ 4.2$ billion for the years ended December 31, 2022, 2021 and 2020, respectively.
(c) In the fourth quarter of 2022, Consumer \& Business Banking was renamed Banking \& Wealth Management.
(d) In the fourth quarter of 2022, Card \& Auto was renamed Card Services \& Auto.
(e) Included MSR risk management results of $\$ 93$ million, $\$(525)$ million and \$(18) million for the years ended December 31, 2022, 2021 and 2020, respectively.

## Management's discussion and analysis

2022 compared with 2021
Net income was $\$ 14.9$ billion, down 29\%, reflecting a net increase in the provision for credit losses compared with a net benefit in the prior year.
Net revenue was $\$ 55.0$ billion, an increase of $10 \%$. Net interest income was $\$ 39.9$ billion, up 22\%, predominantly driven by:

- margin expansion on higher rates as well as growth in deposits in Banking \& Wealth Management ("BWM"), and higher revolving loans in Card Services,
partially offset by
- lower NII associated with PPP Ioan forgiveness in BWM, and tighter loan spreads in Home Lending.

Noninterest revenue was $\$ 15.1$ billion, down 13\%, reflecting:

- lower production revenue from lower margins and volume in Home Lending,
- lower auto operating lease income as a result of a decline in volume, and
- lower card income reflecting higher amortization related to new account origination costs partially offset by higher annual fees in Card Services, while net interchange income was relatively flat,
partially offset by
- higher net mortgage servicing revenue, reflecting the absence of a net loss in MSR risk management in the prior year primarily driven by updates to model inputs related to prepayment expectations, as well as higher operating revenue on a higher level of third-party loans serviced,
- higher commissions reflecting travel-related services in Card Services and increased annuity sales in BWM, and
- higher deposit-related fees due to higher service fee volume in BWM.
Refer to Note 6 for additional information on card income and asset management, administration and commissions. Refer to Note 15 for further information regarding changes in the value of the MSR asset and related hedges, and mortgage fees and related income.

Noninterest expense was \$31.5 billion, up 8\%, reflecting:

- investments in the business and higher structural expenses, predominantly driven by compensation, technology and marketing,
partially offset by
- lower volume- and revenue-related expenses, predominantly driven by lower depreciation expense on lower auto lease assets, partially offset by higher operating losses.
The provision for credit losses was $\$ 3.8$ billion, driven by:
- net charge-offs of $\$ 2.7$ billion, down from $\$ 2.8$ billion in the prior year and included
- a \$309 million decrease in Card Services, reflecting the ongoing financial strength of U.S. consumers. However, median deposit balances declined in the second half of 2022, impacted by the growth in consumer spending,
largely offset by
- a $\$ 190$ million increase in net charge-offs in Auto and BWM as net charge-offs in the prior year benefited from government stimulus and payment assistance programs, and
- a $\$ 1.1$ billion net addition to the allowance for credit losses driven by
- \$950 million in Card Services, reflecting higher outstanding balances, and deterioration in the Firm's macroeconomic outlook, partially offset by a reduction in the allowance related to a decrease in uncertainty associated with borrower behavior as the effects of the pandemic gradually recede, and
- \$175 million in Home Lending.

The prior year included a $\$ 9.8$ billion reduction in the allowance for credit losses across CCB.
Refer to Credit and Investment Risk Management on pages 106-130 and Allowance for Credit Losses on pages 127-129 for a further discussion of the credit portfolios and the allowance for credit losses.

|  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| As of or for the year ended December 31, <br> (in millions, except headcount) | 2022 | 2021 | 2020 |  |
|  |  |  |  |  |
| Selected balance sheet data (period-end) |  |  |  |  |
| Total assets | \$ 514,085 | \$ 500,370 | \$ | 496,705 |
| Loans: |  |  |  |  |
| Banking \& Wealth Management ${ }^{(a)}$ | 29,008 | 35,095 |  | 48,810 |
| Home Lending ${ }^{(b)}$ | 172,554 | 180,529 |  | 182,121 |
| Card Services | 185,175 | 154,296 |  | 144,216 |
| Auto | 68,191 | 69,138 |  | 66,432 |
| Total loans | 454,928 | 439,058 |  | 441,579 |
| Deposits | 1,131,611 | 1,148,110 |  | 958,706 |
| Equity | 50,000 | 50,000 |  | 52,000 |
| Selected balance sheet data (average) |  |  |  |  |
| Total assets | \$ 497,263 | \$ 489,771 | \$ | 501,584 |
| Loans: |  |  |  |  |
| Banking \& Wealth |  |  |  |  |
| Home Lending ${ }^{(c)}$ | 176,285 | 181,049 |  | 197,148 |
| Card Services | 163,335 | 140,405 |  | 146,633 |
| Auto | 68,098 | 67,624 |  | 61,476 |
| Total loans | 439,263 | 433,984 |  | 448,321 |
| Deposits | 1,162,680 | 1,054,956 |  | 851,390 |
| Equity | 50,000 | 50,000 |  | 52,000 |
| Headcount | 135,347 | 128,863 |  | 122,894 |

(a) At December 31, 2022, 2021 and 2020, included $\$ 350$ million, $\$ 5.4$ billion and $\$ 19.2$ billion of loans, respectively, in Business Banking under the PPP. Refer to Credit Portfolio on pages 108-109 for a further discussion of the PPP.
(b) At December 31, 2022, 2021 and 2020, Home Lending loans held-for-sale and loans at fair value were $\$ 3.0$ billion, $\$ 14.9$ billion and $\$ 9.7$ billion, respectively.
(c) Average Home Lending loans held-for sale and loans at fair value were $\$ 7.3$ billion, $\$ 15.4$ billion and $\$ 11.1$ billion for the years ended December 31, 2022, 2021 and 2020, respectively.

Selected metrics
As of or for the year ended
December 31,

| (in millions, except ratio data) | 2022 | 2021 | 2020 |  |
| :--- | :---: | :---: | :---: | ---: |
| Credit data and quality statistics |  |  |  |  |
| Nonaccrual loans $^{(\mathrm{a})(\mathrm{b})}$ | $\$ \mathbf{3 , 8 9 9}$ | (f) | $\$ 4,875$ | (f) |
| $\$ 55,492$ |  |  |  |  |


| Net charge-offs/(recoveries) |  |  |  |
| :---: | :---: | :---: | :---: |
| Banking \& Wealth Management | 370 | 289 | 263 |
| Home Lending | (229) | (275) | (169) |
| Card Services | 2,403 | 2,712 | 4,286 |
| Auto | 144 | 35 | 123 |
| Total net charge-offs/ (recoveries) | \$ 2,688 | \$ 2,761 | \$ 4,503 |
| Net charge-off/(recovery) rate |  |  |  |
| Banking \& Wealth Management ${ }^{(\mathrm{c})}$ | 1.17\% | 0.64\% | 0.61\% |
| Home Lending | (0.14) | (0.17) | (0.09) |
| Card Services | 1.47 | 1.94 | 2.93 |
| Auto | 0.21 | 0.05 | 0.20 |
| Total net charge-off/ (recovery) rate | 0.62\% | 0.66\% | 1.03\% |
| 30+ day delinquency rate |  |  |  |
| Home Lending ${ }^{(d)(e)}$ | 0.83\% | 1.25\% | 1.15\% |
| Card Services | 1.45 | 1.04 | 1.68 |
| Auto | 1.01 | 0.64 | 0.69 |
| 90+ day delinquency rate - Card Services | 0.68\% | 0.50\% | 0.92\% |
| Allowance for loan losses |  |  |  |
| Banking \& Wealth Management | \$ 722 | \$ 697 | \$ 1,372 |
| Home Lending | 867 | 660 | 1,813 |
| Card Services | 11,200 | 10,250 | 17,800 |
| Auto | 715 | 733 | 1,042 |

Total allowance for Ioan losses
\$13,504 \$12,340
(a) At December 31, 2022, 2021 and 2020, nonaccrual loans excluded mortgage loans 90 or more days past due and insured by U.S. government agencies of $\$ 187$ million, $\$ 342$ million and $\$ 558$ million, respectively. These amounts have been excluded based upon the government guarantee. In addition, the Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance.
(b) At December 31, 2022, 2021 and 2020, generally excludes loans that were under payment deferral programs offered in response to the COVID-19 pandemic. Refer to Credit Portfolio on pages 108-109 for further information on consumer assistance. Includes loans to customers that have exited COVID-19 related payment deferral programs and are 90 or more days past due, predominantly all of which were considered collateral-dependent at time of exit.
(c) At December 31, 2022, 2021 and 2020, included $\$ 350$ million, $\$ 5.4$ billion and $\$ 19.2$ billion of loans, respectively, in Business Banking under the PPP. The Firm does not expect to realize material credit losses on PPP loans because the loans are guaranteed by the SBA. Refer to Credit Portfolio on pages 108-109 for a further discussion of the PPP.
(d) At December 31, 2022, 2021 and 2020, the principal balance of loans under payment deferral programs offered in response to the COVID-19 pandemic was $\$ 449$ million, $\$ 1.1$ billion and $\$ 9.1$ billion in Home Lending, respectively. Loans that are performing according to their modified terms are generally not considered delinquent. Refer to Credit Portfolio on pages 108-109 for further information on consumer assistance.
(e) At December 31, 2022, 2021 and 2020, excluded mortgage loans insured by U.S. government agencies of $\$ 258$ million, $\$ 405$ million and $\$ 744$ million, respectively, that are 30 or more days past due. These amounts have been excluded based upon the government guarantee.
(f) At December 31, 2022 and 2021, nonaccrual loans excluded $\$ 101$ million and $\$ 506$ million of PPP loans 90 or more days past due and guaranteed by the SBA, respectively.

(a) Users of all web and/or mobile platforms who have logged in within the past 90 days.
(b) Users of all mobile platforms who have logged in within the past 90 days.
(c) Total payments transaction volume includes debit and credit card sales volume and gross outflows of ACH, ATM, teller, wires, BillPay, PayChase, Zelle, person-to-person and checks.
(d) Includes assets invested in managed accounts and J.P. Morgan mutual funds where AWM is the investment manager. Refer to AWM segment results on pages 76-78 for additional information.
(e) Firmwide mortgage origination volume was $\$ 81.8$ billion, $\$ 182.4$ billion and $\$ 133.4$ billion for the years ended December 31, 2022, 2021 and 2020, respectively.
(f) Included origination volume under the PPP of $\$ 10.6$ billion and $\$ 21.9$ billion for the years ended December 31, 2021 and 2020, respectively. The program ended on May 31, 2021 for new applications.

The Corporate \& Investment Bank, which consists of Banking and Markets \& Securities Services, offers a broad suite of investment banking, market-making, prime brokerage, lending, and treasury and securities products and services to a global client base of corporations, investors, financial institutions, merchants, government and municipal entities. Banking offers a full range of investment banking products and services in all major capital markets, including advising on corporate strategy and structure, capital-raising in equity and debt markets, as well as loan origination and syndication. Banking also includes Payments, which provides payments services enabling clients to manage payments and receipts globally, and cross-border financing. Markets \& Securities Services includes Markets, a global market-maker across products, including cash and derivative instruments, which also offers sophisticated risk management solutions, prime brokerage, and research. Markets \& Securities Services also includes Securities Services, a leading global custodian which provides custody, fund accounting and administration, and securities lending products principally for asset managers, insurance companies and public and private investment funds.

Selected income statement data

| Year ended December 31, <br> (in millions) | $\mathbf{2 0 2 2}$ | 2021 | 2020 |  |
| :--- | ---: | ---: | ---: | ---: |
| Revenue |  |  |  |  |
| Investment banking fees | $\mathbf{6 , 9 2 9}$ | $\$ 13,359$ | $\$ 9,477$ |  |
| Principal transactions | $\mathbf{1 9 , 9 2 6}$ | 15,764 | 17,560 |  |
| Lending- and deposit-related fees | $\mathbf{2 , 4 1 9}$ | 2,514 | 2,070 |  |
| Asset management, administration |  |  |  |  |
| and commissions | $\mathbf{5 , 0 6 5}$ | 5,024 | 4,721 |  |
| All other income ${ }^{(\mathrm{a})}$ | $\mathbf{1 , 6 6 0}$ | 1,548 | 1,292 |  |
| Noninterest revenue | $\mathbf{3 5 , 9 9 9}$ | 38,209 | 35,120 |  |
| Net interest income | $\mathbf{1 1 , 9 0 0}$ | 13,540 | 14,164 |  |
| Total net revenue ${ }^{(b)}$ | $\mathbf{4 7 , 8 9 9}$ | 51,749 | 49,284 |  |
| Provision for credit losses | $\mathbf{1 , 1 5 8}$ | $(1,174)$ | 2,726 |  |
| Noninterest expense |  |  |  |  |
| Compensation expense | $\mathbf{1 3 , 9 1 8}$ | 13,096 | 11,612 |  |
| Noncompensation expense | $\mathbf{1 3 , 1 6 9}$ | 12,229 | 11,926 |  |
| Total noninterest expense | $\mathbf{2 7 , 0 8 7}$ | 25,325 | 23,538 |  |
| Income before income tax | $\mathbf{1 9 , 6 5 4}$ | 27,598 | 23,020 |  |
| expense | $\mathbf{4 , 6 8 4}$ | 6,464 | 5,926 |  |
| Income tax expense | $\mathbf{1 4 , 9 7 0}$ | $\$ 21,134$ | $\$ 17,094$ |  |
| Net income | $\$ 910$ |  |  |  |

(a) Includes card income of $\$ 1.0$ billion, $\$ 910$ million and $\$ 840$ million for the years ended December 31, 2022, 2021 and 2020, respectively.
(b) Includes tax-equivalent adjustments, predominantly due to income tax credits and other tax benefits related to alternative energy investments; income tax credits and amortization of the cost of investments in affordable housing projects; and tax-exempt income from municipal bonds of $\$ 3.0$ billion, $\$ 3.0$ billion and $\$ 2.4$ billion for the years ended December 31, 2022, 2021 and 2020, respectively.

Selected income statement data

| Year ended December 31, (in millions, except ratios) | 2022 | 2021 | 2020 |
| :---: | :---: | :---: | :---: |
| Financial ratios |  |  |  |
| Return on equity | 14 \% | 25 \% | 20 \% |
| Overhead ratio | 57 | 49 | 48 |
| Compensation expense as percentage of total net revenue | 29 | 25 | 24 |
| Revenue by business |  |  |  |
| Investment Banking | \$ 6,510 | \$ 12,506 | \$ 8,871 |
| Payments | 7,376 | 6,270 | 5,560 |
| Lending | 1,377 | 1,001 | 1,146 |
| Total Banking | 15,263 | 19,777 | 15,577 |
| Fixed Income Markets | 18,617 | 16,865 | 20,878 |
| Equity Markets | 10,367 | 10,529 | 8,605 |
| Securities Services | 4,488 | 4,328 | 4,253 |
| Credit Adjustments \& Other ${ }^{(\mathrm{a})}$ | (836) | 250 | (29) |
| Total Markets \& Securities Services | 32,636 | 31,972 | 33,707 |
| Total net revenue | \$47,899 | \$51,749 | \$49,284 |

(a) Consists primarily of centrally managed credit valuation adjustments ("CVA"), funding valuation adjustments ("FVA") on derivatives, other valuation adjustments, and certain components of fair value option elected liabilities, which are primarily reported in principal transactions revenue. Results are presented net of associated hedging activities and net of CVA and FVA amounts allocated to Fixed Income Markets and Equity Markets. Refer to Notes 2, 3 and 24 for additional information.

## Management's discussion and analysis

2022 compared with 2021
Net income was $\$ 15.0$ billion, down 29\%.
Net revenue was $\$ 47.9$ billion, down $7 \%$.
Banking revenue was $\$ 15.3$ billion, down 23\%.

- Investment Banking revenue was $\$ 6.5$ billion, down 48\%, driven by lower Investment Banking fees, which were also down $48 \%$, as volatile market conditions resulted in lower fees across products, and $\$ 251$ million of markdowns on held-for-sale positions, primarily unfunded commitments, in the bridge financing portfolio in the second quarter of 2022. The Firm ranked \#1 for Global Investment Banking fees, according to Dealogic.
- Equity underwriting fees were $\$ 1.0$ billion, down 74\%, and debt underwriting fees were $\$ 2.8$ billion, down $43 \%$, due to lower issuance activity.
- Advisory fees were $\$ 3.1$ billion, down 30\%, driven by a lower level of announced deals.
- Payments revenue was $\$ 7.4$ billion, up $18 \%$, and included the net impact of equity investments. Excluding this net impact, revenue was $\$ 7.8$ billion, up $33 \%$, driven by deposit margin expansion on higher rates and growth in fees on higher volumes.
- Lending revenue was $\$ 1.4$ billion, up $38 \%$, driven by higher net interest income primarily on higher loans, as well as fair value gains on hedges of retained loans, compared with losses in the prior year.

Markets \& Securities Services revenue was $\$ 32.6$ billion, up 2\%. Markets revenue was $\$ 29.0$ billion, up $6 \%$.

- Fixed Income Markets revenue was $\$ 18.6$ billion, up $10 \%$, driven by strong performance in the macro businesses amid volatile market conditions, particularly in Currencies \& Emerging Markets and Rates, partially offset by lower revenue in Securitized Products.
- Equity Markets revenue was \$10.4 billion, down 2\%, driven by lower revenue in Cash Equities, largely offset by Equity Derivatives.
- Securities Services revenue was \$4.5 billion, up 4\%, driven by deposit margin expansion on higher rates and growth in fees, largely offset by lower average market values of assets under custody and lower deposits.
- Credit Adjustments \& Other was a loss of $\$ 836$ million, reflecting funding spread widening, and, to a lesser extent, losses on exposures relating to commodities and Russia and Russia-associated counterparties, compared with a gain of $\$ 250$ million in the prior year.
Noninterest expense was \$27.1 billion, up 7\%, driven by higher structural expense and investments in the business, including higher compensation, partially offset by lower revenue-related compensation as well as lower legal expense.

The provision for credit losses was $\$ 1.2$ billion, predominantly driven by a net addition to the allowance for credit losses, reflecting deterioration in the Firm's macroeconomic outlook and loan growth.
The provision for credit losses in the prior year was a net benefit of $\$ 1.2$ billion, driven by a net reduction in the allowance for credit losses.

| As of or for the year ended December 31, (in millions, except headcount) | 2022 | 2021 | 2020 |
| :---: | :---: | :---: | :---: |
| Selected balance sheet data (period-end) |  |  |  |
| Total assets | \$1,334,296 | \$1,259,896 | \$1,095,926 |
| Loans: |  |  |  |
| Loans retained ${ }^{(\mathrm{a})}$ | 187,642 | 159,786 | 133,296 |
| Loans held-for-sale and loans at fair value ${ }^{(b)}$ | 42,304 | 50,386 | 39,588 |
| Total loans | 229,946 | 210,172 | 172,884 |
| Equity | 103,000 | 83,000 | 80,000 |
| Selected balance sheet data (average) |  |  |  |
| Total assets | \$1,406,250 | \$1,334,518 | \$1,121,942 |
| Trading assets-debt and equity instruments | 405,916 | 448,099 | 425,060 |
| Trading assets-derivative receivables | 77,802 | 68,203 | 69,243 |
| Loans: |  |  |  |
| Loans retained ${ }^{(\mathrm{a})}$ | 172,627 | 145,137 | 135,676 |
| Loans held-for-sale and loans at fair value ${ }^{(b)}$ | 46,846 | 51,072 | 33,792 |
| Total loans | 219,473 | 196,209 | 169,468 |
| Equity | 103,000 | 83,000 | 80,000 |
| Headcount | 73,452 | 67,546 | 61,733 |

(a) Loans retained includes credit portfolio loans, loans held by consolidated Firm-administered multi-seller conduits, trade finance loans, other held-for-investment loans and overdrafts.
(b) Loans held-for-sale and loans at fair value primarily reflect lending related positions originated and purchased in CIB Markets, including loans held for securitization.

Selected metrics

| As of or for the year ended December 31, (in millions, except ratios) |  | 2022 |  | 2021 |  | 2020 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Credit data and quality statistics |  |  |  |  |  |  |
| Net charge-offs/ (recoveries) | \$ | 82 | \$ | 6 | \$ | 370 |
| Nonperforming assets: |  |  |  |  |  |  |
| Nonaccrual loans: |  |  |  |  |  |  |
| Nonaccrual loans retained ${ }^{(\mathrm{a})}$ |  | 718 |  | 584 |  | 1,008 |
| Nonaccrual loans held-for-sale and loans at fair value ${ }^{\text {b }}$ |  | 848 |  | 844 |  | 1,662 |
| Total nonaccrual loans |  | 1,566 |  | 1,428 |  | 2,670 |
| Derivative receivables |  | 296 |  | 316 |  | 56 |
| Assets acquired in loan satisfactions |  | 87 |  | 91 |  | 85 |
| Total nonperforming assets |  | 1,949 |  | 1,835 |  | 2,811 |
| Allowance for credit losses: |  |  |  |  |  |  |
| Allowance for Ioan losses |  | 2,292 |  | 1,348 |  | 2,366 |
| Allowance for lendingrelated commitments |  | 1,448 |  | 1,372 |  | 1,534 |
| Total allowance for credit losses |  | 3,740 |  | 2,720 |  | 3,900 |
| Net charge-off/(recovery) rate ${ }^{\text {(c) }}$ |  | 0.05 \% |  | - \% |  | 0.27 \% |
| Allowance for loan losses to period-end loans retained |  | 1.22 |  | 0.84 |  | 1.77 |
| Allowance for loan losses to period-end loans retained, excluding trade finance and conduits ${ }^{(d)}$ |  | 1.67 |  | 1.12 |  | 2.54 |
| Allowance for loan losses to nonaccrual loans retained ${ }^{(\mathrm{a})}$ |  | 319 |  | 231 |  | 235 |
| Nonaccrual loans to total period-end loans |  | 0.68 |  | 0.68 |  | 1.54 |

(a) Allowance for loan losses of $\$ 104$ million, $\$ 58$ million and $\$ 278$ million were held against these nonaccrual loans at December 31, 2022, 2021 and 2020, respectively.
(b) At December 31, 2022, 2021 and 2020, nonaccrual loans excluded mortgage loans 90 or more days past due and insured by U.S. government agencies of $\$ 115$ million, $\$ 281$ million and $\$ 316$ million, respectively. These amounts have been excluded based upon the government guarantee.
(c) Loans held-for-sale and loans at fair value were excluded when calculating the net charge-off/(recovery) rate.
(d) Management uses allowance for loan losses to period-end loans retained, excluding trade finance and conduits, a non-GAAP financial measure, to provide a more meaningful assessment of CIB's allowance coverage ratio. Refer to Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 58-60.

# Management's discussion and analysis 

Investment banking fees

|  |  | Year ended December 31, |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| (in millions) |  | $\mathbf{2 0 2 2}$ |  | 2021 | 2020 |  |
| Advisory | $\$$ | $\mathbf{3 , 0 5 1}$ | $\$$ | 4,381 | $\$$ | 2,368 |
| Equity underwriting |  | $\mathbf{1 , 0 3 4}$ | 3,953 | 2,758 |  |  |
| Debt underwriting ${ }^{\text {(a) }}$ | $\mathbf{2 , 8 4 4}$ | 5,025 | 4,351 |  |  |  |
| Total investment banking fees | $\mathbf{6}$ | $\mathbf{6 , 9 2 9}$ | $\$$ | 13,359 | $\$$ | 9,477 |

(a) Represents long-term debt and loan syndications.

League table results - wallet share

| Year ended December 31, | 2022 |  |  | 2021 |  |  |  | 2020 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Rank |  | Share | Rank |  | Share |  | Rank |  | Share |
| Based on fees ${ }^{\text {(a) }}$ |  |  |  |  |  |  |  |  |  |  |
| M\&A ${ }^{(b)}$ |  |  |  |  |  |  |  |  |  |  |
| Global | \# | 2 | 8.2 \% | \# |  | 2 | 9.6 \% | \# | 2 | 8.9 \% |
| u.s. |  | 2 | 9.1 |  |  | 2 | 10.8 |  | 2 | 9.4 |
| Equity and equity-related ${ }^{(c)}$ |  |  |  |  |  |  |  |  |  |  |
| Global |  | 1 | 5.8 |  |  | 2 | 8.8 |  | 2 | 8.9 |
| u.s. |  | 1 | 13.9 |  |  | 2 | 11.7 |  | 2 | 12.1 |
| Long-term debt ${ }^{(d)}$ |  |  |  |  |  |  |  |  |  |  |
| Global |  | 1 | 7.0 |  |  | 1 | 8.4 |  | 1 | 8.8 |
| u.s. |  | 1 | 12.2 |  |  | 1 | 12.1 |  | 1 | 12.8 |
| Loan syndications |  |  |  |  |  |  |  |  |  |  |
| Global |  | 1 | 11.2 |  |  | 1 | 10.9 |  | 1 | 11.1 |
| U.S. |  | 1 | 12.8 |  |  | 1 | 12.6 |  | 1 | 12.3 |
| Global investment banking fees ${ }^{(\text {e) }}$ | \# | 1 | 8.0 \% | \# |  | 1 | 9.3 \% | \# | 1 | 9.1 \% |

(a) Source: Dealogic as of January 2, 2023. Reflects the ranking of revenue wallet and market share.
(b) Global M\&A excludes any withdrawn transactions. U.S. M\&A revenue wallet represents wallet from client parents based in the u.S.
(c) Global equity and equity-related ranking includes rights offerings and Chinese A-Shares.
(d) Long-term debt rankings include investment-grade, high-yield, supranationals, sovereigns, agencies, covered bonds, asset-backed securities ("ABS") and mortgage-backed securities ("MBS"); and exclude money market, short-term debt, and U.S. municipal securities.
(e) Global investment banking fees exclude money market, short-term debt and shelf securities.

## Markets revenue

The following table summarizes selected income statement data for the Markets businesses. Markets includes both Fixed Income Markets and Equity Markets. Markets revenue consists of principal transactions, fees, commissions and other income, as well as net interest income. The Firm assesses its Markets business performance on a total revenue basis, as offsets may occur across revenue line items. For example, securities that generate net interest income may be risk-managed by derivatives that are reflected at fair value in principal transactions revenue. Refer to Notes 6 and 7 for a description of the composition of these income statement line items.

Principal transactions reflects revenue on financial instruments and commodities transactions that arise from client-driven market-making activity. Principal transactions revenue includes amounts recognized upon executing new transactions with market participants, as well as "inventoryrelated revenue", which is revenue recognized from gains and losses on derivatives and other instruments that the Firm has been holding in anticipation of, or in response to, client demand, and changes in the fair value of instruments used by the Firm to actively manage the risk exposure arising from such inventory. Principal transactions revenue recognized upon executing new transactions with market participants is affected by many factors including the level of client activity, the bid-offer spread (which is the
difference between the price at which a market participant is willing and able to sell an instrument to the Firm and the price at which another market participant is willing and able to buy it from the Firm, and vice versa), market liquidity and volatility. These factors are interrelated and sensitive to the same factors that drive inventory-related revenue, which include general market conditions, such as interest rates, foreign exchange rates, credit spreads, and equity and commodity prices, as well as other macroeconomic conditions.

For the periods presented below, the predominant source of principal transactions revenue was the amount recognized upon executing new transactions.

| Year ended December 31, (in millions, except where otherwise noted) | 2022 |  |  |  |  |  | 2021 |  |  |  |  |  | 2020 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Fixed Income Markets |  | Equity Markets |  | Total Markets |  | Fixed Income Markets |  | Equity Markets |  | Total Markets |  | Fixed Income Markets |  | Equity Markets |  | Total Markets |  |
| Principal transactions | \$ | 11,682 | \$ | 8,846 | \$ | 20,528 | \$ | 7,911 | \$ | 7,519 | \$ | 15,430 | \$ | 11,857 | \$ | 6,087 | \$ | 17,944 |
| Lending- and deposit-related fees |  | 303 |  | 22 |  | 325 |  | 321 |  | 17 |  | 338 |  | 226 |  | 10 |  | 236 |
| Asset management, administration and commissions |  | 550 |  | 2,007 |  | 2,557 |  | 545 |  | 1,967 |  | 2,512 |  | 411 |  | 2,087 |  | 2,498 |
| All other income |  | 916 |  | (131) |  | 785 |  | 972 |  | (101) |  | 871 |  | 493 |  | (62) |  | 431 |
| Noninterest revenue |  | 13,451 |  | 10,744 |  | 24,195 |  | 9,749 |  | 9,402 |  | 19,151 |  | 12,987 |  | 8,122 |  | 21,109 |
| Net interest income |  | 5,166 |  | (377) |  | 4,789 |  | 7,116 |  | 1,127 |  | 8,243 |  | 7,891 |  | 483 |  | 8,374 |
| Total net revenue | \$ | 18,617 | \$ | 10,367 | \$ | 28,984 | \$ | 16,865 | \$ | 10,529 | \$ | 27,394 | \$ | 20,878 | \$ | 8,605 | \$ | 29,483 |
| Loss days ${ }^{\text {(a) }}$ |  |  |  |  |  | 7 |  |  |  |  |  | 4 |  |  |  |  |  | 4 |

(a) Loss days represent the number of days for which CIB Markets, which consists of Fixed Income Markets and Equity Markets, posted losses to total net revenue. The loss days determined under this measure differ from the measure used to determine backtesting gains and losses. Daily backtesting gains and losses include positions in the Firm's Risk Management value-at-risk ("VaR") measure and exclude certain components of total net revenue, which may more than offset backtesting gains or losses on a particular day. For more information on daily backtesting gains and losses, refer to the VaR discussion on pages 133-135.

## Selected metrics

| As of or for the year ended December 31, (in millions, except where otherwise noted) | 2022 |  | 2021 |  | 2020 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assets under custody ("AuC") by asset class (period-end) (in billions): |  |  |  |  |  |  |
| Fixed Income | \$ | 14,361 | \$ | 16,098 | \$ | 15,840 |
| Equity |  | 10,748 |  | 12,962 |  | 11,489 |
| Other ${ }^{\text {(a) }}$ |  | 3,526 |  | 4,161 |  | 3,651 |
| Total AuC | \$ | 28,635 | \$ | 33,221 | \$ | 30,980 |
| Merchant processing volume (in billions) ${ }^{(b)}$ | \$ | 2,158.4 | \$ | 1,886.7 | \$ | 1,597.3 |
| Client deposits and other third party liabilities (average) ${ }^{(\text {(c) }}$ | \$ | 687,391 | \$ | 714,910 | \$ | 610,555 |

(a) Consists of mutual funds, unit investment trusts, currencies, annuities, insurance contracts, options and other contracts.
(b) Represents total merchant processing volume across CIB, CCB and CB.
(c) Client deposits and other third-party liabilities pertain to the Payments and Securities Services businesses.

International metrics

| As of or for the year ended December 31, (in millions, except where otherwise noted) | 2022 |  | 2021 |  | 2020 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total net revenue ${ }^{\text {(a) }}$ |  |  |  |  |  |  |
| Europe/Middle East/Africa | \$ | 15,303 | \$ | 13,954 | \$ | 13,872 |
| Asia-Pacific |  | 7,846 |  | 7,555 |  | 7,524 |
| Latin America/Caribbean |  | 2,239 |  | 1,833 |  | 1,931 |
| Total international net revenue |  | 25,388 |  | 23,342 |  | 23,327 |
| North America |  | 22,511 |  | 28,407 |  | 25,957 |
| Total net revenue | \$ | 47,899 | \$ | 51,749 | \$ | 49,284 |
| Loans retained (period-end) ${ }^{(a)}$ |  |  |  |  |  |  |
| Europe/Middle East/Africa | \$ | 39,424 | \$ | 33,084 | \$ | 27,659 |
| Asia-Pacific |  | 15,571 |  | 14,471 |  | 12,802 |
| Latin America/Caribbean |  | 8,599 |  | 7,006 |  | 5,425 |
| Total international loans |  | 63,594 |  | 54,561 |  | 45,886 |
| North America |  | 124,048 |  | 105,225 |  | 87,410 |
| Total loans retained | \$ | 187,642 | \$ | 159,786 | \$ | 133,296 |
| Client deposits and other third-party liabilities (average) ${ }^{(\text {b }}$ |  |  |  |  |  |  |
| Europe/Middle East/Africa | \$ | 247,203 | \$ | 243,867 | \$ | 211,592 |
| Asia-Pacific |  | 129,134 |  | 132,241 |  | 124,145 |
| Latin America/Caribbean |  | 39,917 |  | 46,045 |  | 37,664 |
| Total international | \$ | 416,254 | \$ | 422,153 | \$ | 373,401 |
| North America |  | 271,137 |  | 292,757 |  | 237,154 |
| Total client deposits and other third-party liabilities | \$ | 687,391 | \$ | 714,910 | \$ | 610,555 |
| $\begin{aligned} & \text { Auc (period-end) }{ }^{(b)} \\ & \text { (in billions) } \end{aligned}$ |  |  |  |  |  |  |
| North America | \$ | 19,219 | \$ | 21,655 | \$ | 20,028 |
| All other regions |  | 9,416 |  | 11,566 |  | 10,952 |
| Total AuC | \$ | 28,635 | \$ | 33,221 | \$ | 30,980 |

(a) Total net revenue and loans retained (excluding loans held-for-sale and loans at fair value) are based on the location of the trading desk, booking location, or domicile of the client, as applicable.
(b) Client deposits and other third-party liabilities pertaining to the Payments and Securities Services businesses, and Auc, are based on the domicile of the client.

## Commercial Banking provides comprehensive financial solutions, including lending, payments, investment banking and asset management products across three primary client segments: Middle Market Banking, Corporate Client Banking and Commercial Real Estate Banking. Other includes amounts not aligned with a primary client segment. <br> Middle Market Banking covers small and midsized companies, local governments and nonprofit clients. <br> Corporate Client Banking covers large corporations. <br> Commercial Real Estate Banking covers investors, developers, and owners of multifamily, office, retail, industrial and affordable housing properties.

Selected income statement data

| Year ended December 31, <br> (in millions) | $\mathbf{2 0 2 2}$ | 2021 | 2020 |  |
| :--- | ---: | ---: | ---: | ---: |
| Revenue |  |  |  |  |
| Lending- and deposit-related fees | $\mathbf{1 , 2 4 3}$ | $\$$ | 1,392 | $\$$ |
| All other income ${ }^{(\mathrm{a})}$ |  |  |  |  |

(a) Includes card income of $\$ 685$ million, $\$ 624$ million and $\$ 525$ million for the years ended December 31, 2022, 2021 and 2020, respectively.
(b) Total net revenue included tax-equivalent adjustments from income tax credits related to equity investments in designated community development entities and in entities established for rehabilitation of historic properties, as well as tax-exempt income related to municipal financing activities of $\$ 322$ million, $\$ 330$ million and $\$ 350$ million for the years ended December 31, 2022, 2021 and 2020, respectively.

## 2022 compared with 2021

Net income was $\$ 4.2$ billion, down 20\%, reflecting a net increase in the provision for credit losses compared with a net benefit in the prior year.
Net revenue was $\$ 11.5$ billion, up $15 \%$. Net interest income was $\$ 8.2$ billion, up $35 \%$, driven by deposit margin expansion on higher rates and growth in loans, predominantly offset by the impact of higher funding costs and lower deposits.

Noninterest revenue was $\$ 3.3$ billion, down 15\%, driven by lower investment banking revenue and net markdowns on held-for-sale positions, primarily unfunded commitments, in the bridge financing portfolio. The decreases were partially offset by a gain on an equity method investment received in partial satisfaction of a loan.
Noninterest expense was $\$ 4.7$ billion, up 17\%, largely driven by higher volume-and revenue-related expense, as well as structural expense, including higher compensation expense, and expense associated with growth in payments.
The provision for credit losses was $\$ 1.3$ billion, predominantly driven by a net addition to the allowance for credit losses, reflecting deterioration in the Firm's macroeconomic outlook and loan growth.
The provision for credit losses in the prior year was a net benefit of $\$ 947$ million, driven by a net reduction in the allowance for credit losses.

## Management's discussion and analysis

## CB product revenue consists of the following:

Lending includes a variety of financing alternatives, which are primarily provided on a secured basis; collateral includes receivables, inventory, equipment, real estate or other assets. Products include term loans, revolving lines of credit, bridge financing, asset-based structures, leases, and standby letters of credit.

Payments includes revenue from a broad range of products and services that CB clients use to manage payments and receipts globally, as well as invest and manage funds.

Investment banking includes investment banking fees and markets revenue from a full range of products and services providing CB clients with advisory, loan syndications, capital-raising in equity and debt markets, and risk management solutions.

Other revenue primarily includes tax-equivalent adjustments generated from Community Development Banking and activity derived from principal transactions.

## Selected income statement data (continued)

| Year ended December 31, (in millions, except ratios) |  | 2022 |  | 2021 | 2020 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Revenue by product |  |  |  |  |  |  |
| Lending | \$ | 4,524 | \$ | 4,629 | \$ | 4,396 |
| Payments ${ }^{(a)}$ |  | 5,882 |  | 3,791 |  | 3,820 |
| Investment banking ${ }^{(a)(b)}$ |  | 873 |  | 1,473 |  | 964 |
| Other |  | 254 |  | 115 |  | 133 |
| Total net revenue |  | 11,533 | \$ | 10,008 | \$ | 9,313 |
| Investment banking revenue, gross ${ }^{(C)}$ | \$ | 2,978 | \$ | 5,092 | \$ | 3,348 |
| Revenue by client segment |  |  |  |  |  |  |
| Middle Market Banking | \$ | 5,134 | \$ | 4,004 | \$ | 3,640 |
| Corporate Client Banking |  | 3,918 |  | 3,508 |  | 3,203 |
| Commercial Real Estate Banking |  | 2,461 |  | 2,419 |  | 2,313 |
| Other |  | 20 |  | 77 |  | 157 |
| Total net revenue |  | 11,533 | \$ | 10,008 | \$ | 9,313 |
| Financial ratios |  |  |  |  |  |  |
| Return on equity |  | 16 |  | 21 \% |  | 11 \% |
| Overhead ratio |  | 41 |  | 40 |  | 41 |

(a) In the fourth quarter of 2022, certain revenue from CIB Markets products was reclassified from investment banking to payments. Priorperiod amounts have been revised to conform with the current presentation.
(b) Includes CB's share of revenue from investment banking products sold to CB clients through the CIB.
(c) Includes gross revenues earned by the Firm for investment banking and payments products sold to CB clients that are subject to a revenue sharing arrangement with the CIB. Refer to Business Segment Results on page 61 for a discussion of revenue sharing.

Selected metrics

| As of or for the year ended December 31, (in millions, except headcount) |  | 2022 |  | 2021 |  | 2020 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Selected balance sheet data (period-end) |  |  |  |  |  |  |
| Total assets | \$ | 257,106 | \$ | 230,776 | \$ | 228,911 |
| Loans: |  |  |  |  |  |  |
| Loans retained |  | 233,879 |  | 206,220 |  | 207,880 |
| Loans held-for-sale and loans at fair value |  | 707 |  | 2,223 |  | 2,245 |
| Total Ioans | \$ | 234,586 | \$ | 208,443 | \$ | 210,125 |
| Equity |  | 25,000 |  | 24,000 |  | 22,000 |
| Period-end loans by client segment |  |  |  |  |  |  |
| Middle Market Banking ${ }^{(a)}$ | \$ | 72,625 | \$ | 61,159 | \$ | 61,115 |
| Corporate Client Banking |  | 53,840 |  | 45,315 |  | 47,420 |
| Commercial Real Estate Banking |  | 107,999 |  | 101,751 |  | 101,146 |
| Other |  | 122 |  | 218 |  | 444 |
| Total loans ${ }^{(\mathrm{a})}$ | \$ | 234,586 | \$ | 208,443 | \$ | 210,125 |
| Selected balance sheet data (average) |  |  |  |  |  |  |
| Total assets | \$ | 243,108 | \$ | 225,548 | \$ | 233,156 |
| Loans: |  |  |  |  |  |  |
| Loans retained |  | 222,388 |  | 201,920 |  | 217,767 |
| Loans held-for-sale and loans at fair value |  | 1,350 |  | 3,122 |  | 1,129 |
| Total loans | \$ | 223,738 | \$ | 205,042 | \$ | 218,896 |
| Client deposits and other third-party liabilities |  | 294,261 |  | 301,502 |  | 237,825 |
| Equity |  | 25,000 |  | 24,000 |  | 22,000 |
| Average loans by client segment |  |  |  |  |  |  |
| Middle Market Banking | \$ | 67,830 | \$ | 60,128 | \$ | 61,558 |
| Corporate Client Banking |  | 50,281 |  | 44,361 |  | 54,172 |
| Commercial Real Estate Banking |  | 105,459 |  | 100,331 |  | 102,479 |
| Other |  | 168 |  | 222 |  | 687 |
| Total loans | \$ | 223,738 | \$ | 205,042 | \$ | 218,896 |
| Headcount |  | 14,687 |  | 12,902 |  | 11,675 |

(a) At December 31, 2022, 2021 and 2020, total loans included \$132 million, $\$ 1.2$ billion and $\$ 6.6$ billion of loans under the PPP, of which $\$ 123$ million, $\$ 1.1$ billion and $\$ 6.4$ billion were in Middle Market Banking, respectively. Refer to Credit Portfolio on pages 108-109 for a further discussion of the PPP.

## Selected metrics

| As of or for the year ended December 31, (in millions, except ratios) | 2022 | 2021 | 2020 |
| :---: | :---: | :---: | :---: |
| Credit data and quality statistics |  |  |  |
| Net charge-offs/(recoveries) | \$ 84 | \$ 71 | \$ 401 |
| Nonperforming assets |  |  |  |
| Nonaccrual loans: |  |  |  |
| Nonaccrual loans retained ${ }^{(a)}$ | 766 | (c) 740 | (c) 1,286 |
| Nonaccrual loans held-for-sale and loans at fair value | - | - | 120 |
| Total nonaccrual loans | 766 | 740 | 1,406 |
| Assets acquired in loan satisfactions | - | 17 | 24 |
| Total nonperforming assets | 766 | 757 | 1,430 |
| Allowance for credit losses: |  |  |  |
| Allowance for loan losses | 3,324 | 2,219 | 3,335 |
| Allowance for lending-related commitments | 830 | 749 | 651 |
| Total allowance for credit losses | 4,154 | 2,968 | 3,986 |
| Net charge-off/(recovery) rate ${ }^{(b)}$ | 0.04\% | 0.04\% | 0.18\% |
| Allowance for Ioan losses to period-end loans retained | 1.42 | 1.08 | 1.60 |
| Allowance for loan losses to nonaccrual loans retained ${ }^{(a)}$ | 434 | 300 | 259 |
| Nonaccrual loans to period-end total loans | 0.33 | 0.36 | 0.67 |

(a) Allowance for loan losses of $\$ 153$ million, $\$ 124$ million and $\$ 273$ million was held against nonaccrual loans retained at December 31, 2022, 2021 and 2020, respectively.
(b) Loans held-for-sale and loans at fair value were excluded when calculating the net charge-off/(recovery) rate.
(c) At December 31, 2022 and 2021, nonaccrual loans excluded $\$ 18$ million and $\$ 114$ million, respectively, of PPP loans 90 or more days past due and guaranteed by the SBA.

Asset \& Wealth Management, with client assets of \$4.0 trillion, is a global leader in investment and wealth management.

## Asset Management

Offers multi-asset investment management solutions across equities, fixed income, alternatives and money market funds to institutional and retail investors providing for a broad range of clients' investment needs.

## Global Private Bank

Provides retirement products and services, brokerage, custody, estate planning, lending, deposits and investment management to high net worth clients.

The majority of AWM's client assets are in actively managed portfolios.

Selected income statement data

| Year ended December 31, (in millions, except ratios) | 2022 | 2021 | 2020 |
| :---: | :---: | :---: | :---: |
| Revenue |  |  |  |
| Asset management, administration and commissions | \$12,172 | \$12,333 | \$10,610 |
| All other income | 335 | 738 | 212 |
| Noninterest revenue | 12,507 | 13,071 | 10,822 |
| Net interest income | 5,241 | 3,886 | 3,418 |
| Total net revenue | 17,748 | 16,957 | 14,240 |
| Provision for credit losses | 128 | (227) | 263 |
| Noninterest expense |  |  |  |
| Compensation expense | 6,336 | 5,692 | 4,959 |
| Noncompensation expense | 5,493 | 5,227 | 4,998 |
| Total noninterest expense | 11,829 | 10,919 | 9,957 |
| Income before income tax expense | 5,791 | 6,265 | 4,020 |
| Income tax expense | 1,426 | 1,528 | 1,028 |
| Net income | \$ 4,365 | \$ 4,737 | \$ 2,992 |
| Revenue by line of business |  |  |  |
| Asset Management | \$ 8,818 | \$ 9,246 | \$ 7,654 |
| Global Private Bank | 8,930 | 7,711 | 6,586 |
| Total net revenue | \$17,748 | \$16,957 | \$14,240 |
| Financial ratios |  |  |  |
| Return on equity | 25 \% | 33 \% | 28 \% |
| Overhead ratio | 67 | 64 | 70 |
| Pre-tax margin ratio: |  |  |  |
| Asset Management | 30 | 35 | 29 |
| Global Private Bank | 35 | 39 | 27 |
| Asset \& Wealth Management | 33 | 37 | 28 |

2022 compared with 2021
Net income was $\$ 4.4$ billion, down $8 \%$.
Net revenue was $\$ 17.7$ billion, up $5 \%$. Net interest income was $\$ 5.2$ billion, up $35 \%$. Noninterest revenue was $\$ 12.5$ billion, down 4\%.

Revenue from Asset Management was $\$ 8.8$ billion, down $5 \%$, predominantly driven by:

- net investment valuation losses compared to net gains in the prior year and,
- lower asset management fees reflecting a decline in market levels and the impact of net liquidity outflows, predominantly offset by the removal of most money market fund fee waivers.
Revenue from Global Private Bank was $\$ 8.9$ billion, up $16 \%$, driven by:
- margin expansion on higher rates and higher average deposits; and to a lesser extent higher average loans and wider spreads,
partially offset by
- lower brokerage and placement fees on reduced volume, and lower management fees.
Noninterest expense was \$11.8 billion, up 8\%, driven by higher structural expense and investments in the business, largely compensation.
The provision for credit losses was $\$ 128$ million, driven by a net addition to the allowance for credit losses.
The provision for credit losses in the prior year was a net benefit of $\$ 227$ million driven by a net reduction in the allowance for credit losses.


## Asset Management has two high-level measures of its overall fund performance.

- Percentage of mutual fund assets under management in funds rated 4 - or 5 -star: Mutual fund rating services rank funds based on their risk adjusted performance over various periods. A 5 -star rating is the best rating and represents the top $10 \%$ of industry-wide ranked funds. A 4-star rating represents the next $22.5 \%$ of industry-wide ranked funds. A 3 -star rating represents the next $35 \%$ of industrywide ranked funds. A 2 -star rating represents the next $22.5 \%$ of industry-wide ranked funds. A 1-star rating is the worst rating and represents the bottom $10 \%$ of industrywide ranked funds. An overall Morningstar rating is derived from a weighted average of the performance associated with a fund's three-, five and ten- year (if applicable) Morningstar Rating metrics. For U.S.-domiciled funds, separate star ratings are provided at the individual share class level. The Nomura "star rating" is based on three-year riskadjusted performance only. Funds with fewer than three years of history are not rated and hence excluded from these rankings. All ratings, the assigned peer categories and the asset values used to derive these rankings are sourced from the applicable fund rating provider. Where applicable, the fund rating providers redenominate asset values into U.S. dollars. The percentage of AuM is based on star ratings at the share class level for U.S.-domiciled funds, and at a "primary share class" level to represent the star rating of all other funds, except for Japan, for which Nomura provides ratings at the fund level. The performance data may have been different if all share classes had been included. Past performance is not indicative of future results.
- Percentage of mutual fund assets under management in funds ranked in the 1st or 2nd quartile (one, three and five years):All quartile rankings, the assigned peer categories and the asset values used to derive these rankings are sourced from the fund rating providers. Quartile rankings are based on the net-of-fee absolute return of each fund. Where applicable, the fund rating providers redenominate asset values into U.S. dollars. The percentage of AUM is based on fund performance and associated peer rankings at the share class level for U.S.-domiciled funds, at a "primary share class" level to represent the quartile ranking for U.K., Luxembourg and Hong Kong SAR funds and at the fund level for all other funds. The performance data may have been different if all share classes had been included. Past performance is not indicative of future results.
"Primary share class" means the C share class for European funds and Acc share class for Hong Kong SAR and Taiwan funds. If these share classes are not available, the oldest share class is used as the primary share class.

Selected metrics

| As of or for the year ended December 31, (in millions, except ranking data, ratios and headcount) | 2022 | 2021 | 2020 |
| :---: | :---: | :---: | :---: |
| \% of JPM mutual fund assets rated as 4- or 5 -star ${ }^{(\mathrm{a})}$ | 73 \% | 69 \% | 63 \% |
| \% of JPM mutual fund assets ranked in $1^{\text {st }}$ or $2^{\text {nd }}$ quartile: |  |  |  |
| 1 year | 65 | 53 | 63 |
| 3 years | 75 | 72 | 69 |
| 5 years | 81 | 80 | 72 |


| Selected balance sheet data <br> (period-end) |  |  |  |
| :--- | ---: | ---: | ---: |
| Total assets | $\$ 232,037$ | $\$ 234,425$ | $\$ 203,384$ |
| Loans | 214,006 | 218,271 | 186,608 |
| Deposits | 233,130 | 282,052 | 198,755 |
| Equity | $\mathbf{1 7 , 0 0 0}$ | 14,000 | 10,500 |

Selected balance sheet data (average) ${ }^{\text {(c) }}$

| Total assets | \$232,438 | \$217,187 | \$181,432 |
| :---: | :---: | :---: | :---: |
| Loans | 215,582 | 198,487 | 166,311 |
| Deposits | 261,489 | 230,296 | 161,955 |
| Equity | 17,000 | 14,000 | 10,500 |
| Headcount | 26,041 | 22,762 | 20,683 |
| Number of Global Private Bank client advisors | 3,137 | 2,738 | 2,462 |
| Credit data and quality statistics ${ }^{(c)}$ |  |  |  |
| Net charge-offs/(recoveries) | \$ (7) | \$ 26 | \$ (14) |
| Nonaccrual loans | 459 | 708 | 964 |
| Allowance for credit losses: |  |  |  |
| Allowance for loan losses | \$ 494 | \$ 365 | \$ 598 |
| Allowance for lending-related commitments | 20 | 18 | 38 |
| Total allowance for credit losses | \$ 514 | \$ 383 | \$ 636 |
| Net charge-off/(recovery) rate | - \% | 0.01 \% | (0.01)\% |
| Allowance for loan losses to period-end loans | 0.23 | 0.17 | 0.32 |
| Allowance for loan losses to nonaccrual loans | 108 | 52 | 62 |
| Nonaccrual loans to period-end loans | 0.21 | 0.32 | 0.52 |

(a) Represents the Morningstar Rating for all domiciled funds except for Japan domiciled funds which use Nomura. Includes only Asset Management retail open-ended mutual funds that have a rating. Excludes money market funds, Undiscovered Managers Fund, and Brazil domiciled funds.
(b) Quartile ranking sourced from Morningstar, Lipper and Nomura based on country of domicile. Includes only Asset Management retail openended mutual funds that are ranked by the aforementioned sources. Excludes money market funds, Undiscovered Managers Fund, and Brazil domiciled funds.
(c) Loans, deposits and related credit data and quality statistics relate to the Global Private Bank business.

## Management's discussion and analysis

## Client assets

## 2022 compared with 2021

Client assets were $\$ 4.0$ trillion, a decrease of $6 \%$. Assets under management were $\$ 2.8$ trillion, a decrease of $11 \%$ driven by lower market levels and net outflows from liquidity products, partially offset by continued net inflows into long term products.

Client assets

| December 31, (in billions) | 2022 |  | 2021 |  | 2020 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assets by asset class |  |  |  |  |  |  |
| Liquidity | \$ | 654 | \$ | 708 | \$ | 641 |
| Fixed income |  | 638 |  | 693 |  | 671 |
| Equity |  | 670 |  | 779 |  | 595 |
| Multi-asset |  | 603 |  | 732 |  | 656 |
| Alternatives |  | 201 |  | 201 |  | 153 |
| Total assets under management |  | 2,766 |  | 3,113 |  | 2,716 |
| Custody/brokerage/ administration/deposits |  | 1,282 |  | 1,182 |  | 936 |
| Total client assets ${ }^{(\mathrm{a})}$ | \$ | 4,048 | \$ | 4,295 | \$ | 3,652 |

Assets by client segment

| Private Banking | \$ | 751 | \$ | 805 | \$ | 689 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Global Institutional |  | 1,252 |  | 1,430 |  | 1,273 |
| Global Funds |  | 763 |  | 878 |  | 754 |
| Total assets under management | \$ | 2,766 | \$ | 3,113 | \$ | 2,716 |
| Private Banking | \$ | 1,964 | \$ | 1,931 | \$ | 1,581 |
| Global Institutional |  | 1,314 |  | 1,479 |  | 1,311 |
| Global Funds |  | 770 |  | 885 |  | 760 |
| Total client assets ${ }^{(a)}$ | \$ | 4,048 | \$ | 4,295 | \$ | 3,652 |

(a) Includes CCB client investment assets invested in managed accounts and J.P. Morgan mutual funds where AWM is the investment manager.

| Year ended December 31, (in billions) | 2022 |  | 2021 |  | 2020 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assets under management rollforward |  |  |  |  |  |  |
| Beginning balance | \$ | 3,113 | \$ | 2,716 | \$ | 2,328 |
| Net asset flows: |  |  |  |  |  |  |
| Liquidity |  | (55) |  | 68 |  | 104 |
| Fixed income |  | 13 |  | 36 |  | 48 |
| Equity |  | 35 |  | 85 |  | 33 |
| Multi-asset |  | (9) |  | 17 |  | 5 |
| Alternatives |  | 8 |  | 26 |  | 6 |
| Market/performance/other impacts |  | (339) |  | 165 |  | 192 |
| Ending balance, December 31 | \$ | 2,766 | \$ | 3,113 | \$ | 2,716 |
| Client assets rollforward |  |  |  |  |  |  |
| Beginning balance | \$ | 4,295 | \$ | 3,652 | \$ | 3,089 |
| Net asset flows |  | 49 |  | 389 |  | 276 |
| Market/performance/other impacts |  | (296) |  | 254 |  | 287 |
| Ending balance, December 31 | \$ | 4,048 | \$ | 4,295 | \$ | 3,652 |

International metrics

| Year ended December 31, (in billions, except where otherwise noted) |  | 2022 |  | 2021 |  | 2020 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total net revenue (in millions) ${ }^{(\mathrm{a})}$ |  |  |  |  |  |  |
| Europe/Middle East/Africa | \$ | 3,240 | \$ | 3,571 | \$ | 2,956 |
| Asia-Pacific |  | 1,836 |  | 2,017 |  | 1,665 |
| Latin America/Caribbean |  | 967 |  | 886 |  | 782 |
| Total international net revenue |  | 6,043 |  | 6,474 |  | 5,403 |
| North America |  | 11,705 |  | 10,483 |  | 8,837 |
| Total net revenue | \$ | 17,748 | \$ | 16,957 | \$ | 14,240 |
| Assets under management |  |  |  |  |  |  |
| Europe/Middle East/Africa | \$ | 487 | \$ | 561 | \$ | 517 |
| Asia-Pacific |  | 218 |  | 254 |  | 224 |
| Latin America/Caribbean |  | 69 |  | 79 |  | 70 |
| Total international assets under management |  | 774 |  | 894 |  | 811 |
| North America |  | 1,992 |  | 2,219 |  | 1,905 |
| Total assets under management | \$ | 2,766 | \$ | 3,113 | \$ | 2,716 |
| Client assets |  |  |  |  |  |  |
| Europe/Middle East/Africa | \$ | 610 | \$ | 687 | \$ | 622 |
| Asia-Pacific |  | 331 |  | 381 |  | 330 |
| Latin America/Caribbean |  | 189 |  | 195 |  | 166 |
| Total international client assets |  | 1,130 |  | 1,263 |  | 1,118 |
| North America |  | 2,918 |  | 3,032 |  | 2,534 |
| Total client assets | \$ | 4,048 | \$ | 4,295 | \$ | 3,652 |

(a) Regional revenue is based on the domicile of the client.

The Corporate segment consists of Treasury and Chief Investment Office ("CIO") and Other Corporate. Treasury and CIO is predominantly responsible for measuring, monitoring, reporting and managing the Firm's liquidity, funding, capital, structural interest rate and foreign exchange risks.

Other Corporate includes staff functions and expense that is centrally managed as well as certain Firm initiatives and activities not aligned to a specific LOB. The major Other Corporate functions include Real Estate, Technology, Legal, Corporate Finance, Human Resources, Internal Audit, Risk Management, Compliance, Control Management, Corporate Responsibility and various Other Corporate groups.

Selected income statement and balance sheet data

| Year ended December 31, (in millions, except headcount) |  | 2022 |  |  | 2021 |  | 2020 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Revenue |  |  |  |  |  |  |  |
| Principal transactions | \$ | (227) |  | \$ | 187 | \$ | 245 |
| Investment securities gains/(losses) |  | $(2,380)$ |  |  | (345) |  | 795 |
| All other income |  | 809 |  |  | 226 |  | 159 |
| Noninterest revenue |  | $(1,798)$ |  |  | 68 |  | 1,199 |
| Net interest income |  | 1,878 |  |  | $(3,551)$ |  | $(2,375)$ |
| Total net revenue ${ }^{(\mathrm{a})}$ |  | 80 |  |  | $(3,483)$ |  | $(1,176)$ |
| Provision for credit losses |  | 22 |  |  | 81 |  | 66 |
| Noninterest expense |  | 1,034 |  |  | 1,802 |  | 1,373 |
| Income/(loss) before income tax expense/ (benefit) |  | (976) |  |  | $(5,366)$ | $(2,615)$ |  |
| Income tax expense/ (benefit) |  | (233) |  |  | $(1,653)$ |  | (865) |
| Net income/(loss) | \$ | (743) |  | \$ | $(3,713)$ | \$ | $(1,750)$ |
| Total net revenue |  |  |  |  |  |  |  |
| Treasury and CIO |  | (439) |  |  | $(3,464)$ |  | $(1,368)$ |
| Other Corporate |  | 519 |  |  | (19) |  | 192 |
| Total net revenue | \$ | 80 |  | \$ | $(3,483)$ | \$ | $(1,176)$ |
| Net income/(loss) |  |  |  |  |  |  |  |
| Treasury and CIO |  | (197) |  |  | $(3,057)$ |  | $(1,403)$ |
| Other Corporate |  | (546) |  |  | (656) |  | (347) |
| Total net income/(loss) | \$ | (743) |  |  | $(3,713)$ | \$ | $(1,750)$ |
| Total assets (period-end) |  | 1,328,219 |  |  | 1,518,100 | \$ | 359,831 |
| Loans (period-end) |  | 2,181 |  |  | 1,770 |  | 1,657 |
| Deposits |  | 14,203 | (b) |  | 396 |  | 318 |
| Headcount |  | 44,196 |  |  | 38,952 |  | 38,366 |

(a) Included tax-equivalent adjustments, driven by tax-exempt income from municipal bonds, of $\$ 235$ million, $\$ 257$ million and $\$ 241$ million for the years ended December 31, 2022, 2021 and 2020, respectively.
(b) Predominantly relates to the Firm's international consumer growth initiatives.

2022 compared with 2021
Net loss was $\$ 743$ million, compared with a net loss of $\$ 3.7$ billion in the prior year.

Net revenue was $\$ 80$ million, compared with a loss of $\$ 3.5$ billion driven by higher net interest income due to higher rates, partially offset by lower noninterest revenue.

Noninterest revenue was a loss of $\$ 1.8$ billion, compared with a gain of $\$ 68$ million driven by:

- higher net investment securities losses on sales of U.S. GSE and government agency MBS, and U.S. Treasuries associated with repositioning the investment securities portfolio,
- the impact of movements in foreign exchange on certain revenues, primarily as result of the U.S. dollar strengthening,
- net losses related to cash deployment transactions, which were more than offset by the related net interest income earned on those transactions,
- net losses, including hedging costs on an equity method investment related to the Firm's international consumer growth initiatives, and
- net losses on certain legacy private equity investments compared with net gains in prior year.
partially offset by
- a gain on the sale of Visa B shares. In connection with the sale, the Firm entered into a derivative instrument with the purchaser of the shares under which the Firm retains the risk associated with changes in the rate at which the shares are convertible into Visa Class A common shares ("Visa A shares"). Refer to Note 2 for additional information,
- higher net gains related to certain Other Corporate investments, and
- proceeds from an insurance settlement in the first quarter of 2022.
Noninterest expense was $\$ 1.0$ billion, down $\$ 768$ million, predominantly driven by:
- lower structural expense reflecting the impact of movements in foreign exchange on certain expenses primarily as a result of the U.S. dollar strengthening, and lower retained technology expense, and
- a lower contribution to the Firm's Foundation.
partially offset by
- higher investments, including the costs associated with the Firm's international consumer growth initiatives.
The net impact of movements in foreign exchange rates associated with the foreign exchange risk that is transferred to Treasury and CIO on certain revenues and expenses was not material to net income. Refer to Foreign Exchange Risk on page 62 for additional information.


## Management's discussion and analysis

Refer to Note 10 and Note 13 for additional information on the investment securities portfolio and the allowance for credit losses.
The current period income tax benefit was driven by benefits related to tax audit settlements as well as other tax adjustments, partially offset by a change in the level and mix of income and expenses subject to U.S. federal and state and local taxes that also impacted the Firm's tax reserves.
Other Corporate also reflects the Firm's international consumer growth initiatives, which include Chase U.K., the Firm's digital retail bank in the U.K.; Nutmeg, a digital wealth manager in the U.K.; and a 40\% ownership stake in C6 Bank, a digital bank in Brazil, which closed in the first quarter of 2022.

## Treasury and CIO overview

Treasury and CIO is predominantly responsible for measuring, monitoring, reporting and managing the Firm's liquidity, funding, capital, structural interest rate and foreign exchange risks. The risks managed by Treasury and CIO arise from the activities undertaken by the Firm's four major reportable business segments to serve their respective client bases, which generate both on- and offbalance sheet assets and liabilities.
Treasury and CIO seeks to achieve the Firm's asset-liability management objectives generally by investing in highquality securities that are managed for the longer-term as part of the Firm's investment securities portfolio. Treasury and CIO also uses derivatives to meet the Firm's assetliability management objectives. Refer to Note 5 for further information on derivatives. In addition, Treasury and CIO manages the Firm's cash position primarily through deposits at central banks and investments in short-term instruments. Refer to Liquidity Risk Management on pages 97-104 for further information on liquidity and funding risk. Refer to Market Risk Management on pages 131-138 for information on interest rate and foreign exchange risks.
The investment securities portfolio predominantly consists of U.S. and non-U.S. government securities, U.S. GSE and government agency and nonagency mortgage-backed securities, collateralized loan obligations, obligations of U.S. states and municipalities and other ABS. At December 31, 2022, the Treasury and CIO investment securities portfolio, net of the allowance for credit losses, was $\$ 629.3$ billion, and the average credit rating of the securities comprising the portfolio was AA+ (based upon external ratings where available and, where not available, based primarily upon internal risk ratings). Refer to Note 10 for further information on the Firm's investment securities portfolio and internal risk ratings.
Selected income statement and balance sheet data

| As of or for the year ended <br> December 31, (in millions) | 2022 | 2021 | 2020 |  |
| :---: | :---: | :---: | :---: | :---: |
| Investment securities gains/ <br> (losses) | $\$(2,380)$ | $\$$ | $(345)$ | $\$$ |
| Available-for-sale securities <br> (average) | $\$ 239,924$ | $\$ 306,827$ | $\$ 413,367$ |  |
| Held-to-maturity securities <br> (average) |  |  |  |  |
| Investment securities portfolio <br> (average) | $\mathbf{4 1 2 , 1 8 0}$ | 285,086 | 94,569 |  |
| Available-for-sale securities <br> (period-end) | $\$ \mathbf{6 5 2 , 1 0 4}$ | $\$ 591,913$ | $\$ 507,936$ |  |
| Held-to-maturity securities <br> (period-end) | $\mathbf{4 2 5}$ (a) |  |  |  |

(a) During 2022, 2021 and 2020, the Firm transferred $\$ 78.3$ billion, $\$ 104.5$ billion and $\$ 164.2$ billion of investment securities, respectively, from AFS to HTM for capital management purposes.
(b) At December 31, 2022, 2021 and 2020, the allowance for credit losses on investment securities was $\$ 67$ million, $\$ 42$ million and $\$ 78$ million, respectively.

Risk is an inherent part of JPMorgan Chase's business activities. When the Firm extends a consumer or wholesale loan, advises customers and clients on their investment decisions, makes markets in securities, or offers other products or services, the Firm takes on some degree of risk. The Firm's overall objective is to manage its business, and the associated risks, in a manner that balances serving the interests of its clients, customers and investors, and protecting the safety and soundness of the Firm.

The Firm believes that effective risk management requires, among other things:

- Acceptance of responsibility, including identification and escalation of risks by all individuals within the Firm;
- Ownership of risk identification, assessment, data and management within each of the LOBs and Corporate; and
- A Firmwide risk governance and oversight structure.

The Firm follows a disciplined and balanced compensation framework with strong internal governance and independent oversight by the Board of Directors (the "Board"). The impact of risk and control issues is carefully considered in the Firm's performance evaluation and incentive compensation processes.

## Risk governance framework

The Firm's risk governance framework involves understanding drivers of risks, types of risks, and impacts of risks.


Drivers of risks are factors that cause a risk to exist. Drivers of risks include, but are not limited to, the economic environment, regulatory or government policy, competitor or market evolution, business decisions, process or judgment error, deliberate wrongdoing, dysfunctional markets, and natural disasters.

Types of risks are categories by which risks manifest themselves. The Firm's risks are generally categorized in the following four risk types:

- Strategic risk is the risk to earnings, capital, liquidity or reputation associated with poorly designed or failed business plans or inadequate responses to changes in the operating environment.
- Credit and investment risk is the risk associated with the default or change in credit profile of a client, counterparty or customer; or loss of principal or a reduction in expected returns on investments, including
consumer credit risk, wholesale credit risk, and investment portfolio risk.
- Market risk is the risk associated with the effect of changes in market factors, such as interest and foreign exchange rates, equity and commodity prices, credit spreads or implied volatilities, on the value of assets and liabilities held for both the short and long term.
- Operational risk is the risk of an adverse outcome resulting from inadequate or failed internal processes or systems; human factors; or external events impacting the Firm's processes or systems. Operational risk includes compliance, conduct, legal, and estimations and model risk.

Impacts of risks are consequences of risks, both quantitative and qualitative. There may be many consequences of risks manifesting, including quantitative impacts such as a reduction in earnings and capital, liquidity outflows, and fines or penalties, or qualitative impacts such as damage to the Firm's reputation, loss of clients and customers, and regulatory and enforcement actions.

The Firm's risk governance framework is managed on a Firmwide basis. The Firm has an Independent Risk Management ("IRM") function, which is comprised of Risk Management and Compliance. The Firm's Chief Executive Officer ("CEO") appoints, subject to approval by the Risk Committee of the Board of Directors (the "Board Risk Committee"), the Firm's Chief Risk Officer ("CRO") to lead the IRM function and maintain the risk governance framework of the Firm. The framework is subject to approval by the Board Risk Committee through its review and approval of the Risk Governance and Oversight Policy.

The Firm's CRO oversees and delegates authority to the Firmwide Risk Executives ("FREs"), the Chief Risk Officers of the LOBs and Corporate ("LOB CROs"), and the Firm's Chief Compliance Officer ("CCO"), who, in turn, establish Risk Management and Compliance organizations, develop the Firm's risk governance policies and standards, and define and oversee the implementation of the Firm's risk governance framework. The LOB CROs oversee risks that arise in their LOBs and Corporate, while FREs oversee risks that span across the LOBs and Corporate, functions and regions. Each area of the Firm giving rise to risk is expected to operate within the parameters identified by the IRM function, and within its own management-identified risk and control standards.

## Three lines of defense

The Firm's "three lines of defense" are as follows:
The first line of defense consists of each LOB, Treasury and CIO, and certain Other Corporate initiatives, including their aligned Operations, Technology and Control Management. The first line of defense own the identification of risks within their respective organizations and the design and execution of controls to manage those risks.

## Management's discussion and analysis

Responsibilities also include adherence to applicable laws, rules and regulations and implementation of the risk governance framework established by IRM, which may include policies, standards, limits, thresholds and controls.

The second line of defense is the IRM function, which is separate from, and independently assesses and challenges, the first line of defense risk management practices. IRM is also responsible for the identification of risks within its respective organization, adherence to applicable laws, rules and regulations and for the development and implementation of policies and standards with respect to its own processes.

The third line of defense is Internal Audit, an independent function that provides objective assessment of the adequacy and effectiveness of Firmwide processes, controls, governance and risk management. The Internal Audit function is headed by the General Auditor, who reports to the Audit Committee and administratively to the CEO.

In addition, there are other functions that contribute to the Firmwide control environment but are not considered part of a particular line of defense, including Finance, Human Resources and Legal. These other functions are responsible for the identification of risks within their respective organizations, adherence to applicable laws, rules and regulations and implementation of the risk governance framework established by IRM.

## Risk identification and ownership

The LOBs and Corporate own the identification of risks within their respective organizations, as well as the design and execution of controls, including IRM-specified controls, to manage those risks. To support this activity, the Firm has a risk identification framework designed to facilitate each LOB and Corporate's responsibility to identify material risks inherent to the Firm's business and operational activities, catalog them in a central repository and review material risks on a regular basis. The IRM function reviews and challenges the LOB and Corporate's identified risks, maintains the central repository and provides the consolidated Firmwide results to the Firmwide Risk Committee ("FRC") and the Board Risk Committee.

Risk appetite
The Firm's overall appetite for risk is governed by "Risk Appetite" frameworks for quantitative and qualitative risks. Periodically the Firm's risk appetite is set and approved by senior management (including the CEO and CRO) and approved by the Board Risk Committee. Quantitative and qualitative risks are assessed to monitor and measure the Firm's capacity to take risk consistent with its stated risk appetite. Risk appetite results are reported to the Board Risk Committee.

## Risk governance and oversight structure

The independent status of the IRM function is supported by a risk governance and oversight structure that provides channels for the escalation of risks and issues to senior management, the FRC, and the Board of Directors, as appropriate.

The chart below illustrates the committees of the Board of Directors and key senior management-level committees in the Firm's risk governance and oversight structure. In addition, there are other committees, forums and channels of escalation that support the oversight of risk that are not shown in the chart below or described in this Form 10-K.


The Firm's Operating Committee, which consists of the Firm's CEO, CRO, Chief Financial Officer ("CFO"), General Counsel, CEOs of the LOBs and other senior executives, is accountable to and may refer matters to the Firm's Board of Directors. The Operating Committee is responsible for escalating to the Board the information necessary to facilitate the Board's exercise of its duties.

## Board oversight

The Firm's Board of Directors actively oversees the business and affairs of the Firm. This includes monitoring the Firm's financial performance and condition and reviewing the strategic objectives and plans of the Firm. The Board carries out a significant portion of its oversight responsibilities through its principal standing committees, each of which consists solely of independent members of the Board. The Board Risk Committee is the principal committee that oversees risk matters. The Audit Committee oversees the control environment, and the Compensation \& Management Development Committee oversees compensation and other management-related matters. Each committee of the Board oversees reputational risks, conduct risks, and ESG matters within its scope of responsibility.

The JPMorgan Chase Bank, N.A. Board of Directors is responsible for the oversight of management of the bank, which it discharges both acting directly and through the principal standing committees of the Firm's Board of Directors. Risk and control oversight on behalf of JPMorgan Chase Bank N.A. is primarily the responsibility of the Board

Risk Committee and the Audit Committee, respectively, and, with respect to compensation and other managementrelated matters, the Compensation \& Management Development Committee.

The Board Risk Committee assists the Board in its oversight of management's responsibility to implement a global risk management framework reasonably designed to identify, assess and manage the Firm's risks. The Board Risk Committee's responsibilities include approval of applicable primary risk policies and review of certain associated frameworks, analysis and reporting established by management. Breaches in risk appetite and parameters, issues that may have a material adverse impact on the Firm, including capital and liquidity issues, and other significant risk-related matters are escalated to the Board Risk Committee, as appropriate.

The Audit Committee assists the Board in its oversight of management's responsibility to ensure that there is an effective system of controls reasonably designed to safeguard the Firm's assets and income, ensure the integrity of the Firm's financial statements, and maintain compliance with the Firm's ethical standards, policies, plans and procedures, and with laws and regulations. It also assists the Board in its oversight of the qualifications, independence and performance of the Firm's independent registered public accounting firm, and of the performance of the Firm's Internal Audit function.

## Management's discussion and analysis

The Compensation \& Management Development Committee ("CMDC") assists the Board in its oversight of the Firm's compensation principles and practices. The CMDC reviews and approves the Firm's compensation and qualified benefits programs. The Committee reviews the performance of Operating Committee members against their goals, and approves their compensation awards. In addition, the CEO's award is subject to ratification by the independent directors of the Board. The CMDC also reviews the development of and succession for key executives. As part of the Board's role of reinforcing, demonstrating and communicating the "tone at the top," the CMDC oversees the Firm's culture, including reviewing updates from management regarding significant conduct issues and any related actions with respect to employees, including compensation actions.

The Public Responsibility Committee oversees and reviews the Firm's positions and practices on public responsibility matters such as community investment, fair lending, sustainability, consumer practices and other public policy issues that reflect the Firm's values and character and could impact the Firm's reputation among its stakeholders. The Committee also provides guidance on these matters to management and the Board, as appropriate.

The Corporate Governance \& Nominating Committee exercises general oversight with respect to the governance of the Board of Directors. It reviews the qualifications of and recommends to the Board proposed nominees for election to the Board. The Committee evaluates and recommends to the Board corporate governance practices applicable to the Firm. It also reviews the framework for assessing the Board's performance and self-evaluation.

## Management oversight

The Firm's senior management-level committees that are primarily responsible for key risk-related functions include:

The Firmwide Risk Committee ("FRC") is the Firm's highest management-level risk committee. It oversees the risks inherent in the Firm's business and provides a forum for discussion of topics, and issues that are raised or escalated by its members and other committees.

The Firmwide Control Committee ("FCC") is an escalation committee for senior management to review and discuss the Firmwide operational risk environment including identified issues, operational risk metrics and significant events that have been escalated.

Line of Business and Regional Risk Committees are responsible for overseeing the governance, limits, and controls that have been established within the scope of their respective activities. These committees review the ways in which the particular LOB or the businesses operating in a particular region could be exposed to adverse outcomes, with a focus on identifying, accepting, escalating and/or requiring remediation of matters brought to these committees.

Line of Business and Corporate Function Control Committees oversee the operational risk and control environment of their respective business or function, inclusive of Operational Risk, Compliance and Conduct Risks. As part of that mandate, they are responsible for reviewing indicators of elevated or emerging risks and other data that may impact the level of operational risk in a business or function, addressing key operational risk issues, with an emphasis on processes with control concerns and overseeing control remediation.

The Asset and Liability Committee ("ALCO") is responsible for overseeing the Firm's asset and liability management ("ALM"), including the activities and frameworks supporting management of the balance sheet, liquidity risk, interest rate risk, and capital risk.

The Firmwide Valuation Governance Forum ("VGF") is composed of senior finance and risk executives and is responsible for overseeing the management of risks arising from valuation activities conducted across the Firm.

## Risk governance and oversight functions

The Firm manages its risk through risk governance and oversight functions. The scope of a particular function or business activity may include one or more drivers, types and/or impacts of risk. For example, Country Risk Management oversees country risk which may be a driver of risk or an aggregation of exposures that could give rise to multiple risk types such as credit or market risk.
The following sections discuss the risk governance and oversight functions that have been established to manage the risks inherent in the Firm's business activities.

| Risk governance and oversight functions | Page |
| :--- | :---: |
| Strategic Risk | 85 |
| Capital Risk | $86-96$ |
| Liquidity Risk | $97-104$ |
| Reputation Risk | 105 |
| Consumer Credit Risk | $110-115$ |
| Wholesale Credit Risk | $116-126$ |
| Investment Portfolio Risk | 130 |
| Market Risk | $131-138$ |
| Country Risk | $139-140$ |
| Climate Risk | 141 |
| Operational Risk | $142-148$ |
| Compliance Risk | 145 |
| Conduct Risk | 146 |
| Legal Risk | 147 |
| Estimations and Model Risk | 148 |

Strategic risk is the risk to earnings, capital, liquidity or reputation associated with poorly designed or failed business plans or inadequate responses to changes in the operating environment.

## Management and oversight

The Operating Committee, together with the senior leadership of each LOB and Corporate, is responsible for managing the Firm's most significant strategic risks. IRM engages regularly in strategic business discussions and decision-making, including participation in relevant business reviews and senior management meetings, risk and control committees and other relevant governance forums, and acquisition and new business initiative reviews. The Board of Directors oversees management's strategic decisions, and the Board Risk Committee oversees IRM and the Firm's risk governance framework.

In the process of developing business plans and strategic initiatives, LOB and Corporate senior management identify the associated risks that are incorporated into the Firmwide Risk Identification framework and their impact on risk appetite.

In addition, IRM conducts a qualitative assessment of the LOB and Corporate strategic initiatives to assess their impact on the risk profile of the Firm.

The Firm's strategic planning process, which includes the development of the Firm's strategic plan and other strategic initiatives, is one component of managing the Firm's strategic risk. The strategic plan outlines the Firm's strategic framework and initiatives, and includes components such as budget, risk appetite, capital, earnings and asset-liability management objectives. Guided by the Firm's How We Do Business Principles, the Operating Committee and senior management teams in each LOB and Corporate review and update the strategic plan periodically, including evaluating the strategic framework and performance against prior-year initiatives, assessing the operating environment, refining existing strategies and developing new strategies.
The Firm's strategic plan, together with IRM's assessment, are provided to the Board as part of its review and approval of the Firm's strategic plan, and the plan is also reflected in the Firm's budget.

The Firm's balance sheet strategy, which focuses on riskadjusted returns, strong capital and robust liquidity, is also a component in the management of strategic risk. Refer to Capital Risk Management on pages 86-96 for further information on capital risk. Refer to Liquidity Risk Management on pages 97-104 for further information on liquidity risk. Refer to Reputation Risk Management on page 105 for further information on reputation risk.

# Management's discussion and analysis 

## CAPITAL RISK MANAGEMENT

Capital risk is the risk the Firm has an insufficient level or composition of capital to support the Firm's business activities and associated risks during normal economic environments and under stressed conditions.

A strong capital position is essential to the Firm's business strategy and competitive position. Maintaining a strong balance sheet to manage through economic volatility is considered a strategic imperative of the Firm's Board of Directors, CEO and Operating Committee. The Firm's fortress balance sheet philosophy focuses on risk-adjusted returns, strong capital and robust liquidity. The Firm's capital risk management strategy focuses on maintaining long-term stability to enable the Firm to build and invest in market-leading businesses, including in highly stressed environments. Senior management considers the implications on the Firm's capital prior to making significant decisions that could impact future business activities. In addition to considering the Firm's earnings outlook, senior management evaluates all sources and uses of capital with a view to ensuring the Firm's capital strength.

## Capital risk management

The Firm has a Capital Risk Management function whose primary objective is to provide independent oversight of capital risk across the Firm.
Capital Risk Management's responsibilities include:

- Defining, monitoring and reporting capital risk metrics;
- Establishing, calibrating and monitoring capital risk limits and indicators, including capital risk appetite;
- Developing a process to classify, monitor and report capital limit breaches;
- Performing an assessment of the Firm's capital management activities, including changes made to the Contingency Capital Plan described below; and
- Conducting assessments of the Firm's regulatory capital framework intended to ensure compliance with applicable regulatory capital rules.
Capital management
Treasury and CIO is responsible for capital management.
The primary objectives of the Firm's capital management are to:
- Maintain sufficient capital in order to continue to build and invest in the Firm's businesses through the cycle and in stressed environments;
- Retain flexibility to take advantage of future investment opportunities;
- Promote the Firm's ability to serve as a source of strength to its subsidiaries;
- Ensure the Firm operates above the minimum regulatory capital ratios as well as maintain "well-capitalized" status for the Firm and its insured depository institution ("IDI") subsidiaries at all times under applicable regulatory capital requirements;
- Meet capital distribution objectives; and
- Maintain sufficient capital resources to operate throughout a resolution period in accordance with the Firm's preferred resolution strategy.
The Firm addresses these objectives through:
- Establishing internal minimum capital requirements and maintaining a strong capital governance framework. The internal minimum capital levels consider the Firm's regulatory capital requirements as well as an internal assessment of capital adequacy, in normal economic cycles and in stress events;
- Retaining flexibility in order to react to a range of potential events; and
- Regular monitoring of the Firm's capital position and following prescribed escalation protocols, both at the Firm and material legal entity levels.


## Governance

Committees responsible for overseeing the Firm's capital management include the Capital Governance Committee, the Firmwide ALCO and LOB and regional ALCOs, and the CIO, Treasury and Corporate ("CTC") Risk Committee. In addition, the Board Risk Committee periodically reviews the Firm's capital risk tolerance. Refer to Firmwide Risk Management on pages 81-84 for additional discussion of the Firmwide ALCO and other risk-related committees.

## Capital planning and stress testing

 Comprehensive Capital Analysis and Review The Federal Reserve requires large Bank Holding Companies ("BHCs"), including the Firm, to submit at least annually a capital plan that has been reviewed and approved by the Board of Directors. The Federal Reserve uses Comprehensive Capital Analysis and Review ("CCAR") and other stress testing processes to ensure that large BHCs have sufficient capital during periods of economic and financial stress, and have robust, forward-looking capital assessment and planning processes in place that address each BHC's unique risks to enable it to absorb losses under certain stress scenarios. Through CCAR, the Federal Reserve evaluates each BHC's capital adequacy and internal capital adequacy assessment processes ("ICAAP"), as well as its plans to make capital distributions, such as dividend payments or stock repurchases. The Federal Reserve uses results under the severely adverse scenario from its supervisory stress test to determine each firm's Stress Capital Buffer ("SCB") requirement for the coming year.On June 27, 2022, the Firm announced that it had completed the Federal Reserve's 2022 CCAR stress test process. On August 4, 2022, the Federal Reserve affirmed the Firm's 2022 SCB requirement of $4.0 \%$ (up from $3.2 \%$ ), and the Firm's Standardized CET1 capital ratio requirement, including regulatory buffers, of $12.0 \%$ (up from $11.2 \%$ ). The 2022 SCB requirement became effective on October 1, 2022, and will remain in effect until September 30, 2023.

Refer to Capital actions on page 94 for information on actions taken by the Firm's Board of Directors.

## Internal Capital Adequacy Assessment Process

Annually, the Firm prepares the ICAAP, which informs the Board of Directors of the ongoing assessment of the Firm's processes for managing the sources and uses of capital as well as compliance with supervisory expectations for capital planning and capital adequacy. The Firm's ICAAP integrates stress testing protocols with capital planning. The Firm's Audit Committee is responsible for reviewing and approving the capital planning framework.

Stress testing assesses the potential impact of alternative economic and business scenarios on the Firm's earnings and capital. Economic scenarios, and the parameters underlying those scenarios, are defined centrally and applied uniformly across the businesses. These scenarios are articulated in terms of macroeconomic factors, which are key drivers of business results; global market shocks, which generate short-term but severe trading losses; and idiosyncratic operational risk events. The scenarios are intended to capture and stress key vulnerabilities and idiosyncratic risks facing the Firm. In addition to CCAR and other periodic stress testing, management also considers tailored stress scenarios and sensitivity analyses, as necessary.

## Contingency Capital Plan

The Firm's Contingency Capital Plan establishes the capital management framework for the Firm and specifies the principles underlying the Firm's approach towards capital management in normal economic conditions and in stressed environments. The Contingency Capital Plan defines how the Firm calibrates its targeted capital levels and meets minimum capital requirements, monitors the ongoing appropriateness of planned capital distributions, and sets out the capital contingency actions that are expected to be taken or considered at various levels of capital depletion during a period of stress.

## Regulatory capital

The Federal Reserve establishes capital requirements, including well-capitalized standards, for the consolidated financial holding company. The OCC establishes similar minimum capital requirements and standards for the Firm's IDI subsidiaries, including JPMorgan Chase Bank, N.A. The U.S. capital requirements generally follow the Capital Accord of the Basel Committee, as amended from time to time.

## Basel III Overview

The capital rules under Basel III establish minimum capital ratios and overall capital adequacy standards for large and internationally active U.S. BHCs and banks, including the Firm and its IDI subsidiaries, including JPMorgan Chase Bank, N.A. The minimum amount of regulatory capital that must be held by BHCs and banks is determined by calculating RWA, which are on-balance sheet assets and offbalance sheet exposures, weighted according to risk. Two comprehensive approaches are prescribed for calculating RWA: a standardized approach ("Basel III Standardized"), and an advanced approach ("Basel III Advanced"). For each of the risk-based capital ratios, the capital adequacy of the Firm is evaluated against the lower of the Standardized or Advanced approaches compared to their respective regulatory capital ratio requirements. The Firm's Basel III Standardized risk-based ratios are currently more binding than the Basel III Advanced risk-based ratios.

Basel III establishes capital requirements for calculating credit risk RWA and market risk RWA, and in the case of Basel III Advanced, operational risk RWA. Key differences in the calculation of credit risk RWA between the Standardized and Advanced approaches are that for Basel III Advanced, credit risk RWA is based on risk-sensitive approaches which largely rely on the use of internal credit models and parameters, whereas for Basel III Standardized, credit risk RWA is generally based on supervisory risk-weightings which vary primarily by counterparty type and asset class. Market risk RWA is calculated on a generally consistent basis between Basel III Standardized and Basel III Advanced. In addition to the RWA calculated under these approaches, the Firm may supplement such amounts to incorporate management judgment and feedback from its regulators.
Basel III also includes a requirement for Advanced Approaches banking organizations, including the Firm, to calculate the SLR. Refer to SLR on page 93 for additional information.

## Key Regulatory Developments

## CECL regulatory capital transition.

Until December 31, 2021, the Firm's capital reflected a two year delay of the effects of CECL provided by the Federal Reserve Board in response to the COVID-19 pandemic.
Beginning January 1, 2022, the $\$ 2.9$ billion CECL capital benefit is being phased out at $25 \%$ per year over a threeyear period. As of December 31, 2022, the Firm's CET1 capital reflected the remaining $\$ 2.2$ billion benefit associated with the CECL capital transition provisions. Additionally, effective January 1, 2022, the Firm phased out $25 \%$ of the other CECL capital transition provisions which impacted Tier 2 capital, adjusted average assets, total leverage exposure and RWA, as applicable.
Refer to Note 1 for further information on the CECL accounting guidance.

# Management's discussion and analysis 

Standardized Approach for Counterparty Credit Risk. On January 1, 2022, the Firm adopted "Standardized Approach for Counterparty Credit Risk" ("SA-CCR"), which replaced the Current Exposure Method used to measure derivatives counterparty exposure under the Standardized and Advanced approach RWA where internal models are not used, as well as leverage exposure used to calculate the SLR in the regulatory capital framework. The rule issued by the U.S. banking regulators in November 2019 applies to Basel III Advanced Approaches banking organizations, such as the Firm and JPMorgan Chase Bank, N.A.

The adoption of SA-CCR on January 1, 2022 increased the Firm's Standardized RWA by approximately $\$ 40$ billion based on the Firm's derivatives exposure as of December 31, 2021, which resulted in a decrease of approximately 30 bps to the Firm's CET1 capital ratio and a modest decrease in its total leverage exposure. In addition, the adoption of SA-CCR increased the Firm's Advanced RWA, but to a lesser extent than Standardized RWA.

## Risk-based Capital Regulatory Requirements

The following chart presents the Firm's Basel III CET1 capital ratio requirements under the Basel III rules currently in effect.


All banking institutions are currently required to have a minimum CET1 capital ratio of $4.5 \%$ of risk-weighted assets.
Certain banking organizations, including the Firm, are required to hold additional levels of capital to serve as a "capital conservation buffer". The capital conservation buffer incorporates a GSIB surcharge, a discretionary countercyclical capital buffer and a fixed capital conservation buffer of $2.5 \%$ for Advanced regulatory capital requirements and a variable SCB requirement, floored at 2.5\%, for Standardized regulatory capital requirements.

Under the Federal Reserve's GSIB rule, the Firm is required to assess its GSIB surcharge on an annual basis under two separately prescribed methods based on data for the previous fiscal year-end, and is subject to the higher of the two. "Method 1" reflects the GSIB surcharge as prescribed by the Basel Committee's assessment methodology, and is calculated by the Financial Stability Board ("FSB") across five criteria: size, cross-jurisdictional activity, interconnectedness, complexity and substitutability. "Method 2", calculated by the Firm, modifies the Method 1 requirements to include a measure of short-term wholesale funding in place of substitutability, and introduces a GSIB score "multiplication factor".

## Management's discussion and analysis

The following table presents the Firm's effective GSIB surcharge for the years ended December 31, 2023, 2022 and 2021. For 2023, the Firm's effective GSIB surcharge under Method 1 and Method 2 has increased to $2.5 \%$ and 4.0\%, respectively.

|  | 2023 | 2022 | 2021 |
| :--- | :---: | :---: | :---: |
| Method 1 | $2.5 \%$ | $2.0 \%$ | $2.0 \%$ |
| Method 2 | $4.0 \%$ | $3.5 \%$ | $3.5 \%$ |

On November 21, 2022, the FSB released its annual GSIB list based upon data as of December 31, 2021, which affirmed the Firm's Method 1 GSIB surcharge of $2.5 \%$ (up from 2.0\%), effective January 1, 2023.

The Firm's Method 2 surcharge calculated using data as of December 31,2021 is $4.5 \%$, which will be effective January 1, 2024. The Firm's estimated Method 2 surcharge calculated using data as of December 31, 2022 is $4.5 \%$. Accordingly, based on the GSIB rule currently in effect, the Firm's effective GSIB surcharge is expected to increase to 4.5\% on January 1, 2024.

The U.S. federal regulatory capital standards include a framework for setting a discretionary countercyclical capital buffer taking into account the macro financial environment in which large, internationally active banks function. As of December 31, 2022, the U.S. countercyclical capital buffer remained at 0\%. The Federal Reserve will continue to review the buffer at least annually. The buffer can be increased if the Federal Reserve, FDIC and OCC determine that systemic risks are meaningfully above normal and can be calibrated up to an additional $2.5 \%$ of RWA subject to a 12-month implementation period.
Failure to maintain regulatory capital equal to or in excess of the risk-based regulatory capital minimum plus the capital conservation buffer (inclusive of the GSIB surcharge) and any countercyclical buffer will result in limitations to the amount of capital that the Firm may distribute, such as through dividends and common share repurchases, as well as certain executive discretionary bonus payments.

## Risk-based Capital Targets

The Firm's current target for its Basel III Standardized CET1 capital ratio is $13.0 \%$ for the first quarter of 2023 , increasing to $13.5 \%$ for the first quarter of 2024 with consideration for an increase in the GSIB surcharge in 2024, and assuming no change in the Stress Capital Buffer. The Firm's quarterly capital ratios may vary from these targets dependent on market conditions. These targets are based on the Basel III capital rules currently in effect.
Total Loss-Absorbing Capacity
The Federal Reserve's TLAC rule requires the U.S. GSIB toptier holding companies, including the Firm, to maintain minimum levels of external TLAC and eligible long-term debt ("eligible LTD"). Refer to TLAC on page 95 for additional information.

Leverage-based Capital Regulatory Requirements Supplementary leverage ratio
Banking organizations subject to the Basel III Advanced approach are currently required to have a minimum SLR of 3.0\%. Certain banking organizations, including the Firm, are also required to hold an additional 2.0\% leverage buffer.
The SLR is defined as Tier 1 capital under Basel III divided by the Firm's total leverage exposure. Total leverage exposure is calculated by taking the Firm's total average on-balance sheet assets, less amounts permitted to be deducted for Tier 1 capital, and adding certain off-balance sheet exposures, such as undrawn commitments and derivatives potential future exposure.
Failure to maintain an SLR equal to or greater than the regulatory requirement will result in limitations on the amount of capital that the Firm may distribute such as through dividends and common share repurchases, as well as on certain executive discretionary bonus payments.

## Other regulatory capital

In addition to meeting the capital ratio requirements of Basel III, the Firm and its IDI subsidiaries must also maintain minimum capital and leverage ratios in order to be "well-capitalized" under the regulations issued by the Federal Reserve and the Prompt Corrective Action ("PCA") requirements of the FDIC Improvement Act ("FDICIA"), respectively. Refer to Note 27 for additional information. Additional information regarding the Firm's capital ratios, as well as the U.S. federal regulatory capital standards to which the Firm is subject, is presented in Note 27. Refer to the Firm's Pillar 3 Regulatory Capital Disclosures reports, which are available on the Firm's website, for further information on the Firm's Basel III measures.

The following tables present the Firm's risk-based capital metrics under both the Basel III Standardized and Advanced approaches and leverage-based capital metrics. Refer to Note 27 for JPMorgan Chase Bank, N.A.'s risk-based and leveragebased capital metrics.

| (in millions, except ratios) | Standardized |  |  | Advanced |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { December 31, } \\ 2022 \end{gathered}$ | $\begin{gathered} \text { December 31, } \\ 2021 \end{gathered}$ | Capital ratio requirements ${ }^{(b)}$ | $\begin{gathered} \text { December 31, } \\ 2022 \end{gathered}$ | $\begin{gathered} \text { December 31, } \\ 2021 \end{gathered}$ | Capital ratio requirements ${ }^{(b)}$ |
| Risk-based capital metrics: ${ }^{\text {(a) }}$ |  |  |  |  |  |  |
| CET1 capital | \$ 218,934 | \$ 213,942 |  | \$ 218,934 | \$ 213,942 |  |
| Tier 1 capital | 245,631 | 246,162 |  | 245,631 | 246,162 |  |
| Total capital | 277,769 | 274,900 |  | 264,583 | 265,796 |  |
| Risk-weighted assets | 1,653,538 | 1,638,900 |  | 1,609,773 | 1,547,920 |  |
| CET1 capital ratio | 13.2 \% | 13.1 \% | 12.0 \% | 13.6 \% | 13.8 \% | 10.5 \% |
| Tier 1 capital ratio | 14.9 | 15.0 | 13.5 | 15.3 | 15.9 | 12.0 |
| Total capital ratio | 16.8 | 16.8 | 15.5 | 16.4 | 17.2 | 14.0 |

(a) The capital metrics reflect the CECL capital transition provisions.
(b) Represents minimum requirements and regulatory buffers applicable to the Firm for the period ended December 31, 2022. For the period ended December 31, 2021, the Basel III Standardized CET1, Tier 1, and Total capital ratio requirements applicable to the Firm were $11.2 \%, 12.7 \%$, and $14.7 \%$, respectively. Refer to Note 27 for additional information.

| Three months ended (in millions, except ratios) | December 31, 2022 |  | December 31, 2021 |  | Capital ratio requirements ${ }^{(C)}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Leverage-based capital metrics: ${ }^{\text {(a) }}$ |  |  |  |  |  |
| Adjusted average assets ${ }^{(b)}$ | \$ | 3,703,873 | \$ | 3,782,035 |  |
| Tier 1 leverage ratio |  | 6.6 |  | 6.5 | 4.0 \% |
| Total leverage exposure | \$ | 4,367,092 | \$ | 4,571,789 |  |
| SLR |  | 5.6 |  | 5.4 | 5.0 \% |

(a) The capital metrics reflect the CECL capital transition provisions.
(b) Adjusted average assets, for purposes of calculating the leverage ratios, includes quarterly average assets adjusted for on-balance sheet assets that are subject to deduction from Tier 1 capital, predominantly goodwill, inclusive of estimated equity method goodwill, and other intangible assets.
(c) Represents minimum requirements and regulatory buffers applicable to the Firm. Refer to Note 27 for additional information.

## Management's discussion and analysis

## Capital components

The following table presents reconciliations of total stockholders' equity to Basel III CET1 capital, Tier 1 capital and Total capital as of December 31, 2022 and 2021.

| (in millions) | $\begin{array}{r} \text { December 31, } \\ 2022 \\ \hline \end{array}$ |  |  | $\begin{array}{r} \text { December 31, } \\ 2021 \\ \hline \end{array}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Total stockholders' equity | \$ | 292,332 |  | \$ | 294,127 |
| Less: Preferred stock |  | 27,404 |  |  | 34,838 |
| Common stockholders' equity |  | 264,928 |  |  | 259,289 |
| Add: |  |  |  |  |  |
| Certain deferred tax liabilities ${ }^{\left({ }^{(2)}\right.}$ |  | 2,510 |  |  | 2,499 |
| Other CET1 capital adjustments ${ }^{(b)}$ |  | 6,221 |  |  | 3,351 |
| Less: |  |  |  |  |  |
| Goodwill |  | 53,501 | (f) |  | 50,315 |
| Other intangible assets |  | 1,224 |  |  | 882 |
| Standardized/Advanced CET1 capital |  | 218,934 |  |  | 213,942 |
| Add: Preferred stock |  | 27,404 |  |  | 34,838 |
| Less: Other Tier 1 adjustments ${ }^{(c)}$ |  | 707 |  |  | 2,618 |
| Standardized/Advanced Tier 1 capital | \$ | 245,631 |  | \$ | 246,162 |
| Long-term debt and other instruments qualifying as Tier 2 capital | \$ | 13,569 |  | \$ | 14,106 |
| Qualifying allowance for credit losses |  | 19,353 |  |  | 15,012 |
| Other |  | (784) |  |  | (380) |
| Standardized Tier 2 capital | \$ | 32,138 |  | \$ | 28,738 |
| Standardized Total capital | \$ | 277,769 |  | \$ | 274,900 |
| Adjustment in qualifying allowance for credit losses for Advanced Tier 2 capital ${ }^{(\mathrm{e})}$ |  | $(13,186)$ |  |  | $(9,104)$ |
| Advanced Tier 2 capital | \$ | 18,952 |  | \$ | 19,634 |
| Advanced Total capital | \$ | 264,583 |  | \$ | 265,796 |

(a) Represents deferred tax liabilities related to tax-deductible goodwill and to identifiable intangibles created in nontaxable transactions, which are netted against goodwill and other intangibles when calculating CET1 capital.
(b) As of December 31, 2022 and 2021, includes a net benefit associated with cash flow hedges and debit valuation adjustments ("DVA") related to structured notes recorded in AOCI of $\$ 5.2$ billion and $\$ 1.4$ billion and the benefit from the CECL capital transition provisions of $\$ 2.2$ billion and $\$ 2.9$ billion, respectively.
(c) As of December 31, 2021, Other Tier 1 adjustments included $\$ 2.0$ billion of Series $Z$ preferred stock called for redemption on December 31, 2021 and subsequently redeemed on February 1, 2022.
(d) Represents the allowance for credit losses eligible for inclusion in Tier 2 capital up to $1.25 \%$ of credit risk RWA, including the impact of the CECL capital transition provision with any excess deducted from RWA.
(e) Represents an adjustment to qualifying allowance for credit losses for the excess of eligible credit reserves over expected credit losses up to $0.6 \%$ of credit risk RWA, including the impact of the CECL capital transition provision with any excess deducted from RWA.
(f) Goodwill deducted from capital includes goodwill associated with equity method investments in nonconsolidated financial institutions based on regulatory requirements. Refer to Principal investment risk on page 130 for additional information.

## Capital rollforward

The following table presents the changes in Basel III CET1 capital, Tier 1 capital and Tier 2 capital for the year ended December 31, 2022.

| Year Ended December 31, (in millions) | 2022 |
| :--- | ---: |
| Standardized/Advanced CET1 capital at December 31, 2021 | $\$ 213,942$ |
| Net income applicable to common equity | 36,081 |
| Dividends declared on common stock | $(11,893)$ |
| Net purchase of treasury stock | $(1,921)$ |
| Changes in additional paid-in capital | 629 |
| Changes related to AOCI applicable to capital: |  |
| Unrealized gains/(losses) on investment securities | $(11,764)$ |
| Translation adjustments, net of hedges ${ }^{\text {(a) }}$ | $(611)$ |
| Fair value hedges | 98 |
| Defined benefit pension and other postretirement | $(1,241)$ |
| employee benefit ("OPEB") plans | $(4,386)$ |
| Changes related to other CET1 capital adjustments ${ }^{(\mathrm{b})}$ | 4,992 |
| Change in Standardized/Advanced CET1 capital |  |
| Standardized/Advanced CET1 capital at | 218,934 |
| December 31, 2022 |  |

Standardized/Advanced Tier 1 capital at December 31,

| 2021 | $\$ 246,162$ |
| :--- | ---: |
| Change in CET1 capital $^{(\text {b) }}$ | 4,992 |
| Redemptions of noncumulative perpetual preferred stock | $(5,434)$ |
| Other | (89) |
| Change in Standardized/Advanced Tier 1 capital | (531) |
| Standardized/Advanced Tier 1 capital at December 31, |  |
| $\mathbf{2 0 2 2}$ | $\mathbf{\$ 2 4 5 , 6 3 1}$ |


| Standardized Tier 2 capital at December 31, 2021 | \$ 28,738 |
| :---: | :---: |
| Change in long-term debt and other instruments qualifying as Tier 2 | (537) |
| Change in qualifying allowance for credit losses ${ }^{(b)}$ | 4,341 |
| Other | (404) |
| Change in Standardized Tier 2 capital | 3,400 |
| Standardized Tier 2 capital at December 31, 2022 | \$ 32,138 |
| Standardized Total capital at December 31, 2022 | \$ 277,769 |

Advanced Tier 2 capital at December 31, $2021 \quad \$ 19,634$

| Change in long-term debt and other instruments qualifying |  |
| :--- | ---: |
| as Tier 2 | (537) |
| Change in qualifying allowance for credit losses ${ }^{\text {(b) }}$ | 259 |
| Other | (404) |
| Change in Advanced Tier 2 capital | (682) |
| Advanced Tier 2 capital at December 31, 2022 | $\$ 18,952$ |
| Advanced Total capital at December 31, 2022 | $\$ 264,583$ |

(a) Includes foreign currency translation adjustments and the impact of related derivatives.
(b) Includes the impact of the CECL capital transition provisions.

## RWA rollforward

The following table presents changes in the components of RWA under Basel III Standardized and Advanced approaches for the year ended December 31, 2022. The amounts in the rollforward categories are estimates, based on the predominant driver of the change.

| Year ended December 31, 2022 (in millions) | Standardized |  |  |  |  |  | Advanced |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \hline \text { Credit risk } \\ \text { RWA }^{(\mathrm{c})} \end{gathered}$ |  | Market risk RWA |  | Total RWA |  | Credit risk RWA ${ }^{\text {(c) }}$ |  | Market risk RWA |  | Operational risk RWA |  | Total RWA |  |
| December 31, 2021 | \$ | 1,543,452 | \$ | 95,448 | \$ | 1,638,900 | \$ | 1,047,042 | \$ | 95,506 | \$ | 405,372 | \$ | 1,547,920 |
| Model \& data changes ${ }^{(a)}$ |  | $(7,313)$ |  | $(3,808)$ |  | $(11,121)$ |  | 966 |  | $(3,808)$ |  | - |  | $(2,842)$ |
| Movement in portfolio levels ${ }^{(b)}$ |  | 32,397 |  | $(6,638)$ |  | 25,759 |  | 30,068 |  | $(6,266)$ |  | 40,893 |  | 64,695 |
| Changes in RWA |  | 25,084 |  | $(10,446)$ |  | 14,638 |  | 31,034 |  | $(10,074)$ |  | 40,893 |  | 61,853 |
| December 31, 2022 | \$ | 1,568,536 | \$ | 85,002 | \$ | 1,653,538 | \$ | 1,078,076 | \$ | 85,432 | \$ | 446,265 | \$ | 1,609,773 |

(a) Model \& data changes refer to material movements in levels of RWA as a result of revised methodologies and/or treatment per regulatory guidance (exclusive of rule changes).
(b) Movement in portfolio levels (inclusive of rule changes) refers to: for Credit risk RWA, impact of SA-CCR adoption on January 1, 2022, changes in book size including position rolloffs in legacy portfolios in Home Lending, changes in composition and credit quality, market movements, and deductions for excess eligible credit reserves not eligible for inclusion in Tier 2 capital; for Market risk RWA, changes in position, market movements, and changes in the Firm's regulatory multiplier from Regulatory VaR backtesting exceptions; and for Operational risk RWA, updates to cumulative losses and macroeconomic model inputs.
(c) As of December 31, 2022 and 2021, the Basel III Standardized Credit risk RWA included wholesale and retail off balance-sheet RWA of $\$ 210.1$ billion and $\$ 218.5$ billion, respectively; and the Basel III Advanced Credit risk RWA included wholesale and retail off balance-sheet RWA of $\$ 180.8$ billion and $\$ 188.5$ billion, respectively.

Refer to the Firm's Pillar 3 Regulatory Capital Disclosures reports, which are available on the Firm's website, for further information on Credit risk RWA, Market risk RWA and Operational risk RWA.

## Supplementary leverage ratio

The following table presents the components of the Firm's SLR.

| Three months ended (in millions, except ratio) | $\begin{array}{r} \text { December 31, } \\ 2022 \end{array}$ | December 31, 2021 |
| :---: | :---: | :---: |
| Tier 1 capital | \$ 245,631 | \$ 246,162 |
| Total average assets | 3,755,271 | 3,831,655 |
| Less: Regulatory capital adjustments ${ }^{\text {a }}$ | 51,398 | 49,620 |
| Total adjusted average assets ${ }^{(\text {b) }}$ | 3,703,873 | 3,782,035 |
| Add: Off-balance sheet exposures ${ }^{(c)}$ | 663,219 | 789,754 |
| Total leverage exposure | \$ 4,367,092 | \$ 4,571,789 |
| SLR | 5.6 \% | 5.4 \% |

(a) For purposes of calculating the SLR, includes quarterly average assets adjusted for on-balance sheet assets that are subject to deduction from Tier 1 capital, predominantly goodwill, inclusive of estimated equity method goodwill, other intangible assets and adjustments for the CECL capital transition provisions.
(b) Adjusted average assets used for the calculation of Tier 1 leverage ratio.
(c) Off-balance sheet exposures are calculated as the average of the three month-end spot balances on applicable regulatory exposures during the reporting quarter. Effective January 1, 2022, includes the impact of the SA-CCR adoption. Refer to the Firm's Pillar 3 Regulatory Capital Disclosures reports for additional information.

## Line of business equity

Each business segment is allocated capital by taking into consideration a variety of factors including capital levels of similarly rated peers and applicable regulatory capital requirements. ROE is measured and internal targets for expected returns are established as key measures of a business segment's performance.
The Firm's allocation methodology incorporates Basel III Standardized RWA, Basel III Advanced RWA, the GSIB surcharge, and a simulation of capital in a severe stress environment. At least annually, the assumptions, judgments and methodologies used to allocate capital are reassessed and, as a result, the capital allocated to the LOBs may change. As of January 1, 2023, the Firm has changed its line of business capital allocations primarily as a result of updates to the Firm's capital requirements and changes in RWA for each LOB.

The following table presents the capital allocated to each business segment.
Line of business equity (Allocated capital)

|  |  | December 31, |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| (in billions) | January 1, |  |  |  |  |  |
| Consumer \& Community Banking | $\$$ | $\mathbf{5 2 . 0}$ | $\$$ | 50.0 | $\$$ | 50.0 |
| Corporate \& Investment Bank | $\mathbf{1 0 8 . 0}$ |  | 103.0 | 83.0 |  |  |
| Commercial Banking | $\mathbf{2 8 . 5}$ |  | 25.0 | 24.0 |  |  |
| Asset \& Wealth Management | $\mathbf{1 6 . 0}$ |  | 17.0 | 14.0 |  |  |
| Corporate | $\mathbf{6 0 . 4}$ |  | 69.9 | 88.3 |  |  |
| Total common stockholders' equity | $\$$ | $\mathbf{2 6 4 . 9}$ | $\$$ | 264.9 | $\$$ | 259.3 |

## Management's discussion and analysis

## Capital actions

Common stock dividends
The Firm's common stock dividends are planned as part of the Capital Management governance framework in line with the Firm's capital management objectives.
The Firm's quarterly common stock dividend is currently $\$ 1.00$ per share. The Firm's dividends are subject to approval by the Board of Directors on a quarterly basis. Refer to Note 21 and Note 26 for information regarding dividend restrictions.

The following table shows the common dividend payout ratio based on net income applicable to common equity.

| Year ended December 31, | 2022 | 2021 | 2020 |
| :--- | :--- | :--- | :--- |
| Common dividend payout ratio | $33 \%$ | $25 \%$ | $40 \%$ |

## Common stock

Effective May 1, 2022, the Firm is authorized to purchase up to $\$ 30$ billion of common shares under its common share repurchase program, which superseded the previously approved repurchase program under which the Firm was authorized to purchase up to $\$ 30$ billion of common shares.
On July 14, 2022, the Firm announced that it had temporarily suspended share repurchases in anticipation of the increase in the Firm's regulatory capital requirements. The Firm had set a target for achieving CET1 capital of $13.0 \%$ by the first quarter of 2023. The Firm met and exceeded that target in the fourth quarter of 2022, and resumed repurchasing shares under its common share repurchase program in the first quarter of 2023.

The following table sets forth the Firm's repurchases of common stock for the years ended December 31, 2022, 2021 and 2020.

| Year ended December 31, (in millions) | 2022 | $2021^{(\mathrm{a})}$ | $2020^{(\mathrm{b})}$ |
| :--- | :---: | :---: | :---: |
| Total number of shares of common <br> stock repurchased | $\mathbf{2 3 . 1}$ | 119.7 | 50.0 |
| Aggregate purchase price of common <br> stock repurchases | $\mathbf{\$ 3 , 1 2 2}$ | $\$ 18,448$ | $\$ 6,397$ |

(a) As directed by the Federal Reserve, total net repurchases and common stock dividends in the first and second quarter of 2021 were restricted and could not exceed the average of the Firm's net income for the four preceding calendar quarters. Effective July 1, 2021, the Firm became subject to the normal capital distribution restrictions provided under the regulatory capital framework.
(b) On March 15, 2020, in response to the economic disruptions caused by the COVID-19 pandemic, the Firm temporarily suspended repurchases of its common stock. Subsequently, the Federal Reserve directed all large banks, including the Firm, to discontinue net share repurchases through the end of 2020.

The Board of Directors' authorization to repurchase common shares is utilized at management's discretion, and the timing of purchases and the exact amount of common shares that may be repurchased is subject to various factors, including market conditions; legal and regulatory considerations affecting the amount and timing of repurchase activity; the Firm's capital position (taking into account goodwill and intangibles); internal capital generation; and alternative investment opportunities. The $\$ 30$ billion common share repurchase program approved by the Board does not establish specific price targets or timetables. The repurchase program may be suspended by management at any time; and may be executed through open market purchases or privately negotiated transactions, or utilizing Rule 10b5-1 plans, which are written trading plans that the Firm may enter into from time to time under Rule 10b5-1 of the Securities Exchange Act of 1934 and which allow the Firm to repurchase its common shares during periods when it may otherwise not be repurchasing common shares - for example, during internal trading blackout periods.
Refer to Part II, Item 5: Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities on page 34 of the 2022 Form 10-K for additional information regarding repurchases of the Firm's equity securities.
Refer to capital planning and stress testing on pages 86-87 for additional information.

## Preferred stock

Preferred stock dividends declared were $\$ 1.6$ billion for each of the years ended December 31, 2022, 2021 and 2020.

During the year ended December 31, 2022, the Firm redeemed several series of non-cumulative preferred stock. Refer to Note 21 for additional information on the Firm's preferred stock, including the issuance and redemption of preferred stock.

## Subordinated Debt

Refer to Long-term funding and issuance on page 103 and Note 20 for additional information on the Firm's subordinated debt.

## Other capital requirements

Total Loss-Absorbing Capacity
The Federal Reserve's TLAC rule requires the U.S. GSIB toptier holding companies, including the Firm, to maintain minimum levels of external TLAC and eligible long-term debt.

The external TLAC requirements and the minimum level of eligible long-term debt requirements are shown below:

(a) RWA is the greater of Standardized and Advanced compared to their respective regulatory capital ratio requirements.
Failure to maintain TLAC equal to or in excess of the regulatory minimum plus applicable buffers will result in limitations on the amount of capital that the Firm may distribute, such as through dividends and common share repurchases, as well as on certain executive discretionary bonus payments.

The following table presents the eligible external TLAC and eligible LTD amounts, as well as a representation of these amounts as a percentage of the Firm's total RWA and total leverage exposure applying the impact of the CECL capital transition provisions as of December 31, 2022 and 2021.

| (in billions, except ratio) | December 31, 2022 |  |  |  | December 31, 2021 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | External TLAC |  | LTD |  | External TLAC |  | LTD |  |
| Total eligible amount | \$ | 486.0 | \$ | 228.5 | \$ | 464.6 | \$ | 210.4 |
| \% of RWA |  | 29.4 \% |  | 13.8 \% |  | 28.4 \% |  | 12.8 \% |
| Regulatory requirements |  | 22.5 |  | 9.5 |  | 22.5 |  | 9.5 |
| Surplus/ (shortfall) | \$ | 114.0 | \$ | 71.4 | \$ | 95.9 | \$ | 54.7 |
| \% of total leverage exposure |  | 11.1 \% |  | 5.2 \% |  | 10.2 \% |  | 4.6 \% |
| Regulatory requirements |  | 9.5 |  | 4.5 |  | 9.5 |  | 4.5 |
| Surplus/ <br> (shortfall) | \$ | 71.2 | \$ | 32.0 | \$ | 30.3 | \$ | 4.6 |

As of January 1, 2023, the regulatory requirement for TLAC to RWA and LTD to RWA ratios has increased by 50 bps to $23.0 \%$ and $10.0 \%$, respectively, due to the increase in the Firm's GSIB requirements. Refer to Risk-based Capital Regulatory Requirements on pages 89-90 for further information on the GSIB surcharge.
Refer to Liquidity Risk Management on pages 97-104 for further information on long-term debt issued by the Parent Company.
Refer to Part I, Item 1A: Risk Factors on pages 9-32 of the 2022 Form 10-K for information on the financial consequences to holders of the Firm's debt and equity securities in a resolution scenario.

## Management's discussion and analysis

## U.S. broker-dealer regulatory capital

## J.P. Morgan Securities

JPMorgan Chase’s principal U.S. broker-dealer subsidiary is J.P. Morgan Securities. J.P. Morgan Securities is subject to the regulatory capital requirements of Rule 15c3-1 under the Securities Exchange Act of 1934 (the "Net Capital Rule"). J.P. Morgan Securities is also registered as a futures commission merchant and is subject to regulatory capital requirements, including those imposed by the SEC, the Commodity Futures Trading Commission ("CFTC"), the Financial Industry Regulatory Authority ("FINRA") and the National Futures Association ("NFA").
J.P. Morgan Securities has elected to compute its minimum net capital requirements in accordance with the
"Alternative Net Capital Requirements" of the Net Capital Rule.

The following table presents J.P. Morgan Securities’ net capital:

| December 31, 2022 <br> (in millions) |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: |
| Net Capital | $\$$ | 24,989 | $\$$ | 5,628 |

J.P. Morgan Securities is registered with the SEC as a security-based swap dealer and with the CFTC as a swap dealer. As a result of additional SEC and CFTC capital and financial reporting requirements for security-based swap dealers and swap dealers, J.P. Morgan Securities is subject to alternative minimum net capital requirements and required to hold "tentative net capital" in excess of \$5.0 billion. J.P. Morgan Securities is also required to notify the SEC and CFTC in the event that its tentative net capital is less than $\$ 6.0$ billion. Tentative net capital is net capital before deducting market and credit risk charges as defined by the Net Capital Rule. As of December 31, 2022, J.P. Morgan Securities maintained tentative net capital in excess of the minimum and notification requirements.

## Non-U.S. subsidiary regulatory capital

J.P. Morgan Securities plc
J.P. Morgan Securities plc is a wholly-owned subsidiary of JPMorgan Chase Bank, N.A. and has authority to engage in banking, investment banking and broker-dealer activities. J.P. Morgan Securities plc is jointly regulated in the U.K. by the Prudential Regulation Authority ("PRA") and the Financial Conduct Authority ("FCA"). J.P. Morgan Securities plc is subject to the European Union ("EU") Capital Requirements Regulation ("CRR"), as adopted in the U.K., and the PRA capital rules, each of which have implemented Basel III and thereby subject J.P. Morgan Securities plc to its requirements.

The Bank of England requires that U.K. banks, including U.K. regulated subsidiaries of overseas groups, maintain minimum requirements for own funds and eligible liabilities ("MREL"). As of December 31, 2022, J.P. Morgan Securities plc was compliant with its MREL requirements, which became fully phased-in on January 1, 2022.

Effective January 1, 2023, J.P. Morgan Securities plc was required to meet the minimum leverage capital requirement established by the PRA of $3.25 \%$, plus regulatory buffers. As of December 31, 2022, J.P. Morgan Securities plc was compliant with its leverage requirements.

The following table presents J.P. Morgan Securities plc's capital metrics:

| December 31, 2022 |  |  |  |
| :--- | :---: | :---: | ---: |
| (in millions, except ratios) |  | Actual | Regulatory <br> Minimum ratios |
| Total capital | $\$$ | $\mathbf{5 4 , 2 1 8}$ |  |
| CET1 capital ratio | $\mathbf{2 2 . 4} \%$ | $\mathbf{4 . 5} \%$ |  |
| Tier 1 capital ratio | $\mathbf{2 5 . 4} \%$ | $\mathbf{6 . 0} \%$ |  |
| Total capital ratio | $\mathbf{3 2 . 6} \%$ | $\mathbf{8 . 0} \%$ |  |

(a) Represents minimum Pillar 1 requirements specified by the PRA. J.P. Morgan Securities plc's capital ratios as of December 31, 2022 exceeded the minimum requirements, including the additional capital requirements specified by the PRA.

## J.P. Morgan SE

JPMSE is a wholly-owned subsidiary of JPMorgan Chase Bank, N.A. and has authority to engage in banking, investment banking and markets activities. JPMSE is regulated by the European Central Bank as well as the local regulators in each of the countries in which it operates, and it is subject to EU capital requirements under Basel III.
JPMSE is required by the EU Single Resolution Board to maintain MREL. As of December 31, 2022, JPMSE was compliant with its MREL requirements.

The following table presents JPMSE's capital metrics:

| December 31, 2022 <br> (in millions, except ratios) | Actual |  |  |
| :--- | ---: | ---: | ---: |
| Total capital | $\mathbf{3 8 , 8 7 9}$ |  |  |
| CET1 capital ratio | $\mathbf{1 9 . 7} \%$ | $\mathbf{4 . 5} \%$ |  |
| Tier 1 capital ratio | $\mathbf{1 9 . 7} \%$ | $\mathbf{6 . 0} \%$ |  |
| Total capital ratio | $\mathbf{3 3 . 8} \%$ | $\mathbf{8 . 0} \%$ |  |
| Tier 1 leverage ratio | $\mathbf{6 . 0} \%$ | $\mathbf{3 . 0} \%$ |  |

(a) Represents minimum Pillar 1 requirements specified by the EU CRR. J.P. Morgan SE's capital and leverage ratios as of December 31, 2022 exceeded the minimum requirements, including the additional capital requirements specified by the European Banking Authority.

Liquidity risk is the risk that the Firm will be unable to meet its contractual and contingent financial obligations as they arise or that it does not have the appropriate amount, composition and tenor of funding and liquidity to support its assets and liabilities.

## Liquidity risk management

The Firm has a Liquidity Risk Management ("LRM") function whose primary objective is to provide independent oversight of liquidity risk across the Firm. Liquidity Risk Management's responsibilities include:

- Defining, monitoring and reporting liquidity risk metrics;
- Independently establishing and monitoring limits and indicators, including liquidity risk appetite;
- Developing a process to classify, monitor and report limit breaches;
- Performing an independent review of liquidity risk management processes to evaluate their adequacy and effectiveness based on LRM's Independent Review Framework;
- Monitoring and reporting internal Firmwide and legal entity liquidity stress tests, regulatory defined metrics, as well as liquidity positions, balance sheet variances and funding activities; and
- Approving or escalating for review new or updated liquidity stress assumptions.


## Liquidity management

Treasury and CIO is responsible for liquidity management.
The primary objectives of the Firm's liquidity management are to:

- Ensure that the Firm's core businesses and material legal entities are able to operate in support of client needs and meet contractual and contingent financial obligations through normal economic cycles as well as during stress events, and
- Manage an optimal funding mix and availability of liquidity sources.
The Firm addresses these objectives through:
- Analyzing and understanding the liquidity characteristics of the assets and liabilities of the Firm, LOBs and legal entities, taking into account legal, regulatory, and operational restrictions;
- Developing internal liquidity stress testing assumptions;
- Defining and monitoring Firmwide and legal entityspecific liquidity strategies, policies, reporting and contingency funding plans;
- Managing liquidity within the Firm's approved liquidity risk appetite tolerances and limits;
- Managing compliance with regulatory requirements related to funding and liquidity risk; and
- Setting FTP in accordance with underlying liquidity characteristics of balance sheet assets and liabilities as well as certain off-balance sheet items.

As part of the Firm's overall liquidity management strategy, the Firm manages liquidity and funding using a centralized, global approach designed to:

- Optimize liquidity sources and uses;
- Monitor exposures;
- Identify constraints on the transfer of liquidity between the Firm's legal entities; and
- Maintain the appropriate amount of surplus liquidity at a Firmwide and legal entity level, where relevant.


## Governance

Committees responsible for liquidity governance include the Firmwide ALCO as well as LOB and regional ALCOs, the Treasurer Committee, and the CTC Risk Committee. In addition, the Board Risk Committee reviews and recommends to the Board of Directors, for formal approval, the Firm's liquidity risk tolerances, liquidity strategy, and liquidity policy. Refer to Firmwide Risk Management on pages 81-84 for further discussion of ALCO and other riskrelated committees.

## Internal stress testing

Liquidity stress tests are intended to ensure that the Firm has sufficient liquidity under a variety of adverse scenarios, including scenarios analyzed as part of the Firm's resolution and recovery planning. Stress scenarios are produced for JPMorgan Chase \& Co. ("Parent Company") and the Firm's material legal entities on a regular basis, and other stress tests are performed in response to specific market events or concerns. Liquidity stress tests assume all of the Firm's contractual financial obligations are met and take into consideration:

- Varying levels of access to unsecured and secured funding markets;
- Estimated non-contractual and contingent cash outflows;
- Considerations of credit rating downgrades;
- Collateral haircuts; and
- Potential impediments to the availability and transferability of liquidity between jurisdictions and material legal entities such as regulatory, legal or other restrictions.
Liquidity outflows are modeled across a range of time horizons and currency dimensions and contemplate both market and idiosyncratic stresses.
Results of stress tests are considered in the formulation of the Firm's funding plan and assessment of its liquidity position. The Parent Company acts as a source of funding for the Firm through equity and long-term debt issuances, and its intermediate holding company, JPMorgan Chase Holdings LLC (the "IHC"), provides funding support to the ongoing operations of the Parent Company and its subsidiaries. The Firm maintains liquidity at the Parent Company, the IHC, and operating subsidiaries at levels sufficient to comply with liquidity risk tolerances and


## Management's discussion and analysis

minimum liquidity requirements, and to manage through periods of stress when access to normal funding sources may be disrupted.

Contingency funding plan
The Firm's Contingency Funding Plan ("CFP") sets out the strategies for addressing and managing liquidity resource needs during a liquidity stress event and incorporates liquidity risk limits, indicators and risk appetite tolerances. The CFP also identifies the alternative contingent funding and liquidity resources available to the Firm and its legal entities in a period of stress.

## LCR and HQLA

The LCR rule requires that the Firm and JPMorgan Chase Bank, N.A. maintain an amount of eligible HQLA that is sufficient to meet their respective estimated total net cash outflows over a prospective 30 calendar-day period of significant stress. Eligible HQLA, for purposes of calculating the LCR, is the amount of unencumbered HQLA that satisfy certain operational considerations as defined in the LCR rule. HQLA primarily consist of cash and certain high-quality liquid securities as defined in the LCR rule.

Under the LCR rule, the amount of eligible HQLA held by JPMorgan Chase Bank, N.A. that is in excess of its standalone $100 \%$ minimum LCR requirement, and that is not transferable to non-bank affiliates, must be excluded from the Firm's reported eligible HQLA.
Estimated net cash outflows are based on standardized stress outflow and inflow rates prescribed in the LCR rule, which are applied to the balances of the Firm's assets, sources of funds, and obligations. The LCR for both the Firm and JPMorgan Chase Bank, N.A. is required to be a minimum of $100 \%$.

The following table summarizes the Firm and JPMorgan Chase Bank, N.A.'s average LCR for the three months ended December 31, 2022, September 30, 2022 and December 31, 2021 based on the Firm's interpretation of the LCR framework.

| Average amount (in millions) | Three months ended |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { December 31, } \\ 2022 \end{gathered}$ |  | $\begin{gathered} \text { September } 30, \\ 2022 \end{gathered}$ |  | $\begin{gathered} \text { December 31, } \\ 2021 \end{gathered}$ |  |
| JPMorgan Chase \& Co.: |  |  |  |  |  |  |
| HQLA |  |  |  |  |  |  |
| Eligible cash ${ }^{(a)}$ | \$ | 542,847 | \$ | 589,158 | \$ | 703,384 |
| Eligible securities ${ }^{(b)(c)}$ |  | 190,201 |  | 126,913 |  | 34,738 |
| Total HQLA ${ }^{(\mathrm{d})}$ | \$ | 733,048 | \$ | 716,071 | \$ | 738,122 |
| Net cash outflows | \$ | 652,580 | \$ | 635,072 | \$ | 664,801 |
| LCR |  | 112 \% |  | 113 \% |  | 111 \% |
| Net excess eligible $H^{2} A^{(d)}$ | \$ | 80,468 | \$ | 80,999 | \$ | 73,321 |
| JPMorgan Chase Bank, N.A.: |  |  |  |  |  |  |
| LCR |  | 151 \% |  | 165 \% |  | 178 \% |
| Net excess eligible HQLA | \$ | 356,733 | \$ | 450,260 | \$ | 555,300 |

[^135] Reserve Banks.
(b) Predominantly U.S. Treasuries, U.S. GSE and government agency MBS, and sovereign bonds net of applicable haircuts under the LCR rule.
(c) Eligible HQLA securities may be reported in securities borrowed or purchased under resale agreements, trading assets, or investment securities on the Firm's Consolidated balance sheets.
(d) Excludes average excess eligible HQLA at JPMorgan Chase Bank, N.A. that are not transferable to non-bank affiliates.

JPMorgan Chase Bank, N.A.'s average LCR decreased during the three months ended December 31, 2022, compared with the three months ended September 30, 2022 reflecting a decrease in JPMorgan Chase Bank, N.A.'s HQLA, primarily due to a reduction in cash associated with a decline in deposits, and loan growth.

JPMorgan Chase Bank, N.A.'s average LCR for the three months ended December 31, 2022 decreased when compared with the same period in the prior year, reflecting a decrease in JPMorgan Chase Bank, N.A.'s HQLA as a result of a reduction in cash from loan growth and a decline in deposits as well as lower market values of HQLA-eligible investment securities. Refer to Note 10 for additional information on the Firm's investment securities portfolio.

The Firm and JPMorgan Chase Bank, N.A.'s average LCR fluctuates from period to period due to changes in its eligible HQLA and estimated net cash outflows as a result of ongoing business activity. Refer to the Firm's U.S. LCR Disclosure reports, which are available on the Firm's website, for a further discussion of the Firm's LCR.

## Other liquidity sources

In addition to the assets reported in the Firm's eligible HQLA discussed above, the Firm had unencumbered marketable securities, such as equity and debt securities, that the Firm believes would be available to raise liquidity. This includes excess eligible HQLA securities at JPMorgan Chase Bank, N.A. that are not transferable to non-bank affiliates. The fair value of these securities was approximately $\$ 694$ billion and $\$ 914$ billion as of December 31, 2022 and 2021, respectively, although the amount of liquidity that could be raised at any particular time would be dependent on prevailing market conditions. The fair value decreased compared to December 31, 2021, primarily due to a decrease in excess eligible HQLA securities at JPMorgan Chase Bank, N.A., as noted above.

The Firm also had available borrowing capacity at the FHLBs and the discount window at the Federal Reserve Banks as a result of collateral pledged by the Firm to such banks of approximately $\$ 323$ billion and $\$ 308$ billion as of December 31, 2022 and 2021, respectively. This borrowing capacity excludes the benefit of cash and securities reported in the Firm's eligible HQLA or other unencumbered securities that are currently pledged at the Federal Reserve Banks discount window and other central banks. Available borrowing capacity increased from December 31, 2021 primarily due to increased credit card receivables pledged at the Federal Reserve Banks. Although available, the Firm does not view this borrowing capacity at the Federal Reserve Banks discount window and the other central banks as a primary source of liquidity.

NSFR
The net stable funding ratio ("NSFR") is a liquidity requirement for large banking organizations that is intended to measure the adequacy of "available" stable funding that is sufficient to meet their "required" amounts of stable funding over a one-year horizon.
As of December 31, 2022, the Firm and JPMorgan Chase Bank, N.A. were compliant with the $100 \%$ minimum NSFR requirement, based on the Firm's current interpretation of the final rule. The Firm will be required to publicly disclose its quarterly average NSFR semiannually beginning in the second half of 2023.

## Management's discussion and analysis

## Funding

## Sources of funds

Management believes that the Firm's unsecured and secured funding capacity is sufficient to meet its on- and off-balance sheet obligations, which includes both shortand long-term cash requirements.
The Firm funds its global balance sheet through diverse sources of funding including stable deposits, secured and unsecured funding in the capital markets and stockholders' equity. Deposits are the primary funding source for JPMorgan Chase Bank, N.A. Additionally, JPMorgan Chase Bank, N.A. may access funding through short- or long-term secured borrowings, through the issuance of unsecured
long-term debt, or from borrowings from the IHC. The Firm's non-bank subsidiaries are primarily funded from long-term unsecured borrowings and short-term secured borrowings which are primarily securities loaned or sold under repurchase agreements. Excess funding is invested by Treasury and CIO in the Firm's investment securities portfolio or deployed in cash or other short-term liquid investments based on their interest rate and liquidity risk characteristics.

Refer to Note 28 for additional information on off-balance sheet obligations.

## Deposits

The table below summarizes, by LOB and Corporate, the period-end and average deposit balances as of and for the years ended December 31, 2022 and 2021.

| As of or for the year ended December 31, (in millions) | 2022 |  | 2021 |  | Average |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 2022 |  | 2021 |
| Consumer \& Community Banking | \$ | 1,131,611 |  |  | \$ | 1,148,110 | \$ | 1,162,680 | \$ | 1,054,956 |
| Corporate \& Investment Bank |  | 689,893 |  | 707,791 |  | 739,700 |  | 760,048 |
| Commercial Banking |  | 271,342 |  | 323,954 |  | 294,180 |  | 301,343 |
| Asset \& Wealth Management |  | 233,130 |  | 282,052 |  | 261,489 |  | 230,296 |
| Corporate |  | 14,203 |  | 396 |  | 9,866 |  | 511 |
| Total Firm | \$ | 2,340,179 | \$ | 2,462,303 | \$ | 2,467,915 | \$ | 2,347,154 |

Deposits provide a stable source of funding and reduce the Firm's reliance on the wholesale funding markets. A significant portion of the Firm's deposits are consumer deposits and wholesale operating deposits, which are both considered to be stable sources of liquidity. Wholesale operating deposits are considered to be stable sources of liquidity because they are generated from customers that maintain operating service relationships with the Firm.
The Firm believes that average deposit balances are generally more representative of deposit trends than period-end deposit balances. However, during periods of market disruption those trends could be affected.

Average deposits were higher for the year ended December 31, 2022 compared to the year ended December 31, 2021, reflecting:

- growth in CCB from existing and new accounts across both consumer and small business customers, partially offset by a decline in deposits starting in the second half of 2022, impacted by growth in customer spending, and
- net inflows in AWM resulting from the residual effects of certain government actions, partially offset by migration into investments starting in the second quarter of 2022 as a result of the rising interest rate environment partially offset by
- Iower average deposits in CIB and CB due to attrition, also as a result of the rising interest rate environment.

Period-end deposits decreased reflecting:

- attrition in CB and CIB, particularly non-operating deposits in CB, partially offset by net issuances of structured notes in Markets,
- net outflows into investments in AWM amid the rising interest rate environment, and
- a decline in balances in existing accounts in CCB due to higher customer spending, predominantly offset by net inflows into new accounts.
The increase in deposits for both spot and averages in Corporate was driven by the Firm's international consumer growth initiatives.
Refer to the discussion of the Firm's Consolidated Balance Sheets Analysis and the Business Segment Results on pages $55-56$ and pages 61-80, respectively, for further information on deposit and liability balance trends.

Certain deposits are covered by insurance protection that provides additional funding stability and results in a benefit to the LCR. Deposit insurance protection may be available to depositors in the countries in which the deposits are placed. For example, the Federal Deposit Insurance Corporation ("FDIC") provides deposit insurance protection for deposits placed in a U.S. depository institution. At December 31, 2022 and 2021, the Firmwide estimated uninsured deposits were $\$ 1,383.7$ billion and $\$ 1,489.6$ billion, respectively, primarily reflecting wholesale operating deposits.

Total uninsured deposits include time deposits. The table below presents an estimate of uninsured U.S. and non-U.S. time deposits, and their remaining maturities. The Firm's estimates of its uninsured U.S. time deposits are based on data that the Firm calculates periodically under applicable FDIC regulations. For purposes of this presentation, all nonU.S. time deposits are deemed to be uninsured.

| (in millions) | $\begin{gathered} \hline \text { December 31, } \\ 2022 \\ \hline \end{gathered}$ |  |  |  | $\begin{gathered} \hline \text { December 31, } \\ 2021 \end{gathered}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | U.S. |  | Non-U.S. |  | U.S. |  | Non-U.S. |
| Three months or less | \$ | 43,513 | \$ | 68,765 | \$ | 29,359 | \$ | 49,342 |
| Over three months but within 6 months |  | 8,670 |  | 3,658 |  | 6,235 |  | 2,172 |
| Over six months but within 12 months |  | 7,035 |  | 2,850 |  | 913 |  | 459 |
| Over 12 months |  | 787 |  | 2,634 |  | 526 |  | 2,562 |
| Total | \$ | 60,005 | \$ | 77,907 | \$ | 37,033 | \$ | 54,535 |

The table below shows the loan and deposit balances, the loans-to-deposits ratios, and deposits as a percentage of total liabilities, as of December 31, 2022 and 2021.

| As of December 31, <br> (in billions except ratios) |  | $\mathbf{2 0 2 2}$ | 2021 |  |
| :--- | :---: | :---: | :---: | :---: |
| Deposits | $\$$ | $\mathbf{2 , 3 4 0 . 2}$ | $\$$ | $2,462.3$ |
| Deposits as a \% of total liabilities |  | $\mathbf{6 9} \%$ | $\mathbf{7 1} \%$ |  |
| Loans | $\mathbf{\$}$ | $\mathbf{1 , 1 3 5 . 6}$ | $\$$ | $1,077.7$ |
| Loans-to-deposits ratio |  | $\mathbf{4 9} \%$ | $\mathbf{4 4} \%$ |  |

The following table provides a summary of the average balances and average interest rates of JPMorgan Chase's deposits for the years ended December 31, 2022, 2021, and 2020.

| (Unaudited) <br> Year ended December 31, <br> (in millions, except interest rates) | Average balances |  |  |  |  |  |  | Average interest rates |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 2022 |  | 2021 |  |  | 2020 | 2022 | 2021 | 2020 |
| U.S. offices |  |  |  |  |  |  |  |  |  |  |
| Noninterest-bearing | \$ | 691,206 | \$ | 648,170 | (c) | \$ | 495,722 | NA | NA | NA |
| Interest-bearing |  |  |  |  |  |  |  |  |  |  |
| Demand ${ }^{(a)}$ |  | 324,512 |  | 322,122 | (c) |  | 269,888 | 0.92 \% | 0.06 \% | 0.25 \% |
| Savings ${ }^{(b)}$ |  | 971,788 |  | 930,866 | (c) |  | 739,916 | 0.28 | 0.06 | 0.13 |
| Time |  | 62,022 |  | 48,628 |  |  | 59,053 | 2.07 | 0.26 | 1.10 |
| Total interest-bearing deposits |  | 1,358,322 |  | 1,301,616 |  |  | 1,068,857 | 0.52 | 0.07 | 0.21 |
| Total deposits in U.S. offices |  | 2,049,528 |  | 1,949,786 |  |  | 1,564,579 | 0.34 | 0.05 | 0.15 |
| Non-U.S. offices |  |  |  |  |  |  |  |  |  |  |
| Noninterest-bearing |  | 28,043 |  | 26,315 |  |  | 21,805 | NA | NA | NA |
| Interest-bearing |  |  |  |  |  |  |  |  |  |  |
| Demand |  | 324,740 |  | 313,304 |  |  | 267,545 | 0.57 | (0.10) | - |
| Time |  | 65,604 |  | 57,749 |  |  | 52,822 | 1.85 | (0.09) | 0.13 |
| Total interest-bearing deposits |  | 390,344 |  | 371,053 |  |  | 320,367 | 0.78 | (0.10) | 0.02 |
| Total deposits in non-U.S. offices |  | 418,387 |  | 397,368 |  |  | 342,172 | 0.73 | (0.09) | 0.02 |
| Total deposits | \$ | 2,467,915 | \$ | 2,347,154 |  | \$ | 1,906,751 | 0.41 \% | 0.02 \% | 0.12 \% |

(a) Includes Negotiable Order of Withdrawal ("NOW") accounts, and certain trust accounts.
(b) Includes Money Market Deposit Accounts ("MMDAs").
(c) Prior-period amounts have been revised to conform with the current presentation.

Refer to Note 17 for additional information on deposits.

## Management's discussion and analysis

The following table summarizes short-term and long-term funding, excluding deposits, as of December 31, 2022 and 2021, and average balances for the years ended December 31, 2022 and 2021. Refer to the Consolidated Balance Sheets Analysis on pages 55-56 and Note 11 for additional information.
Sources of funds (excluding deposits)

| As of or for the year ended December 31, (in millions) | 2022 |  | 2021 |  | Average |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 2022 | 2021 |  |
| Commercial paper | \$ | 12,557 |  |  | \$ | 15,108 | \$ | 16,151 | \$ | 12,285 |
| Other borrowed funds |  | 8,418 |  | 9,999 |  | 12,250 |  | 12,903 |
| Federal funds purchased |  | 1,684 |  | 1,769 |  | 1,567 |  | 2,197 |
| Total short-term unsecured funding | \$ | 22,659 | \$ | 26,876 | \$ | 29,968 | \$ | 27,385 |
| Securities sold under agreements to repurchase ${ }^{(\text {a) }}$ | \$ | 198,382 | \$ | 189,806 | \$ | 236,192 | \$ | 250,229 |
| Securities loaned ${ }^{\text {(a) }}$ |  | 2,547 |  | 2,765 |  | 5,003 |  | 6,876 |
| Other borrowed funds |  | 23,052 |  | 28,487 |  | 25,211 |  | 28,138 |
| Obligations of Firm-administered multi-seller conduits ${ }^{(b)}$ |  | 9,236 |  | 6,198 |  | 7,387 |  | 9,283 |
| Total short-term secured funding | \$ | 233,217 | \$ | 227,256 | \$ | 273,793 | \$ | 294,526 |
| Senior notes | \$ | 188,025 | \$ | 191,488 | \$ | 189,047 | \$ | 181,290 |
| Subordinated debt |  | 21,803 |  | 20,531 |  | 20,125 |  | 20,877 |
| Structured notes ${ }^{(c)}$ |  | 70,839 |  | 73,956 |  | 68,656 |  | 75,152 |
| Total long-term unsecured funding | \$ | 280,667 | \$ | 285,975 | \$ | 277,828 | \$ | 277,319 |
| Credit card securitization ${ }^{(b)}$ | \$ | 1,999 | \$ | 2,397 | \$ | 1,950 | \$ | 3,156 |
| FHLB advances |  | 11,093 |  | 11,110 |  | 11,103 |  | 12,174 |
| Other long-term secured funding ${ }^{(d)}$ |  | 4,105 |  | 3,920 |  | 3,837 |  | 4,384 |
| Total long-term secured funding | \$ | 17,197 | \$ | 17,427 | \$ | 16,890 | \$ | 19,714 |
| Preferred stock ${ }^{(\text {e }}$ | \$ | 27,404 | \$ | 34,838 | \$ | 31,893 | \$ | 33,027 |
| Common stockholders' equity ${ }^{(\text {e }}$ | \$ | 264,928 | \$ | 259,289 | \$ | 253,068 | \$ | 250,968 |

(a) Primarily consists of short-term securities loaned or sold under agreements to repurchase.
(b) Included in beneficial interests issued by consolidated variable interest entities on the Firm's Consolidated balance sheets.
(c) Includes certain TLAC-eligible long-term unsecured debt issued by the Parent Company.
(d) Includes long-term structured notes which are secured.
(e) Refer to Capital Risk Management on pages 86-96, Consolidated statements of changes in stockholders' equity on page 162, Note 21 and Note 22 for additional information on preferred stock and common stockholders' equity.

## Short-term funding

The Firm's sources of short-term secured funding primarily consist of securities loaned or sold under agreements to repurchase. These instruments are secured predominantly by high-quality securities collateral, including governmentissued debt and U.S. GSE and government agency MBS. Securities sold under agreements to repurchase increased at December 31, 2022, compared with December 31, 2021, due to higher secured financing of trading assets in Markets, partially offset by lower secured financing of AFS investment securities in Treasury and CIO.

The balances associated with securities loaned or sold under agreements to repurchase fluctuate over time due to investment and financing activities of clients, the Firm's demand for financing, the ongoing management of the mix of the Firm's liabilities, including its secured and unsecured financing (for both the investment securities and marketmaking portfolios), and other market and portfolio factors.

The Firm's sources of short-term unsecured funding primarily consist of issuances of wholesale commercial paper and other borrowed funds.

The decrease in period-end commercial paper and the increase in average balances for the year ended December 31, 2022 compared to the respective prior year periods, was due to changes in net issuance levels primarily for short-term liquidity management.

## Long-term funding and issuance

Long-term funding provides an additional source of stable funding and liquidity for the Firm. The Firm's long-term funding plan is driven primarily by expected client activity, liquidity considerations, and regulatory requirements, including TLAC. Long-term funding objectives include maintaining diversification, maximizing market access and optimizing funding costs. The Firm evaluates various funding markets, tenors and currencies in creating its optimal long-term funding plan.

The significant majority of the Firm's long-term unsecured funding is issued by the Parent Company to provide flexibility in support of the funding needs of both bank and non-bank subsidiaries. The Parent Company advances substantially all net funding proceeds to its subsidiary, the IHC. The IHC does not issue debt to external counterparties. The following table summarizes long-term unsecured issuance and maturities or redemptions for the years ended December 31, 2022 and 2021. Refer to Note 20 for additional information on the IHC and long-term debt.

Long-term unsecured funding

| Year ended December 31, (Notional in millions) | 2022 |  | 2021 |  | 2022 |  | 2021 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Parent Company |  |  |  | Subsidiaries |  |  |  |
| Issuance |  |  |  |  |  |  |  |  |
| Senior notes issued in the U.S. market | \$ | 32,600 | \$ | 39,500 | \$ | - | \$ | - |
| Senior notes issued in non-U.S. markets |  | 2,752 |  | 5,581 |  | - |  | - |
| Total senior notes |  | 35,352 |  | 45,081 |  | - |  | - |
| Subordinated debt |  | 3,500 |  | - |  | - |  | - |
| Structured notes ${ }^{(2)}$ |  | 2,535 |  | 4,113 |  | 35,577 |  | 32,714 |
| Total long-term unsecured funding - issuance | \$ | 41,387 | \$ | 49,194 | \$ | 35,577 | \$ | 32,714 |
| Maturities/redemptions |  |  |  |  |  |  |  |  |
| Senior notes | \$ | 16,700 | \$ | 10,840 | \$ | 65 | \$ | 65 |
| Subordinated debt |  | - |  | 9 |  | - |  | - |
| Structured notes |  | 1,594 |  | 4,694 |  | 25,481 |  | 33,023 |
| Total long-term unsecured funding - maturities/redemptions | \$ | 18,294 | \$ | 15,543 | \$ | 25,546 | \$ | 33,088 |

(a) Includes certain TLAC-eligible long-term unsecured debt issued by the Parent Company.

The Firm can also raise secured long-term funding through securitization of consumer credit card loans and FHLB advances. The following table summarizes the securitization issuance and FHLB advances and their respective maturities or redemptions for the years ended December 31, 2022 and 2021.

Long-term secured funding

| Year ended December 31, (in millions) | Issuance |  |  |  | Maturities/Redemptions |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2022 |  | 2021 |  | 2022 |  | 2021 |  |
| Credit card securitization | \$ | 999 | \$ | - | \$ | 1,400 | \$ | 2,550 |
| FHLB advances |  | - |  | - |  | 14 |  | 3,011 |
| Other long-term secured funding ${ }^{(a)}$ |  | 476 |  | 525 |  | 268 |  | 741 |
| Total long-term secured funding | \$ | 1,475 | \$ | 525 | \$ | 1,682 | \$ | 6,302 |

(a) Includes long-term structured notes that are secured.

The Firm's wholesale businesses also securitize loans for client-driven transactions; those client-driven loan securitizations are not considered to be a source of funding for the Firm and are not included in the table above. Refer to Note 14 for a further description of client-driven loan securitizations.

## Management's discussion and analysis

## Credit ratings

The cost and availability of financing are influenced by credit ratings. Reductions in these ratings could have an adverse effect on the Firm's access to liquidity sources, increase the cost of funds, trigger additional collateral or funding requirements and decrease the number of investors and counterparties willing to lend to the Firm. The nature and magnitude of the impact of ratings downgrades depends on numerous contractual and behavioral factors, which the Firm believes are incorporated in its liquidity risk and stress testing metrics. The Firm believes that it
maintains sufficient liquidity to withstand a potential decrease in funding capacity due to ratings downgrades.

Additionally, the Firm's funding requirements for VIEs and other third-party commitments may be adversely affected by a decline in credit ratings. Refer to liquidity risk and credit-related contingent features in Note 5 for additional information on the impact of a credit ratings downgrade on the funding requirements for VIEs, and on derivatives and collateral agreements.

The credit ratings of the Parent Company and the Firm's principal bank and non-bank subsidiaries as of December 31, 2022, were as follows:

| December 31, 2022 | JPMorgan Chase \& Co. |  |  | JPMorgan Chase Bank, N.A. |  |  | J.P. Morgan Securities LLC J.P. Morgan Securities plc J.P. Morgan SE |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Long-term issuer | Short-term issuer | Outlook | Long-term issuer | Short-term issuer | Outlook | Long-term issuer | Short-term issuer | Outlook |
| Moody's Investors Service | A1 | P-1 | Stable | Aa2 | P-1 | Stable | Aa3 | P-1 | Stable |
| Standard \& Poor's | A- | A-2 | Positive | A+ | A-1 | Positive | A+ | A-1 | Positive |
| Fitch Ratings | AA- | F1+ | Stable | AA | F1+ | Stable | AA | F1+ | Stable |

(a) In January 2022, the three rating agencies affirmed the credit ratings of J.P. Morgan SE, which are equivalent to the ratings previously assigned to J.P. Morgan SE's predecessors, J.P. Morgan Bank Luxembourg S.A. and J.P. Morgan AG.

On September 29, 2022, Moody's upgraded the Parent Company's long-term issuer rating to A1 (previously A2) and changed the long-term outlook to stable (previously positive). All other ratings and outlooks of the Parent Company and those of the Firm's principal bank and nonbank subsidiaries were affirmed by Moody's.
JPMorgan Chase's unsecured debt does not contain requirements that would call for an acceleration of payments, maturities or changes in the structure of the existing debt, provide any limitations on future borrowings or require additional collateral, based on unfavorable changes in the Firm's credit ratings, financial ratios, earnings, or stock price.

Critical factors in maintaining high credit ratings include a stable and diverse earnings stream, strong capital and liquidity ratios, strong credit quality and risk management controls, and diverse funding sources. Rating agencies continue to evaluate economic and geopolitical trends, regulatory developments, future profitability, risk management practices, and litigation matters, as well as their broader ratings methodologies. Changes in any of these factors could lead to changes in the Firm's credit ratings.

Reputation risk is the risk that an action or inaction may negatively impact perception of the Firm's integrity and reduce confidence in the Firm's competence by various constituents, including clients, counterparties, customers, investors, regulators, employees, communities or the broader public.

Organization and management
Reputation Risk Management establishes the governance framework for managing reputation risk across the Firm's LOBs and Corporate. Reputation risk is inherently challenging to identify, manage, and quantify.

The Firm's reputation risk management function includes the following activities:

- Maintaining a Firmwide Reputation Risk Governance policy and a standard consistent with the reputation risk framework
- Overseeing the governance execution through processes and infrastructure that support consistent identification, escalation, management and monitoring of reputation risk issues Firmwide

The types of events that result in reputation risk are wideranging and may be introduced by the Firm's employees and the clients, customers and counterparties with which the Firm does business. These events could result in financial losses, litigation, regulatory enforcement actions, fines, penalties or other sanctions, as well as other harm to the Firm.

## Governance and oversight

The Reputation Risk Governance policy establishes the principles for managing reputation risk for the Firm. It is the responsibility of employees in each LOB and Corporate to consider the reputation of the Firm when deciding whether to offer a new product, engage in a transaction or client relationship, enter a new jurisdiction, initiate a business process or consider any other activity. Environmental impacts and social concerns are increasingly important considerations in assessing the Firm's reputation risk, and are a component of the Firm's reputation risk governance.

Reputation risk issues that are deemed to be material are escalated as appropriate.

## Management's discussion and analysis

## CREDIT AND INVESTMENT RISK MANAGEMENT

Credit and investment risk is the risk associated with the default or change in credit profile of a client, counterparty or customer; or loss of principal or a reduction in expected returns on investments, including consumer credit risk, wholesale credit risk, and investment portfolio risk.

Credit risk management
Credit risk is the risk associated with the default or change in credit profile of a client, counterparty or customer. The Firm provides credit to a variety of clients and customers, ranging from large corporate and institutional clients to individual consumers and small businesses. In its consumer businesses, the Firm is exposed to credit risk primarily through its home lending, credit card, auto, and business banking businesses. In its wholesale businesses, the Firm is exposed to credit risk through its underwriting, lending, market-making, and hedging activities with and for clients and counterparties, as well as through its operating services activities (such as cash management and clearing activities), and securities financing activities. The Firm is also exposed to credit risk through its investment securities portfolio and cash placed with banks.
Credit Risk Management monitors, measures and manages credit risk throughout the Firm and defines credit risk policies and procedures. The Firm's credit risk management governance includes the following activities:

- Maintaining a credit risk policy framework
- Monitoring, measuring and managing credit risk across all portfolio segments, including transaction and exposure approval
- Setting industry and geographic concentration limits, as appropriate, and establishing underwriting guidelines
- Assigning and managing credit authorities in connection with the approval of credit exposure
- Managing criticized exposures and delinquent loans, and
- Estimating credit losses and supporting appropriate credit risk-based capital management

Risk identification and measurement
To measure credit risk, the Firm employs several methodologies for estimating the likelihood of obligor or counterparty default. Methodologies for measuring credit risk vary depending on several factors, including type of asset (e.g., consumer versus wholesale), risk measurement parameters (e.g., delinquency status and borrower's credit score versus wholesale risk-rating) and risk management and collection processes (e.g., retail collection center versus centrally managed workout groups). Credit risk measurement is based on the probability of default of an obligor or counterparty, the loss severity given a default event and the exposure at default.

Based on these factors and the methodology and estimates described in Note 13 and Note 10, the Firm estimates credit losses for its exposures. The allowance for loan losses reflects estimated credit losses related to the consumer and wholesale held-for-investment loan portfolios, the allowance for lending-related commitments reflects estimated credit losses related to the Firm's lending-related commitments and the allowance for investment securities reflects estimated credit losses related to the investment securities portfolio. Refer to Note 13, Note 10 and Critical Accounting Estimates used by the Firm on pages 149-152 for further information.

In addition, potential and unexpected credit losses are reflected in the allocation of credit risk capital and represent the potential volatility of actual losses relative to the established allowances for loan losses and lendingrelated commitments. The analyses for these losses include stress testing that considers alternative economic scenarios as described below.

## Stress testing

Stress testing is important in measuring and managing credit risk in the Firm's credit portfolio. The stress testing process assesses the potential impact of alternative economic and business scenarios on estimated credit losses for the Firm. Economic scenarios and the underlying parameters are defined centrally, articulated in terms of macroeconomic factors and applied across the businesses. The stress test results may indicate credit migration, changes in delinquency trends and potential losses in the credit portfolio. In addition to the periodic stress testing processes, management also considers additional stresses outside these scenarios, including industry and countryspecific stress scenarios, as necessary. The Firm uses stress testing to inform decisions on setting risk appetite both at a Firm and LOB level, as well as to assess the impact of stress on individual counterparties.

## Risk monitoring and management

The Firm has developed policies and practices that are designed to preserve the independence and integrity of the approval and decision-making process for extending credit so that credit risks are assessed accurately, approved properly, monitored regularly and managed actively at both the transaction and portfolio levels. The policy framework establishes credit approval authorities, concentration limits, risk-rating methodologies, portfolio review parameters and guidelines for management of distressed exposures. In addition, certain models, assumptions and inputs used in evaluating and monitoring credit risk are independently validated by groups that are separate from the LOBs.

Consumer credit risk is monitored for delinquency and other trends, including any concentrations at the portfolio level, as certain of these trends can be addressed through changes in underwriting policies and portfolio guidelines. Consumer Risk Management evaluates delinquency and other trends against business expectations, current and forecasted economic conditions, and industry benchmarks. Historical and forecasted economic performance and trends are incorporated into the modeling of estimated consumer credit losses and are part of the monitoring of the credit risk profile of the portfolio.

Wholesale credit risk is monitored regularly at an aggregate portfolio, industry, and individual client and counterparty level with established concentration limits that are reviewed and revised periodically as deemed appropriate by management. Industry and counterparty limits, as measured in terms of exposure and economic risk appetite, are subject to stress-based loss constraints. Wrong-way risk is the risk that exposure to a counterparty is positively correlated with the impact of a default by the same counterparty, which could cause exposure to increase at the same time as the counterparty's capacity to meet its obligations is decreasing.

Management of the Firm's wholesale credit risk exposure is accomplished through a number of means, including:

- Loan underwriting and credit approval processes
- Loan syndications and participations
- Loan sales and securitizations
- Credit derivatives
- Master netting agreements, and
- Collateral and other risk-reduction techniques

In addition to Credit Risk Management, an independent Credit Review function is responsible for:

- Independently validating or changing the risk grades assigned to exposures in the Firm's wholesale credit portfolio, and assessing the timeliness of risk grade changes initiated by responsible business units; and
- Evaluating the effectiveness of the credit management processes of the LOBs and Corporate, including the adequacy of credit analyses and risk grading/loss given default ("LGD") rationales, proper monitoring and management of credit exposures, and compliance with applicable grading policies and underwriting guidelines.

Refer to Note 12 for further discussion of consumer and wholesale Ioans.

## Risk reporting

To enable monitoring of credit risk and effective decisionmaking, aggregate credit exposure, credit quality forecasts, concentration levels and risk profile changes are reported regularly to senior members of Credit Risk Management. Detailed portfolio reporting of industry, clients, counterparties and customers, product and geography are prepared, and the appropriateness of the allowance for credit losses is reviewed by senior management at least on a quarterly basis. Through the risk reporting and governance structure, credit risk trends and limit exceptions are provided regularly to, and discussed with, risk committees, senior management and the Board of Directors.

## CREDIT PORTFOLIO

Credit risk is the risk associated with the default or change in credit profile of a client, counterparty or customer.
In the following tables, total loans include loans retained (i.e., held-for-investment); loans held-for-sale; and certain loans accounted for at fair value. The following tables do not include loans which the Firm accounts for at fair value and classifies as trading assets; refer to Notes 2 and 3 for further information regarding these loans. Refer to Notes 12,28 , and 5 for additional information on the Firm's loans, lending-related commitments and derivative receivables, including the Firm's related accounting policies.
Refer to Note 10 for information regarding the credit risk inherent in the Firm's investment securities portfolio; and refer to Note 11 for information regarding credit risk inherent in the securities financing portfolio. Refer to Consumer Credit Portfolio on pages 110-115 and Note 12 for further discussions of the consumer credit environment and consumer loans. Refer to Wholesale Credit Portfolio on pages 116-126 and Note 12 for further discussions of the wholesale credit environment and wholesale loans.

Total credit portfolio

| December 31, (in millions) | Credit exposure |  |  | Nonperforming ${ }^{(d)(\mathrm{e})}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2022 | 2021 |  | 2022 | 2021 |  |
| Loans retained | \$ 1,089,598 | \$ 1,010,206 | \$ | \$ 5,837 | \$ | 6,932 |
| Loans held-for-sale | 3,970 | 8,688 |  | 54 |  | 48 |
| Loans at fair value | 42,079 | 58,820 |  | 829 |  | 815 |
| Total loans | 1,135,647 | 1,077,714 |  | 6,720 |  | 7,795 |
| Derivative receivables | 70,880 | 57,081 |  | 296 |  | 316 |
| Receivables from customers ${ }^{(a)}$ | 49,257 | 59,645 |  | - |  | - |
| Total credit-related assets | 1,255,784 | 1,194,440 |  | 7,016 |  | 8,111 |
| Assets acquired in loan satisfactions |  |  |  |  |  |  |
| Real estate owned | NA | NA |  | 203 |  | 213 |
| Other | NA | NA |  | 28 |  | 22 |
| Total assets acquired in loan satisfactions | NA | NA |  | 231 |  | 235 |
| Lending-related commitments | 1,326,782 | 1,262,313 |  | 455 |  | 764 |
| Total credit portfolio | \$ 2,582,566 | \$ 2,456,753 | \$ | \$ 7,702 | \$ | 9,110 |
| Credit derivatives and credit-related notes used in credit portfolio management activities ${ }^{\text {(b) }}$ | \$ (19,330) | \$ (20,739) | (c) \$ | \$ | \$ | - |
| Liquid securities and other cash collateral held against derivatives | $(23,014)$ | $(10,102)$ |  | NA |  | NA |

(a) Receivables from customers reflect held-for-investment margin loans to brokerage clients in CIB, CCB and AWM; these are reported within accrued interest and accounts receivable on the Consolidated balance sheets.
(b) Represents the net notional amount of protection purchased and sold through credit derivatives and credit-related notes used to manage credit exposures.
(c) Prior-period amount has been revised to conform with the current presentation.
(d) At December 31, 2022 and 2021, nonperforming assets excluded mortgage loans 90 or more days past due and insured by U.S. government agencies of $\$ 302$ million and $\$ 623$ million, respectively. These amounts have been excluded based upon the government guarantee. In addition, the Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance.
(e) At December 31, 2022, and 2021 nonaccrual loans excluded $\$ 119$ million and $\$ 633$ million, respectively, of PPP loans 90 or more days past due and guaranteed by the SBA.

The following table provides information on Firmwide nonaccrual loans to total loans.

| December 31, <br> (in millions, except ratios) | $\mathbf{2 0 2 2}$ |  |  |
| :--- | ---: | ---: | ---: |
| Total nonaccrual loans | $\$$ | $\mathbf{6 , 7 2 0}$ | $\$$ |
| Total loans | $\mathbf{1 , 1 3 5 , 6 4 7}$ |  | $\mathbf{1 , 0 7 7 , 7 9 5}$ |
| Firmwide nonaccrual loans to total loans <br> outstanding | $\mathbf{0 . 5 9} \%$ |  |  |

The following table provides information about the Firm's net charge-offs and recoveries.

| Year ended December 31, <br> (in millions, except ratios) | $\mathbf{2 0 2 2}$ | 2021 |  |  |
| :--- | ---: | ---: | ---: | ---: |
| Net charge-offs | $\$$ | $\mathbf{2 , 8 5 3}$ | $\$$ | 2,865 |
| Average retained loans | $\mathbf{1 , 0 4 4 , 7 6 5}$ | 965,271 |  |  |
| Net charge-off rates | $\mathbf{0 . 2 7} \%$ | $\mathbf{0 . 3 0} \%$ |  |  |

Customer and client assistance
The Firm provided various forms of assistance to customers and clients impacted by the COVID-19 pandemic, including payment deferrals and covenant modifications. Assistance provided in response to the COVID-19 pandemic could delay the recognition of delinquencies, nonaccrual status, and net charge-offs for those customers and clients who would have otherwise moved into past due or nonaccrual status. Refer to Notes 12 and 13 for further information on the Firm's accounting policies for loan modifications and the allowance for credit losses.

Paycheck Protection Program ("PPP")
The PPP, implemented by the Small Business
Administration ("SBA"), provided the Firm with delegated authority to process and originate PPP loans. When certain criteria are met, PPP Ioans are subject to forgiveness and the Firm will receive payment of the forgiveness amount from the SBA. The PPP ended for new applications on May 31, 2021.
At December 31, 2022 and 2021, the Firm had $\$ 490$ million and $\$ 6.7$ billion, respectively, of PPP loans, including $\$ 350$ million and $\$ 5.4$ billion, respectively, in consumer, and $\$ 140$ million and $\$ 1.3$ billion, respectively, in wholesale.
At December 31, 2022 and 2021, $\$ 119$ million and $\$ 633$ million, respectively, of PPP loans 90 or more days past due have been excluded from the Firm's nonaccrual loans as they are guaranteed by the SBA. Refer to Note 12 for additional information.

CONSUMER CREDIT PORTFOLIO
The Firm's retained consumer portfolio consists primarily of
residential real estate loans, credit card loans, scored auto
and business banking loans, as well as associated lending-
related commitments. The Firm's focus is on serving
primarily the prime segment of the consumer credit market.
Originated mortgage loans are retained in the residential
real estate portfolio, securitized or sold to U.S. government
agencies and U.S. government-sponsored enterprises; other
types of consumer loans are typically retained on the
balance sheet. Refer to Note 12 for further information on
the consumer loan portfolio. Refer to Note 28 for further
information on lending-related commitments.

The following tables present consumer credit-related information with respect to the scored credit portfolio held in CCB, AWM, CIB and Corporate.

Consumer credit portfolio

| December 31, (in millions) |  |  |  |  | Credit exposure |  |  |  | Nonaccrual loans ${ }^{(j)(k)(1)}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 2022 |  | 2021 |  | 2022 |  | 2021 |  |
| Consumer, excluding credit card |  |  |  |  |  |  |  |  |  |  |  |  |
| Residential real estate ${ }^{(a)}$ |  |  |  |  |  | 237,561 | \$ | 224,795 | \$ | 3,745 | \$ | 4,759 |
| Auto and other ${ }^{(\mathrm{b})(\mathrm{c})(\mathrm{d})}$ |  |  |  |  |  | 63,192 |  | 70,761 |  | 129 |  | 119 |
| Total loans - retained |  |  |  |  |  | 300,753 |  | 295,556 |  | 3,874 |  | 4,878 |
| Loans held-for-sale |  |  |  |  |  | 618 |  | 1,287 |  | 28 |  | - |
| Loans at fair value ${ }^{(e)}$ |  |  |  |  |  | 10,004 |  | 26,463 |  | 423 |  | 472 |
| Total consumer, excluding credit card loans |  |  |  |  |  | 311,375 |  | 323,306 |  | 4,325 |  | 5,350 |
| Lending-related commitments ${ }^{(f)}$ |  |  |  |  |  | 33,518 |  | 45,334 |  |  |  |  |
| Total consumer exposure, excluding credit card |  |  |  |  |  | 344,893 |  | 368,640 |  |  |  |  |
| Credit card |  |  |  |  |  |  |  |  |  |  |  |  |
| Loans retained ${ }^{(\mathrm{g})}$ |  |  |  |  |  | 185,175 |  | 154,296 |  | NA |  | NA |
| Total credit card loans |  |  |  |  |  | 185,175 |  | 154,296 |  |  |  |  |
| Lending-related commitments ${ }^{(f)(\text { (h) }}$ |  |  |  |  |  | 821,284 |  | 730,534 |  |  |  |  |
| Total credit card exposure ${ }^{(\mathrm{h})}$ |  |  |  |  |  | 1,006,459 |  | 884,830 |  |  |  |  |
| Total consumer credit portfolio ${ }^{(\text {h })}$ |  |  |  |  |  | 1,351,352 | \$ | 1,253,470 | \$ | 4,325 | \$ | 5,350 |
| Credit-related notes used in credit portfolio management activities ${ }^{(\text {i) }}$ |  |  |  |  |  | $(1,187)$ | \$ | $(2,028)$ |  |  |  |  |
| (in millions, except ratios) | Year ended December 31, |  |  |  |  |  |  |  |  |  |  |  |
|  | Net charge-offs/(recoveries) |  |  |  | Average loans - retained |  |  |  | Net charge-off/(recovery) rate ${ }^{(m)}$ |  |  |  |
|  | 2022 |  | 2021 |  | 2022 |  | 2021 |  | 2022 |  | 2021 |  |
| Consumer, excluding credit card |  |  |  |  |  |  |  |  |  |  |  |  |
| Residential real estate | \$ | (226) | \$ | (275) | \$ | 233,454 | \$ | 220,914 |  | (0.10)\% |  | (0.12)\% |
| Auto and other |  | 495 |  | 286 |  | 65,955 |  | 77,900 |  | 0.75 |  | 0.37 |
| Total consumer, excluding credit card - retained |  | 269 |  | 11 |  | 299,409 |  | 298,814 |  | 0.09 |  | - |
| Credit card - retained |  | 2,403 |  | 2,712 |  | 163,335 |  | 139,900 |  | 1.47 |  | 1.94 |
| Total consumer - retained | \$ | 2,672 | \$ | 2,723 | \$ | 462,744 | \$ | 438,714 |  | 0.58 \% |  | 0.62 \% |

(a) Includes scored mortgage and home equity loans held in CCB and AWM, and scored mortgage loans held in Corporate.
(b) At December 31, 2022 and 2021, excluded operating lease assets of $\$ 12.0$ billion and $\$ 17.1$ billion, respectively. These operating lease assets are included in other assets on the Firm's Consolidated balance sheets. Refer to Note 18 for further information.
(c) Includes scored auto and business banking loans and overdrafts.
(d) At December 31, 2022 and 2021, included $\$ 350$ million and $\$ 5.4$ billion of loans, respectively, in Business Banking under the PPP. The Firm does not expect to realize material credit losses on PPP loans because the loans are guaranteed by the SBA. Refer to Credit Portfolio on pages 108-109 for a further discussion of the PPP.
(e) Includes scored mortgage loans held in CCB and CIB.
(f) Credit card, home equity and certain business banking lending-related commitments represent the total available lines of credit for these products. The Firm has not experienced, and does not anticipate, that all available lines of credit would be used at the same time. For credit card commitments, and if certain conditions are met, home equity commitments and certain business banking commitments, the Firm can reduce or cancel these lines of credit by providing the borrower notice or, in some cases as permitted by law, without notice. Refer to Note 28 for further information.
(g) Includes billed interest and fees.
(h) Also includes commercial card lending-related commitments primarily in CB and CIB.
(i) Represents the notional amount of protection obtained through the issuance of credit-related notes that reference certain pools of residential real estate and auto loans in the retained consumer portfolio.
(j) At December 31, 2022 and 2021, nonaccrual loans excluded mortgage loans 90 or more days past due and insured by U.S. government agencies of $\$ 302$ million and $\$ 623$ million, respectively. These amounts have been excluded from nonaccrual loans based upon the government guarantee. In addition, the Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status, as permitted by regulatory guidance.
(k) Generally excludes loans under payment deferral programs offered in response to the COVID-19 pandemic.
(I) At December 31, 2022 and 2021, nonaccrual loans excluded $\$ 101$ million and $\$ 506$ million, respectively, of PPP loans 90 or more days past due and guaranteed by the SBA.
(m) Average consumer loans held-for-sale and loans at fair value were $\$ 17.4$ billion and $\$ 29.1$ billion for the years ended December 31, 2022 and 2021, respectively. These amounts were excluded when calculating net charge-off/(recovery) rates.

## Management's discussion and analysis

Maturities and sensitivity to changes in interest rates
The table below sets forth loan maturities by scheduled repayments, by class of loan and the distribution between fixed and floating interest rates based on the stated terms of the loan agreements. Effective December 31, 2022, the Firm revised its methodology from contractual maturities to scheduled repayments. The Firm estimated the principal repayment amounts for both the residential real estate and auto and other loan classes by calculating the weighted-average loan balance and interest rates for loan pools based on remaining loan term.

(a) Credit card loans with maturities greater than one year represent TDRs and are at fixed interest rates. There are no credit card loans due after one year at variable interest rates.
(b) Includes loans held-for-sale and loans at fair value.
(c) Includes overdrafts.

## Consumer, excluding credit card

## Portfolio analysis

Loans decreased from December 31, 2021 driven by residential real estate loans at fair value and auto and other loans, largely offset by higher retained residential real estate loans.

The following discussions provide information concerning individual Ioan products. Refer to Note 12 for further information about this portfolio, including information about delinquencies, loan modifications and other credit quality indicators.
Residential real estate: The residential real estate portfolio, including loans held-for-sale and loans at fair value, predominantly consists of prime mortgage loans and home equity lines of credit.
Retained loans increased compared to December 31, 2021 reflecting originations, net of paydowns. Retained nonaccrual loans decreased from December 31, 2021 reflecting improved credit performance and loan sales. Net recoveries were lower for the year ended December 31, 2022 compared to the prior year driven by lower prepayments due to higher interest rates, partially offset by lower gross charge-offs.
Loans at fair value decreased from December 31, 2021, as warehouse loan sales in Home Lending outpaced originations due to higher interest rates and loan sales in CIB outpaced loan purchase activity. Nonaccrual Ioans at fair value decreased from December 31, 2021 driven by net portfolio activity in CIB.
The carrying value of home equity lines of credit outstanding was $\$ 15.7$ billion at December 31, 2022. This amount included $\$ 5.1$ billion of HELOCs that have recast from interest-only to fully amortizing payments or have been modified and $\$ 5.0$ billion of interest-only balloon HELOCs, which primarily mature after 2030. The Firm manages the risk of HELOCs during their revolving period by closing or reducing the undrawn line to the extent permitted by law when borrowers are exhibiting a material deterioration in their credit risk profile.
At December 31, 2022 and 2021, the carrying value of interest-only residential mortgage loans were $\$ 36.3$ billion and $\$ 30.0$ billion, respectively. These loans have an interest-only payment period generally followed by an adjustable-rate or fixed-rate fully amortizing payment period to maturity and are typically originated as higherbalance loans to higher-income borrowers, predominantly in AWM. The interest-only residential mortgage Ioan portfolio reflected net recoveries for the year ended December 31, 2022. The credit performance of this portfolio is comparable with the performance of the broader prime mortgage portfolio.

The following table provides a summary of the Firm's residential mortgage portfolio insured and/or guaranteed by U.S. government agencies, predominantly loans held-forsale and loans at fair value. The Firm monitors its exposure to certain potential unrecoverable claim payments related to government-insured loans and considers this exposure in estimating the allowance for loan losses.

| (in millions) | December 31, <br> 2022 | December 31, <br> 2021 |  |  |
| :--- | ---: | ---: | ---: | ---: |
| Current | $\$$ | $\mathbf{6 5 9}$ | $\$$ | 689 |
| 30-89 days past due |  | $\mathbf{1 3 6}$ | 135 |  |
| 90 or more days past due | $\mathbf{3 0 2}$ | 623 |  |  |
| Total government guaranteed loans | $\$$ | $\mathbf{1 , 0 9 7}$ | $\$$ | 1,447 |

Geographic composition and current estimated loan-tovalue ratio of residential real estate loans At December 31, 2022, $\$ 152.7$ billion, or $64 \%$ of the total retained residential real estate loan portfolio, excluding mortgage loans insured by U.S. government agencies, were concentrated in California, New York, Florida, Texas and Illinois, compared with $\$ 145.5$ billion, or $65 \%$ at December 31, 2021.
Average current estimated loan-to-value ("LTV") ratios were relatively flat.
Refer to Note 12 for information on the geographic composition and current estimated LTVs of the Firm's residential real estate loans.

Modified residential real estate Ioans
The following table presents information relating to modified retained residential real estate loans for which concessions have been granted to borrowers experiencing financial difficulty, which include both TDRs and modified PCD loans not accounted for as TDRs. The following table does not include loans with short-term or other insignificant modifications that are not considered concessions and, therefore, are not TDRs. Refer to Note 12 for further information on modifications for the years ended December 31, 2022 and 2021.

| (in millions) | December 31, <br> 2022 | December 31, <br> 2021 |  |
| :--- | ---: | ---: | ---: |
| Retained loans | $\$$ | $\mathbf{1 1 , 5 7 9}$ | $\$$ |
| Nonaccrual retained loans ${ }^{(\text {a })}$ |  | $\mathbf{3 , 3 0 0}$ | 3,251 |

(a) At both December 31, 2022 and 2021, nonaccrual loans included $\$ 2.7$ billion of TDRs for which the borrowers were less than 90 days past due. Refer to Note 12 for additional information about loans modified in a TDR that are on nonaccrual status.

## Management's discussion and analysis

Auto and other: The auto and other loan portfolio, including loans at fair value consists of prime-quality scored auto and business banking loans, as well as overdrafts. The portfolio decreased when compared with December 31, 2021 due to paydowns of scored Auto loans and PPP Ioan forgiveness in Business Banking predominantly offset by originations of scored Auto loans. Net charge-offs for the year ended December 31, 2022 increased compared to the prior year due to higher scored Auto and overdraft chargeoffs, as the prior year benefited from government stimulus and payment assistance programs. The scored Auto net charge-off rates were $0.24 \%$ and $0.04 \%$ for the years ended December 31, 2022 and 2021, respectively.

## Nonperforming assets

The following table presents information as of December 31, 2022 and 2021, about consumer, excluding credit card, nonperforming assets.

| Nonperforming assets ${ }^{(\mathrm{a})}$ |  |  |  |
| :--- | ---: | ---: | ---: |
| December 31, (in millions) | $\mathbf{2 0 2 2}$ | 2021 |  |
| Nonaccrual loans | $\mathbf{\$}$ | $\mathbf{4 , 1 9 6}$ | $\$$ |
| Residential real estate $^{(\mathrm{b})}$ | 5,231 |  |  |
| Auto and other ${ }^{(\mathrm{c})}$ | $\mathbf{1 2 9}$ | 119 |  |
| Total nonaccrual loans | $\mathbf{4 , 3 2 5}$ | 5,350 |  |
| Assets acquired in loan satisfactions |  |  |  |
| Real estate owned | $\mathbf{1 2 9}$ | 112 |  |
| Other | $\mathbf{2 8}$ | 22 |  |
| Total assets acquired in loan satisfactions | $\mathbf{1 5 7}$ | $\mathbf{1 3 4}$ |  |
| Total nonperforming assets | $\mathbf{\$}$ | $\mathbf{4 , 4 8 2}$ | $\$$ |

(a) At December 31, 2022 and 2021, nonperforming assets excluded mortgage loans 90 or more days past due and insured by U.S. government agencies of $\$ 302$ million and $\$ 623$ million, respectively. These amounts have been excluded based upon the government guarantee.
(b) Generally excludes loans under payment deferral programs offered in response to the COVID-19 pandemic.
(c) At December 31, 2022 and 2021, nonaccrual loans excluded \$101 million and $\$ 506$ million, respectively, of PPP loans 90 or more days past due and guaranteed by the SBA.

## Nonaccrual loans

The following table presents changes in consumer, excluding credit card, nonaccrual loans for the years ended December 31, 2022 and 2021.

Nonaccrual loan activity

| Year ended December 31, <br> (in millions) |  |  |  |
| :--- | ---: | ---: | ---: |
| Beginning balance | $\mathbf{2 0 2 2}$ | $\mathbf{2 0 2 1}$ |  |
| Additions: | $\mathbf{5 , 3 5 0}$ | $\$$ | 6,467 |
| Reductions: | $\mathbf{2 , 1 9 6}$ | 2,956 |  |
| $\quad$ Principal payments and other ${ }^{(\mathrm{a})}$ |  |  |  |
| Charge-offs | $\mathbf{1 , 3 9 3}$ | 2,018 |  |
| Returned to performing status | $\mathbf{2 5 5}$ | 229 |  |
| Foreclosures and other liquidations | $\mathbf{1 , 4 0 5}$ | 1,716 |  |
| Total reductions | $\mathbf{1 6 8}$ | 110 |  |
| Net changes | $\mathbf{3 , 2 2 1}$ | 4,073 |  |
| Ending balance | $\mathbf{( 1 , 0 2 5 )}$ | $\mathbf{( 1 , 1 1 7 )}$ |  |

(a) Other reductions include loan sales.

Refer to Note 12 for further information about the consumer credit portfolio, including information about delinquencies, other credit quality indicators, loan modifications and loans that were in the process of active or suspended foreclosure.
Purchased credit deteriorated ("PCD") loans
The following tables provide credit-related information for PCD loans which are reported in residential real estate.

| (in millions, except ratios) | $\begin{array}{r} \text { December 31, } \\ 2022 \end{array}$ |  | December 31, 2021 |  |
| :---: | :---: | :---: | :---: | :---: |
| Loan delinquency ${ }^{\text {(a) }}$ |  |  |  |  |
| Current | \$ | 10,910 | \$ | 12,746 |
| 30-149 days past due |  | 347 |  | 331 |
| 150 or more days past due |  | 277 |  | 664 |
| Total PCD loans | \$ | 11,534 | \$ | 13,741 |
| \% of $30+$ days past due to total retained PCD loans |  | 5.41 \% |  | 7.24 \% |
| Nonaccrual loans | \$ | 1,200 | \$ | 1,616 |
| Year ended December 31, (in millions, except ratios) |  | 2022 |  | 2021 |
| Net charge-offs/(recoveries) | \$ | (11) | \$ | 15 |
| Net charge-off/(recovery) rate |  | (0.09)\% |  | 0.10 \% |

(a) At December 31, 2022 and 2021, loans under payment deferral programs offered in response to the COVID-19 pandemic which are still within their deferral period and performing according to their modified terms are generally not considered delinquent.

## Credit card

Total credit card loans increased from December 31, 2021 driven by growth in balances on higher consumer spending and net new originations. The December 31, 2022 30+ and $90+$ day delinquency rates of $1.45 \%$ and $0.68 \%$, respectively, increased compared to the December 31, $202130+$ and 90+ day delinquency rates of $1.04 \%$ and $0.50 \%$, but remain below pre-pandemic levels. Net chargeoffs decreased for the year ended December 31, 2022 compared to the prior year. Delinquency and net charge-off rates continue to benefit from the ongoing financial strength of U.S. consumers. However, median deposit balances declined in the second half of 2022, impacted by the growth in consumer spending.
Consistent with the Firm's policy, all credit card Ioans typically remain on accrual status until charged off. However, the Firm's allowance for loan losses includes the estimated uncollectible portion of accrued and billed interest and fee income.

Geographic and FICO composition of credit card loans At December 31, 2022, $\$ 85.4$ billion, or $46 \%$ of the total retained credit card loan portfolio, was concentrated in California, Texas, New York, Florida and Illinois, compared with $\$ 70.5$ billion, or $46 \%$, at December 31, 2021.

## Modifications of credit card loans

At December 31, 2022, the Firm had $\$ 796$ million of credit card loans outstanding that have been modified in TDRs, compared to $\$ 1.0$ billion at December 31, 2021. These TDRs do not include loans with short-term or other insignificant modifications that are not considered TDRs.

Refer to Note 12 for further information about this portfolio, including information about delinquencies, geographic and FICO composition, and modifications.

# Management's discussion and analysis 

## WHOLESALE CREDIT PORTFOLIO

In its wholesale businesses, the Firm is exposed to credit risk primarily through its underwriting, lending, marketmaking, and hedging activities with and for clients and counterparties, as well as through various operating services (such as cash management and clearing activities), securities financing activities and cash placed with banks. A portion of the loans originated or acquired by the Firm's wholesale businesses is generally retained on the balance sheet. The Firm distributes a significant percentage of the loans that it originates into the market as part of its syndicated loan business and to manage portfolio concentrations and credit risk. The wholesale portfolio is actively managed, in part by conducting ongoing, in-depth reviews of client credit quality and transaction structure, inclusive of collateral where applicable, and of industry, product and client concentrations. Refer to the industry discussion on pages 118-121 for further information.
The Firm's wholesale credit portfolio includes exposure held in CIB, CB, AWM, and Corporate, as well as the risk-rated BWM and auto dealer exposure held in CCB, for which the wholesale methodology is applied when determining the allowance for loan losses.

In 2022, wholesale credit continued to perform well with charge-offs remaining low.

As of December 31, 2022, retained loans increased by $\$ 43.3$ billion driven by CIB and CB, including higher revolver utilization, partially offset by a decline in AWM. Lending-related commitments decreased $\$ 14.5$ billion, driven by net portfolio activity in CIB, including a decrease in held-for-sale positions in the bridge financing portfolio, largely offset by net portfolio activity in AWM and CB.

As of December 31, 2022, the investment-grade percentage of the portfolio remained relatively flat at 70\%, while criticized exposure decreased by $\$ 6.9$ billion from $\$ 38.2$ billion to $\$ 31.3$ billion. As of December 31, 2022, nonperforming exposure decreased by $\$ 406.0$ million driven by a decline in lending-related commitments in CIB and loans in AWM as a result of client-specific upgrades, paydowns and cancelled commitments, largely offset by client-specific downgrades in CIB including downgrades to certain Russia and Russia-associated clients in the first quarter of 2022. Refer to Business Developments on page 50 and Country Risk on pages 139-140 for additional information. Refer to Wholesale credit exposure - industry exposures on pages 118-121 for additional information.

Wholesale credit portfolio

| December 31, (in millions) | Credit exposure |  | Nonperforming |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2022 | 2021 | 2022 | 2021 |
| Loans retained | \$ 603,670 | \$ 560,354 | \$ 1,963 | \$ 2,054 |
| Loans held-for-sale | 3,352 | 7,401 | 26 | 48 |
| Loans at fair value | 32,075 | 32,357 | 406 | 343 |
| Loans | 639,097 | 600,112 | 2,395 | 2,445 |
| Derivative receivables | 70,880 | 57,081 | 296 | 316 |
| Receivables from customers ${ }^{\text {a }}$ | 49,257 | 59,645 | - | - |
| Total wholesale credit-related assets | 759,234 | 716,838 | 2,691 | 2,761 |
| Assets acquired in loan satisfactions |  |  |  |  |
| Real estate owned | NA | NA | 74 | 101 |
| Other | NA | NA | - | - |
| Total assets acquired in loan satisfactions | NA | NA | 74 | 101 |
| Lending-related commitments | 471,980 | 486,445 | 455 | 764 |
| Total wholesale credit portfolio | \$1,231,214 \$1,203,283 |  | \$ 3,220 | \$ 3,626 |
| Credit derivatives and credit-related notes used in credit portfolio management activities ${ }^{(b)}$ | \$ $(18,143)$ | \$ $(18,711)^{(c)}$ | \$ | \$ |
| Liquid securities and other cash collateral held against derivatives | $(23,014)$ | $(10,102)$ | NA | NA |

(a) Receivables from customers reflect held-for-investment margin loans to brokerage clients in CIB, CCB and AWM; these are reported within accrued interest and accounts receivable on the Consolidated balance sheets.
(b) Represents the net notional amount of protection purchased and sold through credit derivatives and credit-related notes used to manage both performing and nonperforming wholesale credit exposures; these derivatives do not qualify for hedge accounting under U.S. GAAP. Refer to Credit derivatives on page 126 and Note 5 for additional information.
(c) Prior-period amounts have been revised to conform with the current presentation.

## Wholesale credit exposure - maturity and ratings profile

The following tables present the maturity and internal risk ratings profiles of the wholesale credit portfolio as of December 31, 2022 and 2021. The Firm generally considers internal ratings with qualitative characteristics equivalent to BBB-/Baa3 or higher as investment grade, and takes into consideration collateral and structural support when determining the internal risk rating for each credit facility. Refer to Note 12 for further information on internal risk ratings.

(a) Loans held-for-sale are primarily related to syndicated loans and loans transferred from the retained portfolio.
(b) These derivatives do not qualify for hedge accounting under U.S. GAAP.
(c) The notional amounts are presented on a net basis by underlying reference entity and the ratings profile shown is based on the ratings of the reference entity on which protection has been purchased. Predominantly all of the credit derivatives entered into by the Firm where it has purchased protection used in credit portfolio management activities are executed with investment-grade counterparties. In addition, the Firm obtains credit protection against certain loans in the retained loan portfolio through the issuance of credit-related notes.
(d) Prior-period amounts have been revised to conform with the current presentation.
(e) The maturity profile of retained loans, lending-related commitments and derivative receivables is generally based on remaining contractual maturity. Derivative contracts that are in a receivable position at December 31, 2022, may become payable prior to maturity based on their cash flow profile or changes in market conditions.

## Management's discussion and analysis

Wholesale credit exposure - industry exposures
The Firm focuses on the management and diversification of its industry exposures, and pays particular attention to industries with actual or potential credit concerns.

Exposures that are deemed to be criticized align with the U.S. banking regulators' definition of criticized exposures, which consist of the special mention, substandard and doubtful categories. Total criticized exposure, excluding loans held-for-sale and loans at fair value, was $\$ 31.3$ billion at December 31, 2022 and $\$ 38.2$ billion at December 31, 2021, representing approximately $2.7 \%$ and $3.5 \%$ of total wholesale credit exposure, respectively. Criticized exposure decreased driven by net portfolio activity and client-specific upgrades concentrated in Consumer \& Retail, Technology, Media \& Telecommunications and Real Estate, largely offset by client-specific downgrades. Of the $\$ 31.3$ billion of criticized exposure at December 31, 2022, approximately half was undrawn and $\$ 28.6$ billion was performing.

The table below summarizes by industry the Firm's exposures as of December 31, 2022 and 2021. The industry of risk category is generally based on the client or counterparty's primary business activity. Refer to Note 4 for additional information on industry concentrations.
Wholesale credit exposure - industries ${ }^{(\mathrm{a})}$

| As of or for the year ended December 31, 2022 (in millions) | $\begin{aligned} & \text { Credit }_{(f)(\mathrm{g})} \\ & \text { exposure } \left.^{( }\right) \end{aligned}$ |  | $\begin{gathered} \text { Investment- } \\ \text { grade } \end{gathered}$ |  | Noninvestment-grade |  |  |  |  |  | Selected metrics |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 30 days or more past due and accruing loans ${ }^{(1)}$ |  |  |  |  |  |  |  | Net chargeoffs/ (recoveries) |  | Credit derivative hedges and creditrelated notes ${ }^{\text {h }}$ |  | Liquid securities and other cash collateral held against derivative receivables |  |
|  |  |  | Noncriticized | Criticized performing |  | Criticized nonperforming |  |  |  |  |  |  |  |
| Real Estate | \$ | 170,857 |  |  | \$ | 129,866 | \$ | 36,945 | \$ | 3,609 | \$ | 437 | \$ | 543 | \$ | 19 | \$ | (113) | \$ | - |
| Individuals and Individual Entities ${ }^{\left({ }^{(b)}\right.}$ |  | 130,815 |  | 112,006 |  | 18,104 |  | 360 |  | 345 |  | 1,038 |  | 1 |  | - |  | - |
| Consumer \& Retail |  | 120,555 |  | 60,781 |  | 51,871 |  | 7,295 |  | 608 |  | 321 |  | 49 |  | $(1,157)$ |  | - |
| Asset Managers |  | 95,656 |  | 78,925 |  | 16,665 |  | 61 |  | 5 |  | 15 |  | (1) |  | - |  | $(8,278)$ |
| Industrials |  | 72,483 |  | 39,052 |  | 30,500 |  | 2,809 |  | 122 |  | 282 |  | 44 |  | $(1,258)$ |  | - |
| Technology, Media \& Telecommunications |  | 72,286 |  | 39,199 |  | 25,689 |  | 7,096 |  | 302 |  | 62 |  | 39 |  | $(1,766)$ |  | - |
| Healthcare |  | 62,613 |  | 43,839 |  | 17,117 |  | 1,479 |  | 178 |  | 43 |  | 27 |  | $(1,055)$ |  | - |
| Banks \& Finance Cos |  | 51,816 |  | 27,811 |  | 22,994 |  | 961 |  | 50 |  | 36 |  | - |  | (262) |  | (994) |
| Oil \& Gas |  | 38,668 |  | 20,547 |  | 17,616 |  | 474 |  | 31 |  | 57 |  | (6) |  | (414) |  | - |
| Utilities |  | 36,218 |  | 25,981 |  | 9,294 |  | 807 |  | 136 |  | 21 |  | 15 |  | (607) |  | (1) |
| State \& Municipal Govt ${ }^{(c)}$ |  | 33,847 |  | 33,191 |  | 529 |  | 126 |  | 1 |  | 36 |  | - |  | (9) |  | (5) |
| Automotive ${ }^{\text {(c) }}$ |  | 33,287 |  | 23,908 |  | 8,839 |  | 416 |  | 124 |  | 198 |  | (2) |  | (513) |  | - |
| Insurance |  | 21,045 |  | 15,468 |  | 5,396 |  | 181 |  | - |  | 1 |  | - |  | (273) |  | $(7,296)$ |
| Chemicals \& Plastics |  | 20,030 |  | 12,134 |  | 7,103 |  | 744 |  | 49 |  | 10 |  | 3 |  | (298) |  | - |
| Central Govt |  | 19,095 |  | 18,698 |  | 362 |  | 35 |  | - |  | - |  | 10 |  | $(4,591)$ |  | (677) |
| Metals \& Mining |  | 15,915 |  | 8,825 |  | 6,863 |  | 222 |  | 5 |  | 7 |  | (1) |  | (27) |  | (4) |
| Transportation |  | 15,009 |  | 6,497 |  | 6,862 |  | 1,574 |  | 76 |  | 24 |  | 2 |  | (339) |  | - |
| Securities Firms |  | 8,066 |  | 4,235 |  | 3,716 |  | 115 |  | - |  | - |  | (13) |  | (26) |  | $(2,811)$ |
| Financial Markets Infrastructure |  | 4,962 |  | 4,525 |  | 437 |  | - |  | - |  | - |  | - |  | - |  | - |
| All other ${ }^{\text {(d) }}$ |  | 123,307 |  | 105,284 |  | 17,555 |  | 223 |  | 245 |  | 4 |  | (5) |  | $(5,435)$ |  | $(2,948)$ |
| Subtotal |  | 1,146,530 | \$ | 810,772 | \$ | 304,457 | \$ | 28,587 | \$ | 2,714 | \$ | 2,698 | \$ | 181 | \$ | $(18,143)$ | \$ | $(23,014)$ |
| Loans held-for-sale and loans at fair value |  | 35,427 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Receivables from customers |  | 49,257 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total ${ }^{(\mathrm{e})}$ |  | 1,231,214 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |


| As of or for the year ended December 31, 2021 (in millions) | $\begin{array}{r} \text { Credit }_{\text {(f)(g) }} \\ \text { exposure }^{( } \end{array}$ |  | $\begin{gathered} \text { Investment- } \\ \text { grade } \\ \hline \end{gathered}$ |  | Noninvestment-grade |  |  |  |  |  | Selected metrics |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 30 days or more past due and accruing loans |  |  |  |  |  |  |  | $\begin{aligned} & \text { Net charge- } \\ & \text { offs/ } \\ & \text { (recoveries) } \\ & \hline \end{aligned}$ |  | Credit derivative hedges and creditrelated notes ${ }^{(h)}$ |  | Liquid securities and other cash collateral held against derivative receivables |  |  |
|  |  |  | Noncriticized | Criticized performing |  | Criticized nonperforming |  |  |  |  |  |  |  |  |
| Real Estate | \$ | 155,069 |  |  | \$ | 120,174 | \$ | 29,642 | \$ | 4,636 | \$ | 617 | \$ | 394 | \$ | 6 | \$ | (185) | (i) | \$ | - |
| Individuals and Individual Entities ${ }^{(b)}$ |  | 141,973 |  | 122,606 |  | 18,797 |  | 99 |  | 471 |  | 1,450 |  | 32 |  | - |  |  | (1) |
| Consumer \& Retail |  | 122,789 |  | 59,622 |  | 53,317 |  | 9,445 |  | 405 |  | 288 |  | 2 |  | (352) | (i) |  | - |
| Asset Managers |  | 81,228 |  | 68,593 |  | 12,630 |  | - |  | 5 |  | 8 |  | - |  | - |  |  | $(3,900)$ |
| Industrials |  | 66,974 |  | 36,953 |  | 26,957 |  | 2,895 |  | 169 |  | 428 |  | 13 |  | (586) | (i) |  | (1) |
| Technology, Media \& Telecommunications |  | 84,070 |  | 49,610 |  | 25,540 |  | 8,595 |  | 325 |  | 58 |  | (1) |  | (900) | (i) |  | (12) |
| Healthcare |  | 59,014 |  | 42,133 |  | 15,136 |  | 1,686 |  | 59 |  | 204 |  | (4) |  | (490) |  |  | (174) |
| Banks \& Finance Cos |  | 54,684 |  | 29,732 |  | 23,809 |  | 1,138 |  | 5 |  | 9 |  | 9 |  | (503) | (i) |  | (810) |
| Oil \& Gas |  | 42,606 |  | 20,698 |  | 20,222 |  | 1,558 |  | 128 |  | 4 |  | 60 |  | (564) | (i) |  | - |
| Utilities |  | 33,203 |  | 25,069 |  | 7,011 |  | 914 |  | 209 |  | 11 |  | 6 |  | (367) | (i) |  | (4) |
| State \& Municipal Govt ${ }^{(c)}$ |  | 33,216 |  | 32,522 |  | 586 |  | 101 |  | 7 |  | 74 |  | - |  | - |  |  | (14) |
| Automotive |  | 34,573 |  | 24,606 |  | 9,446 |  | 399 |  | 122 |  | 95 |  | (3) |  | (463) |  |  | - |
| Insurance |  | 13,926 |  | 9,943 |  | 3,887 |  | 96 |  | - |  | - |  | - |  | (25) | (i) |  | $(2,366)$ |
| Chemicals \& Plastics |  | 17,660 |  | 11,319 |  | 5,817 |  | 518 |  | 6 |  | 7 |  | - |  | (89) |  |  | - |
| Central Govt |  | 11,317 |  | 11,067 |  | 250 |  | - |  | - |  | - |  | - |  | $(6,961)$ |  |  | (72) |
| Metals \& Mining |  | 16,696 |  | 7,848 |  | 8,491 |  | 294 |  | 63 |  | 27 |  | 7 |  | (15) | (i) |  | (4) |
| Transportation |  | 14,635 |  | 6,010 |  | 5,983 |  | 2,470 |  | 172 |  | 21 |  | 20 |  | (100) | (i) |  | (24) |
| Securities Firms |  | 4,180 |  | 2,599 |  | 1,578 |  | - |  | 3 |  | - |  | - |  | (47) |  |  | (217) |
| Financial Markets Infrastructure |  | 4,377 |  | 3,987 |  | 390 |  | - |  | - |  | - |  | - |  | - |  |  | - |
| All other ${ }^{\text {(d) }}$ |  | 111,690 |  | 97,537 |  | 13,580 |  | 205 |  | 368 |  | 242 |  | (5) |  | $(7,064)$ | (i) |  | $(2,503)$ |
| Subtotal |  | 1,103,880 | \$ | 782,628 | \$ | 283,069 | \$ | 35,049 | \$ | 3,134 | \$ | 3,320 | \$ | 142 | \$ | (18,711) |  | \$ | $(10,102)$ |
| Loans held-for-sale and loans at fair value |  | 39,758 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Receivables from customers |  | 59,645 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total ${ }^{(\text {e }}$ |  | 1,203,283 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

(a) The industry rankings presented in the table as of December 31, 2021, are based on the industry rankings of the corresponding exposures at December 31, 2022, not actual rankings of such exposures at December 31, 2021.
(b) Individuals and Individual Entities predominantly consists of Global Private Bank clients within AWM and J.P. Morgan Wealth Management within CCB, and includes exposure to personal investment companies and personal and testamentary trusts.
(c) In addition to the credit risk exposure to states and municipal governments (both U.S. and non-U.S.) at December 31, 2022 and 2021 , noted above, the Firm held: $\$ 6.6$ billion and $\$ 7.1$ billion, respectively, of trading assets; $\$ 6.8$ billion and $\$ 15.9$ billion, respectively, of AFS securities; and $\$ 19.7$ billion and $\$ 14.0$ billion, respectively, of HTM securities, issued by U.S. state and municipal governments. Refer to Note 2 and Note 10 for further information.
(d) All other includes: SPEs and Private education and civic organizations, representing approximately $95 \%$ and $5 \%$, respectively, at December 31,2022 and 94\% and 6\%, respectively, at December 31, 2021.
(e) Excludes cash placed with banks of $\$ 556.6$ billion and $\$ 729.6$ billion, at December 31, 2022 and 2021, respectively, which is predominantly placed with various central banks, primarily Federal Reserve Banks.
(f) Credit exposure is net of risk participations and excludes the benefit of credit derivatives and credit-related notes used in credit portfolio management activities held against derivative receivables or loans and liquid securities and other cash collateral held against derivative receivables.
(g) Credit exposure includes held-for-sale and fair value option elected lending-related commitments.
(h) Represents the net notional amounts of protection purchased and sold through credit derivatives and credit-related notes used to manage the credit exposures; these derivatives do not qualify for hedge accounting under U.S. GAAP. The All other category includes purchased credit protection on certain credit indices.
(i) Prior-period amounts have been revised to conform with the current presentation.

## Management's discussion and analysis

Presented below is additional detail on certain of the Firm's industry exposures.

## Real Estate

Real Estate exposure was $\$ 170.9$ billion as of December 31, 2022. Criticized exposure decreased by $\$ 1.2$ billion from $\$ 5.3$ billion at December 31, 2021 to $\$ 4.0$ billion at December 31, 2022, driven by client-specific upgrades and net portfolio activity largely offset by client-specific downgrades.

| (in millions, except ratios) | December 31, 2022 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Loans and Lending-related Commitments |  | Derivative Receivables |  | Credit exposure |  | \% Investmentgrade | \% Drawn ${ }^{\text {(d) }}$ |
| Multifamily ${ }^{\text {a }}$ | \$ | 99,555 | \$ | 17 | \$ | 99,572 | 82 \% | 87 \% |
| Industrial |  | 15,928 |  | 1 |  | 15,929 | 72 | 71 |
| Office |  | 14,917 |  | 25 |  | 14,942 | 74 | 73 |
| Services and Non Income Producing |  | 13,968 |  | 10 |  | 13,978 | 65 | 48 |
| Other Income Producing Properties ${ }^{(b)}$ |  | 12,701 |  | 150 |  | 12,851 | 70 | 62 |
| Retail |  | 10,192 |  | 8 |  | 10,200 | 75 | 68 |
| Lodging |  | 3,347 |  | 38 |  | 3,385 | 6 | 37 |
| Total Real Estate Exposure ${ }^{(\mathrm{c})}$ | \$ | 170,608 | \$ | 249 | \$ | 170,857 | 76 \% | 77 \% |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  | er | 2021 |  |  |
| (in millions, except ratios) |  | ns and g-related itments |  | ative vables |  | Credit posure | \% Investment- grade | \% Drawn ${ }^{(\mathrm{d})}$ |
| Multifamily ${ }^{\text {a }}$ | \$ | 89,032 | \$ | 122 | \$ | 89,154 | 84 \% | 89 \% |
| Industrial |  | 11,546 |  | 66 |  | 11,612 | 75 | 64 |
| Office |  | 16,409 |  | 234 |  | 16,643 | 75 | 71 |
| Services and Non Income Producing |  | 11,512 |  | 24 |  | 11,536 | 63 | 50 |
| Other Income Producing Properties ${ }^{(b)}$ |  | 13,018 |  | 498 |  | 13,516 | 77 | 55 |
| Retail |  | 9,580 |  | 106 |  | 9,686 | 61 | 69 |
| Lodging |  | 2,859 |  | 63 |  | 2,922 | 5 | 33 |
| Total Real Estate Exposure | \$ | 153,956 | \$ | 1,113 | \$ | 155,069 | 77 \% | 77 \% |

(a) Multifamily exposure is largely in California.
(b) Other Income Producing Properties consists of clients with diversified property types or other property types outside of categories listed in the table above
(c) Real Estate exposure is approximately $79 \%$ secured; unsecured exposure is approximately $77 \%$ investment-grade.
(d) Represents drawn exposure as a percentage of credit exposure.

## Consumer \& Retail

Consumer \& Retail exposure was $\$ 120.6$ billion as of December 31, 2022. Criticized exposure decreased by $\$ 1.9$ billion from $\$ 9.9$ billion at December 31, 2021 to $\$ 7.9$ billion at December 31, 2022, driven by net portfolio activity and client-specific upgrades largely offset by client-specific downgrades.

| (in millions, except ratios) | December 31, 2022 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Loans and Lending-related Commitments |  | Derivative Receivables |  | Credit exposure |  | \% Investmentgrade | \% Drawn ${ }^{(\mathrm{d})}$ |
| Retail ${ }^{(\mathrm{a})}$ | \$ | 33,891 | \$ | 309 | \$ | 34,200 | 50 \% | 33 \% |
| Food and Beverage |  | 31,706 |  | 736 |  | 32,442 | 59 | 39 |
| Business and Consumer Services |  | 31,256 |  | 384 |  | 31,640 | 50 | 40 |
| Consumer Hard Goods |  | 13,879 |  | 172 |  | 14,051 | 51 | 39 |
| Leisure ${ }^{\text {(b) }}$ |  | 8,173 |  | 49 |  | 8,222 | 21 | 45 |
| Total Consumer \& Retail ${ }^{(\mathrm{c})}$ | \$ | 118,905 | \$ | 1,650 | \$ | 120,555 | 50 \% | 38 \% |
|  | December 31, 2021 |  |  |  |  |  |  |  |
| (in millions, except ratios) |  | ns and g-related mitments |  | ative vables |  | redit posure | \% Investment- grade | \% Drawn ${ }^{(\mathrm{d})}$ |
| Retail ${ }^{(\mathrm{a})}$ | \$ | 32,872 | \$ | 1,152 | \$ | 34,024 | 50 \% | 31 \% |
| Food and Beverage |  | 30,434 |  | 957 |  | 31,391 | 59 | 33 |
| Business and Consumer Services |  | 32,159 |  | 347 |  | 32,506 | 46 | 33 |
| Consumer Hard Goods |  | 17,035 |  | 111 |  | 17,146 | 46 | 30 |
| Leisure ${ }^{\text {(b) }}$ |  | 7,620 |  | 102 |  | 7,722 | 17 | 34 |
| Total Consumer \& Retail | \$ | 120,120 | \$ | 2,669 | \$ | 122,789 | 49 \% | 32 \% |

(a) Retail consists of Home Improvement \& Specialty Retailers, Restaurants, Supermarkets, Discount \& Drug Stores, Specialty Apparel and Department Stores.
(b) Leisure consists of Gaming, Arts \& Culture, Travel Services and Sports \& Recreation. As of December 31, 2022, approximately $90 \%$ of the noninvestmentgrade Leisure portfolio is secured.
(c) Consumer \& Retail exposure is approximately 58\% secured; unsecured exposure is approximately $80 \%$ investment-grade.
(d) Represents drawn exposure as a percent of credit exposure.

## Oil \& Gas

Oil \& Gas exposure was $\$ 38.7$ billion as of December 31, 2022. Criticized exposure decreased by $\$ 1.2$ billion from $\$ 1.7$ billion at December 31, 2021 to $\$ 505$ million at December 31, 2022, driven by net portfolio activity and client-specific upgrades partially offset by client-specific downgrades.

| (in millions, except ratios) | December 31, 2022 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Loans and Lending-related Commitments |  | Derivative Receivables |  | Credit exposure |  | \% Investmentgrade | \% Drawn ${ }^{\text {(c) }}$ |
| Exploration \& Production ("E\&P") and Oil field Services | \$ | 17,729 | \$ | 4,666 | \$ | 22,395 | 50 \% | 25 \% |
| Other Oil \& Gas ${ }^{(a)}$ |  | 15,818 |  | 455 |  | 16,273 | 57 | 25 |
| Total Oil \& Gas ${ }^{\text {(b) }}$ | \$ | 33,547 | \$ | 5,121 | \$ | 38,668 | 53 \% | 25 \% |
|  | December 31, 2021 |  |  |  |  |  |  |  |
| (in millions, except ratios) |  | s and -related itments |  | ative vables |  | edit osure | \% Investment- grade | \% Drawn ${ }^{\text {(c) }}$ |
| Exploration \& Production ("E\&P") and Oil field Services | \$ | 17,631 | \$ | 5,452 | \$ | 23,083 | 39 \% | 26 \% |
| Other Oil \& Gas ${ }^{(1)}$ |  | 18,941 |  | 582 |  | 19,523 | 60 | 26 |
| Total Oil \& Gas | \$ | 36,572 | \$ | 6,034 | \$ | 42,606 | 49 \% | 26 \% |

(a) Other Oil \& Gas includes Integrated Oil \& Gas companies, Midstream/Oil Pipeline companies and refineries.
(b) Oil \& Gas exposure is approximately $41 \%$ secured, over half of which is reserve-based lending to the Exploration \& Production sub-sector; unsecured exposure is approximately $61 \%$ investment-grade.
(c) Represents drawn exposure as a percent of credit exposure.

## Loans

In its wholesale businesses, the Firm provides loans to a variety of clients, ranging from large corporate and institutional clients to high-net-worth individuals. Refer to Note 12 for a further discussion on loans, including information about delinquencies, loan modifications and other credit quality indicators.
The following table presents the change in the nonaccrual Ioan portfolio for the years ended December 31, 2022 and 2021. Since December 31, 2021, nonaccrual loan exposure decreased by $\$ 50$ million driven by Individuals and Individual Entities and Transportation due to client-specific upgrades and net portfolio activity, largely offset by Consumer \& Retail due to client-specific downgrades.

Wholesale nonaccrual loan activity

| Year ended December 31, (in millions) | 2022 | 2021 |  |
| :--- | ---: | ---: | ---: |
| Beginning balance | $\$$ | $\mathbf{2 , 4 4 5}$ | $\$$ |
| Additions | $\mathbf{2 , 1 1 9}$ |  |  |
| Reductions: |  | 2,909 |  |
| Paydowns and other | $\mathbf{1 , 3 2 9}$ | 2,676 |  |
| Gross charge-offs | $\mathbf{2 1 3}$ | 268 |  |
| Returned to performing status | $\mathbf{5 9 4}$ | 1,106 |  |
| Sales | $\mathbf{3 3}$ | 520 |  |
| Total reductions | $\mathbf{2 , 1 6 9}$ | 4,570 |  |
| Net changes |  | $\mathbf{( 5 0 )}$ | $(1,661)$ |
| Ending balance | $\mathbf{2 , 3 9 5}$ | $\$$ | 2,445 |

The following table presents net charge-offs/recoveries, which are defined as gross charge-offs less recoveries, for the years ended December 31, 2022 and 2021. The amounts in the table below do not include gains or losses from sales of nonaccrual loans recognized in noninterest revenue.
Wholesale net charge-offs/(recoveries)

| Year ended December 31, <br> (in millions, except ratios) | $\mathbf{2 0 2 2}$ | 2021 |
| :--- | :---: | :---: |
| Loans | $\mathbf{5 8 2 , 0 2 1}$ | $\$ 526,557$ |
| Average loans retained | $\mathbf{3 2 2}$ | 283 |
| Gross charge-offs | $\mathbf{( 1 4 1 )}$ | $\mathbf{( 1 4 1 )}$ |
| Gross recoveries collected | $\mathbf{1 8 1}$ | 142 |
| Net charge-offs/(recoveries) | $\mathbf{0 . 0 3} \%$ | $0.03 \%$ |
| Net charge-off/(recovery) rate |  |  |

## Maturities and sensitivity to changes in interest rates

The table below sets forth wholesale loan maturities and the distribution between fixed and floating interest rates based on the stated terms of the loan agreements by loan class. Effective December 31, 2022, the Firm revised its methodology from contractual maturities to scheduled repayments. Refer to Note 12 for further information on Ioan classes.

| December 31, 2022 <br> (in millions, except ratios) | $\begin{gathered} 1 \text { year or } \\ \text { less }^{(a)} \end{gathered}$ | After 1 year through 5 years |  | After 5 years through 15 years |  | fter 15 years | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Wholesale Ioans: |  |  |  |  |  |  |  |
| Secured by real estate | \$ 9,275 | \$ 43,060 | \$ | 41,234 | \$ | 41,277 | \$ 134,846 |
| Commercial and industrial | 54,408 | 115,823 |  | 8,493 |  | 193 | 178,917 |
| Other | 166,967 | 122,062 |  | 32,291 |  | 4,014 | 325,334 |
| Total wholesale loans | \$ 230,650 | \$ 280,945 | \$ | 82,018 | \$ | 45,484 | \$ 639,097 |
| Loans due after one year at fixed interest rates |  |  |  |  |  |  |  |
| Secured by real estate |  | \$ 6,087 | \$ | 6,387 | \$ | 724 |  |
| Commercial and industrial |  | 5,432 |  | 1,107 |  | 4 |  |
| Other |  | 23,303 |  | 14,792 |  | 2,786 |  |
| Loans due after one year at variable interest rates |  |  |  |  |  |  |  |
| Secured by real estate |  | \$ 36,972 | \$ | 34,847 | \$ | 40,553 |  |
| Commercial and industrial |  | 110,391 |  | 7,387 |  | 189 |  |
| Other |  | 98,760 |  | 17,498 |  | 1,228 |  |
| Total wholesale loans |  | \$ 280,945 | \$ | 82,018 | \$ | 45,484 |  |

(a) Includes loans held-for-sale, demand loans and overdrafts.

The following table presents net charge-offs/recoveries, average retained loans and net charge-off/recovery rate by loan class for the year ended December 31, 2022 and 2021.


## Management's discussion and analysis

## Lending-related commitments

The Firm uses lending-related financial instruments, such as commitments (including revolving credit facilities) and guarantees, to address the financing needs of its clients. The contractual amounts of these financial instruments represent the maximum possible credit risk should the clients draw down on these commitments or when the Firm fulfills its obligations under these guarantees, and the clients subsequently fail to perform according to the terms of these contracts. Most of these commitments and guarantees have historically been refinanced, extended, cancelled, or expired without being drawn upon or a default occurring. As a result, the Firm does not believe that the total contractual amount of these wholesale lending-related commitments is representative of the Firm's expected future credit exposure or funding requirements. Refer to Note 28 for further information on wholesale lendingrelated commitments.

## Receivables from customers

Receivables from customers reflect held-for-investment margin loans to brokerage clients in CIB, CCB and AWM that are collateralized by assets maintained in the clients' brokerage accounts (e.g., cash on deposit, and liquid and readily marketable debt or equity securities). Because of this collateralization, no allowance for credit losses is generally held against these receivables. To manage its credit risk, the Firm establishes margin requirements and monitors the required margin levels on an ongoing basis, and requires clients to deposit additional cash or other collateral, or to reduce positions, when appropriate. These receivables are reported within accrued interest and accounts receivable on the Firm's Consolidated balance sheets.

## Derivative contracts

Derivatives enable clients and counterparties to manage risk, including credit risk and risks arising from fluctuations in interest rates, foreign exchange and equities and commodities prices. The Firm makes markets in derivatives in order to meet these needs and uses derivatives to manage certain risks associated with net open risk positions from its market-making activities, including the counterparty credit risk arising from derivative receivables. The Firm also uses derivative instruments to manage its own credit risk and other market risk exposure. The nature of the counterparty and the settlement mechanism of the derivative affect the credit risk to which the Firm is exposed. For OTC derivatives, the Firm is exposed to the credit risk of the derivative counterparty. For exchange-traded derivatives ("ETD"), such as futures and options, and cleared over-the-counter ("OTC-cleared") derivatives, the Firm can also be exposed to the credit risk of the relevant CCP. Where possible, the Firm seeks to mitigate its credit risk exposures arising from derivative contracts through the use of legally enforceable master netting arrangements and collateral agreements. The percentage of the Firm's OTC derivative transactions subject to collateral agreements excluding foreign exchange spot trades, which are not typically covered by collateral agreements due to their short
maturity and centrally cleared trades that are settled daily was approximately $87 \%$ and $88 \%$ at December 31, 2022 and 2021, respectively. Refer to Note 5 for additional information on the Firm's use of collateral agreements and further discussion of derivative contracts, counterparties and settlement types.
The fair value of derivative receivables reported on the Consolidated balance sheets were $\$ 70.9$ billion and $\$ 57.1$ billion at December 31, 2022 and 2021, respectively. The increase was primarily driven by higher foreign exchange as a result of market movements. Derivative receivables represent the fair value of the derivative contracts after giving effect to legally enforceable master netting agreements and the related cash collateral held by the Firm.
In addition, the Firm held liquid securities and other cash collateral that may be used as security when the fair value of the client's exposure is in the Firm's favor. For these purposes, the definition of liquid securities is consistent with the definition of high quality liquid assets as defined in the LCR rule.

In management's view, the appropriate measure of current credit risk should also take into consideration other collateral, which generally represents securities that do not qualify as high quality liquid assets under the LCR rule. The benefits of these additional collateral amounts for each counterparty are subject to a legally enforceable master netting agreement and limited to the net amount of the derivative receivables for each counterparty.

The Firm also holds additional collateral (primarily cash, G7 government securities, other liquid government agency and guaranteed securities, and corporate debt and equity securities) delivered by clients at the initiation of transactions, as well as collateral related to contracts that have a non-daily call frequency and collateral that the Firm has agreed to return but has not yet settled as of the reporting date. Although this collateral does not reduce the balances and is not included in the tables below, it is available as security against potential exposure that could arise should the fair value of the client's derivative contracts move in the Firm's favor. Refer to Note 5 for additional information on the Firm's use of collateral agreements.

The following tables summarize the net derivative receivables and the internal ratings profile for the periods presented.
Derivative receivables

| December 31, (in millions) | 2022 | 2021 |  |  |
| :--- | :---: | :---: | :---: | :---: |
| Total, net of cash collateral <br> Liquid securities and other cash <br> collateral held against derivative <br> receivables | $\$$ | $\mathbf{7 0 , 8 8 0}$ | $\$$ | 57,081 |
| Total, net of liquid securities and <br> other cash collateral | $\$$ | $\mathbf{4 7 , 8 6 6}$ | $\$$ | 46,979 |
| Other collateral <br> held against derivative receivables | $\mathbf{( 1 , 2 6 1 )}$ | $(1,544)$ |  |  |
| Total, net of collateral | $\mathbf{4 6 , 6 0 5}$ | $\$$ | $\mathbf{4 5 , 4 3 5}$ |  |

Ratings profile of derivative receivables

| December 31, (in millions, except ratios) | 2022 |  |  | 2021 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Exposure net of collateral |  | \% of exposure net of collateral | Exposure net of collateral |  | \% of exposure net of collateral |
| Investment-grade | \$ | 35,097 | 75 \% | \$ | 30,278 | 67 \% |
| Noninvestment-grade |  | 11,508 | 25 |  | 15,157 | 33 |
| Total | \$ | 46,605 | 100 \% | \$ | 45,435 | 100 \% |

While useful as a current view of credit exposure, the net fair value of the derivative receivables does not capture the potential future variability of that credit exposure. To capture the potential future variability of credit exposure, the Firm calculates, on a client-by-client basis, three measures of potential derivatives-related credit loss: Peak, Derivative Risk Equivalent ("DRE"), and Average exposure ("AVG"). These measures all incorporate netting and collateral benefits, where applicable.
Peak represents a conservative measure of potential derivative exposure, including the benefit of collateral, to a counterparty calculated in a manner that is broadly equivalent to a $97.5 \%$ confidence level over the life of the transaction. Peak is the primary measure used by the Firm for setting credit limits for derivative contracts, senior management reporting and derivatives exposure management.
DRE exposure is a measure that expresses the risk of derivative exposure, including the benefit of collateral, on a basis intended to be equivalent to the risk of loan exposures. DRE is a less extreme measure of potential credit loss than Peak and is used as an input for aggregating derivative credit risk exposures with loans and other credit risk.
Finally, AVG is a measure of the expected fair value of the Firm's derivative exposure, including the benefit of collateral, at future time periods. AVG over the total life of the derivative contract is used as the primary metric for pricing purposes and is used to calculate credit risk capital and CVA, as further described below.
The fair value of the Firm's derivative receivables incorporates CVA to reflect the credit quality of counterparties. CVA is based on the Firm's AVG to a counterparty and the counterparty's credit spread in the credit derivatives market. The Firm believes that active risk management is essential to controlling the dynamic credit risk in the derivatives portfolio. In addition, the Firm's risk
management process for derivatives exposures takes into consideration the potential impact of wrong-way risk, which is broadly defined as the risk that exposure to a counterparty is positively correlated with the impact of a default by the same counterparty, which could cause exposure to increase at the same time as the counterparty's capacity to meet its obligations is decreasing. Many factors may influence the nature and magnitude of these correlations over time. To the extent that these correlations are identified, the Firm may adjust the CVA associated with a particular counterparty's AVG. The Firm risk manages exposure to changes in CVA by entering into credit derivative contracts, as well as interest rate, foreign exchange, equity and commodity derivative contracts.
The below graph shows exposure profiles to the Firm's current derivatives portfolio over the next 10 years as calculated by the Peak, DRE and AVG metrics. The three measures generally show that exposure will decline after the first year, if no new trades are added to the portfolio.

Exposure profile of derivatives measures
December 31, 2022
(in billions)


## Management's discussion and analysis

## Credit derivatives

The Firm uses credit derivatives for two primary purposes: first, in its capacity as a market-maker, and second, as an end-user to manage the Firm's own credit risk associated with various exposures.

## Credit portfolio management activities

Included in the Firm's end-user activities are credit derivatives used to mitigate the credit risk associated with traditional lending activities (loans and lending-related commitments) and derivatives counterparty exposure in the Firm's wholesale businesses (collectively, "credit portfolio management activities"). Information on credit portfolio management activities is provided in the table below.

The Firm also uses credit derivatives as an end-user to manage other exposures, including credit risk arising from certain securities held in the Firm's market-making businesses. These credit derivatives are not included in credit portfolio management activities.

Credit derivatives and credit-related notes used in credit portfolio management activities

| December 31, (in millions) | Notional amount of protection purchased and sold ${ }^{(\mathrm{a})}$ |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2022 |  | 2021 |  |  |
| Credit derivatives and credit-related notes used to manage: |  |  |  |  |  |
| Loans and lending-related commitments | \$ | 6,422 | \$ | 4,138 |  |
| Derivative receivables |  | 11,721 |  | 14,573 | (b) |
| Credit derivatives and credit-related notes used in credit portfolio management activities | \$ | 18,143 | \$ | 18,711 |  |

(a) Amounts are presented net, considering the Firm's net protection purchased or sold with respect to each underlying reference entity or index.
(b) Prior-period amount has been revised to conform with the current presentation

The credit derivatives used in credit portfolio management activities do not qualify for hedge accounting under U.S. GAAP; these derivatives are reported at fair value, with gains and losses recognized in principal transactions revenue. In contrast, the loans and lending-related commitments being risk-managed are accounted for on an accrual basis. This asymmetry in accounting treatment, between loans and lending-related commitments and the credit derivatives used in credit portfolio management activities, causes earnings volatility that is not representative, in the Firm's view, of the true changes in value of the Firm's overall credit exposure.

The effectiveness of credit default swaps ("CDS") as a hedge against the Firm's exposures may vary depending on a number of factors, including the named reference entity (i.e., the Firm may experience losses on specific exposures that are different than the named reference entities in the purchased CDS); the contractual terms of the CDS (which may have a defined credit event that does not align with an actual loss realized by the Firm); and the maturity of the Firm's CDS protection (which in some cases may be shorter than the Firm's exposures). However, the Firm generally seeks to purchase credit protection with a maturity date that is the same or similar to the maturity date of the exposure for which the protection was purchased, and remaining differences in maturity are actively monitored and managed by the Firm. Refer to Credit derivatives in Note 5 for further information on credit derivatives and derivatives used in credit portfolio management activities.

The Firm's allowance for credit losses represents management's estimate of expected credit losses over the remaining expected life of the Firm's financial assets measured at amortized cost and certain off-balance sheet lending-related commitments. The Firm's allowance for credit losses comprises:

- the allowance for loan losses, which covers the Firm's retained loan portfolios (scored and risk-rated) and is presented separately on the Consolidated balance sheets,
- the allowance for lending-related commitments, which is reflected in accounts payable and other liabilities on the Consolidated balance sheets, and
- the allowance for credit losses on investment securities, which is reflected in investment securities on the Consolidated balance sheets.


## Discussion of changes in the allowance

The allowance for credit losses as of December 31, 2022 was $\$ 22.2$ billion, reflecting a net addition of $\$ 3.5$ billion from December 31, 2021, consisting of:

- $\$ 2.3$ billion in wholesale, driven by deterioration in the Firm's macroeconomic outlook and loan growth, predominantly in CB and CIB, and
- \$1.2 billion in consumer, predominantly driven by Card Services, reflecting higher outstanding balances and deterioration in the Firm's macroeconomic outlook, partially offset by a reduction in the allowance related to a decrease in uncertainty associated with borrower behavior as the effects of the pandemic gradually recede.
Deterioration in the Firm's macroeconomic outlook included both updates to the central scenario in the fourth quarter of 2022, which now reflects a mild recession, as well as the impact of the increased weight placed on the adverse scenarios beginning in the first quarter of 2022 due to the effects associated with higher inflation, changes in monetary policy, and geopolitical risks, including the war in Ukraine.
The Firm's allowance for credit losses is estimated using a weighted average of five internally developed macroeconomic scenarios. The adverse scenarios incorporate more punitive macroeconomic factors than the central case assumptions provided in the table below, resulting in a weighted average U.S. unemployment rate peaking at $5.6 \%$ in the second quarter of 2024 , and a $1.2 \%$ lower U.S. real GDP exiting the second quarter of 2024.

The Firm's central case assumptions reflected U.S. unemployment rates and U.S. real GDP as follows:

|  | Assumptions at December 31, 2022 |  |  |
| :---: | :---: | :---: | :---: |
|  | 2Q23 | 4Q23 | 2Q24 |
| U.S. unemployment rate ${ }^{(a)}$ | 3.8 \% | 4.3 \% | 5.0 \% |
| YoY growth in U.S. real GDP ${ }^{(b)}$ | 1.5 \% | 0.4 \% | - \% |
|  | Assumptions at December 31, 2021 |  |  |
|  | 2Q22 | 4Q22 | 2Q23 |
| U.S. unemployment rate ${ }^{(a)}$ | 4.2 \% | 4.0 \% | 3.9 \% |
| YoY growth in U.S. real GDP ${ }^{(b)}$ | 3.1 \% | 2.8 \% | 2.1 \% |

(a) Reflects quarterly average of forecasted U.S. unemployment rate.
(b) The year over year growth in U.S. real GDP in the forecast horizon of the central scenario is calculated as the percentage change in U.S. real GDP levels from the prior year.

Subsequent changes to this forecast and related estimates will be reflected in the provision for credit losses in future periods.

Refer to Critical Accounting Estimates Used by the Firm on pages 149-152 for further information on the allowance for credit losses and related management judgments. Refer to Consumer Credit Portfolio on pages 110-115, Wholesale Credit Portfolio on pages 116-126 for additional information on the consumer and wholesale credit portfolios.

Allowance for credit losses and related information

| Year ended December 31, (in millions, except ratios) | 2022 |  |  |  |  |  |  |  |  | 2021 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Consumer, excluding credit card |  | Credit card |  | Wholesale |  | Total |  |  | Consumer, excluding credit card |  | Credit card |  | Wholesale |  | Total |  |
| Allowance for loan losses |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Beginning balance at January 1, | \$ | 1,765 | \$ | 10,250 | \$ | 4,371 | \$ |  | 16,386 | \$ | 3,636 |  | 17,800 | \$ | 6,892 | \$ | 28,328 |
| Gross charge-offs |  | 812 |  | 3,192 |  | 322 |  |  | 4,326 |  | 630 |  | 3,651 |  | 283 |  | 4,564 |
| Gross recoveries collected |  | (543) |  | (789) |  | (141) |  |  | $(1,473)$ |  | (619) |  | (939) |  | (141) |  | $(1,699)$ |
| Net charge-offs |  | 269 |  | 2,403 |  | 181 |  |  | 2,853 |  | 11 |  | 2,712 |  | 142 |  | 2,865 |
| Provision for loan losses |  | 543 |  | 3,353 |  | 2,293 |  |  | 6,189 |  | $(1,858)$ |  | $(4,838)$ |  | $(2,375)$ |  | $(9,071)$ |
| Other |  | 1 |  | - |  | 3 |  |  | 4 |  | (2) |  | - |  | (4) |  | (6) |
| Ending balance at December 31, | \$ | 2,040 | \$ | 11,200 | \$ | 6,486 | \$ | + | 19,726 | \$ | 1,765 |  | 10,250 | \$ | 4,371 | \$ | 16,386 |
| Allowance for lending-related commitments |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Beginning balance at January 1, | \$ | 113 | \$ | - | \$ | 2,148 | \$ | + | 2,261 | \$ | 187 | \$ | - | \$ | 2,222 | \$ | 2,409 |
| Provision for lending-related commitments |  | (37) |  | - |  | 157 |  |  | 120 |  | (75) |  | - |  | (74) |  | (149) |
| Other |  | - |  | - |  | 1 |  |  | 1 |  | 1 |  | - |  | - |  | 1 |
| Ending balance at December 31, | \$ | 76 | \$ | - | \$ | 2,306 | \$ | \$ | 2,382 | \$ | 113 | \$ | - | \$ | 2,148 | \$ | 2,261 |
| Impairment methodology |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Asset-specific ${ }^{(a)}$ | \$ | (624) | \$ | 223 | \$ | 467 | \$ | + | 66 | \$ | (665) | \$ | 313 | \$ | 263 | \$ | (89) |
| Portfolio-based |  | 2,664 |  | 10,977 |  | 6,019 |  |  | 19,660 |  | 2,430 |  | 9,937 |  | 4,108 |  | 16,475 |
| Total allowance for loan losses | \$ | 2,040 | \$ | 11,200 | \$ | 6,486 | \$ |  | 19,726 | \$ | 1,765 |  | 10,250 | \$ | 4,371 | \$ | 16,386 |
| Impairment methodology |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Asset-specific | \$ | - | \$ | - | \$ | 90 | \$ |  | 90 | \$ | - | \$ | - | \$ | 167 | \$ | 167 |
| Portfolio-based |  | 76 |  | - |  | 2,216 |  |  | 2,292 |  | 113 |  | - |  | 1,981 |  | 2,094 |
| Total allowance for lending-related commitments | \$ | 76 | \$ | - | \$ | 2,306 | \$ | S | 2,382 | \$ | 113 | \$ | - | \$ | 2,148 | \$ | 2,261 |
| Total allowance for investment securities |  | NA |  | NA |  | NA | \$ | \$ | 96 |  | NA |  | NA |  | NA | \$ | 42 |
| Total allowance for credit losses ${ }^{(b)}$ | \$ | 2,116 | \$ | 11,200 | \$ | 8,792 | \$ | + | 22,204 | \$ | 1,878 |  | 10,250 | \$ | 6,519 | \$ | 18,689 |
| Memo: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Retained loans, end of period |  | 300,753 |  | 185,175 |  | 603,670 |  |  | 89,598 |  | 295,556 |  | 154,296 |  | 60,354 | \$1 | 010,206 |
| Retained loans, average |  | 299,409 |  | 163,335 |  | 582,021 |  |  | ,044,765 |  | 298,814 |  | 139,900 |  | 26,557 |  | 965,271 |
| Credit ratios |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Allowance for loan losses to retained loans |  | 0.68 \% |  | 6.05 \% |  | 1.07 \% |  |  | 1.81 \% |  | 0.60 \% |  | 6.64 \% |  | 0.78 \% |  | 1.62 \% |
| Allowance for loan losses to retained nonaccrual loans ${ }^{(c)}$ |  | 53 |  | NM |  | 330 |  |  | 338 |  | 36 |  | NM |  | 213 |  | 236 |
| Allowance for loan losses to retained nonaccrual loans excluding credit card |  | 53 |  | NM |  | 330 |  |  | 146 |  | 36 |  | NM |  | 213 |  | 89 |
| Net charge-off rates |  | 0.09 |  | 1.47 |  | 0.03 |  |  | 0.27 |  | - |  | 1.94 |  | 0.03 |  | 0.30 |

(a) Includes collateral dependent loans, including those considered TDRs and those for which foreclosure is deemed probable, modified PCD loans, and noncollateral dependent loans that have been modified or are reasonably expected to be modified in a TDR. Also includes risk-rated loans that have been placed on nonaccrual status for the wholesale portfolio segment. The asset-specific credit card allowance for loan losses modified or reasonably expected to be modified in a TDR is calculated based on the loans' original contractual interest rates and does not consider any incremental penalty rates.
(b) At December 31, 2022, excludes an allowance for credit losses associated with certain accounts receivable in CIB of $\$ 21$ million.
(c) The Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance.

Allocation of allowance for loan losses
The table below presents a breakdown of the allowance for loan losses by loan class. Refer to Note 12 for further information on loan classes.

| December 31, (in millions, except ratios) | 2022 |  |  | 2021 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Allowance for loan losses |  | Percent of retained loans to total retained loans | Allowance for loan losses |  | Percent of retained loans to total retained loans |
| Residential real estate | \$ | 1,070 | 22 \% | \$ | 817 | 22 \% |
| Auto and other |  | 970 | 6 |  | 948 | 7 |
| Consumer, excluding credit card |  | 2,040 | 28 |  | 1,765 | 29 |
| Credit card |  | 11,200 | 17 |  | 10,250 | 15 |
| Total consumer |  | 13,240 | 45 |  | 12,015 | 45 |
| Secured by real estate |  | 1,782 | 12 |  | 1,495 | 12 |
| Commercial and industrial |  | 3,507 | 15 |  | 1,881 | 14 |
| Other |  | 1,197 | 28 |  | 995 | 29 |
| Total wholesale |  | 6,486 | 55 |  | 4,371 | 55 |
| Total | \$ | 19,726 | 100 \% | \$ | 16,386 | 100 \% |

# Management's discussion and analysis 

INVESTMENT PORTFOLIO RISK MANAGEMENT

Investment portfolio risk is the risk associated with the loss of principal or a reduction in expected returns on investments arising from the investment securities portfolio or from principal investments. The investment securities portfolio is predominantly held by Treasury and CIO in connection with the Firm's balance sheet and asset-liability management objectives. Principal investments are predominantly privately-held financial instruments and are managed in the LOBs and Corporate. Investments are typically intended to be held over extended periods and, accordingly, the Firm has no expectation for short-term realized gains with respect to these investments.

Investment securities risk
Investment securities risk includes the exposure associated with a default in the payment of principal and interest. This risk is mitigated given that the investment securities portfolio held by Treasury and CIO predominantly consists of high-quality securities. At December 31, 2022, the Treasury and CIO investment securities portfolio, net of the allowance for credit losses, was $\$ 629.3$ billion, and the average credit rating of the securities comprising the portfolio was AA+ (based upon external ratings where available, and where not available, based primarily upon internal risk ratings). Refer to Corporate segment results on pages 79-80 and Note 10 for further information on the investment securities portfolio and internal risk ratings. Refer to Liquidity Risk Management on pages 97-104 for further information on related liquidity risk. Refer to Market Risk Management on pages 131-138 for further information on the market risk inherent in the portfolio.

## Governance and oversight

Investment securities risks are governed by the Firm's Risk Appetite framework, and reviewed at the CTC Risk Committee with regular updates provided to the Board Risk Committee.
The Firm's independent control functions are responsible for reviewing the appropriateness of the carrying value of investment securities in accordance with relevant policies. Approved levels for investment securities are established for each risk category, including capital and credit risks.

Principal investment risk
Principal investments are typically privately-held financial instruments representing ownership interests or other forms of junior capital. In general, principal investments include tax-oriented investments and investments made to enhance or accelerate the Firm's business strategies and exclude those that are consolidated on the Firm's balance sheets. These investments are made by dedicated investing businesses or as part of a broader business strategy. The Firm's principal investments are managed by the LOBs and Corporate and are reflected within their respective financial results. The Firm's investments will continue to evolve in line with its strategies, including the Firm's commitment to support underserved communities and minority-owned businesses.

The table below presents the aggregate carrying values of the principal investment portfolios as of December 31, 2022 and 2021.

|  | December 31, <br> 2022 | December 31, <br> 2021 |  |  |
| :--- | :--- | :--- | :--- | ---: |
| (in billions) | $\mathbf{2 6 . 2}$ | $\$$ | 23.2 |  |
| Tax-oriented investments, <br> primarily in alternative energy <br> and affordable housing | $\$$ |  |  |  |
| Private equity, various debt and <br> equity instruments, and real <br> assets | $\mathbf{1 0 . 8}$ | (a) |  |  |
| Total carrying value | $\mathbf{3 7 . 0}$ | $\$$ | 30.5 |  |

(a) Includes the Firm's 40\% ownership in C6 Bank and 49\% ownership in Viva Wallet.

## Governance and oversight

The Firm's approach to managing principal risk is consistent with the Firm's risk governance structure. The Firm has established a Firmwide risk policy framework for all principal investing activities that includes approval by executives who are independent from the investing businesses, as appropriate.
The Firm's independent control functions are responsible for reviewing the appropriateness of the carrying value of investments in accordance with relevant policies. As part of the risk governance structure, approved levels for investments are established and monitored for each relevant business or segment in order to manage the overall size of the portfolios. The Firm also conducts stress testing on these portfolios using specific scenarios that estimate losses based on significant market moves and/or other risk events.

Market risk is the risk associated with the effect of changes in market factors such as interest and foreign exchange rates, equity and commodity prices, credit spreads or implied volatilities, on the value of assets and liabilities held for both the short and long term.

## Market Risk Management

Market Risk Management monitors market risks throughout the Firm and defines market risk policies and procedures.
Market Risk Management seeks to manage risk, facilitate efficient risk/return decisions, reduce volatility in operating performance and provide transparency into the Firm's market risk profile for senior management, the Board of Directors and regulators. Market Risk Management is responsible for the following functions:

- Maintaining a market risk policy framework
- Independently measuring, monitoring and controlling LOB, Corporate, and Firmwide market risk
- Defining, approving and monitoring of limits
- Performing stress testing and qualitative risk assessments


## Risk measurement

## Measures used to capture market risk

There is no single measure to capture market risk and therefore Market Risk Management uses various metrics, both statistical and nonstatistical, to assess risk including:

- Value-at-risk (VaR)
- Stress testing
- Profit and loss drawdowns
- Earnings-at-risk
- Other sensitivity-based measures


## Risk monitoring and control

Market risk exposure is managed primarily through a series of limits set in the context of the market environment and business strategy. In setting limits, Market Risk Management takes into consideration factors such as market volatility, product liquidity, accommodation of client business, and management judgment. Market Risk Management maintains different levels of limits. Firm level limits include VaR and stress limits. Similarly, LOB and Corporate limits include VaR and stress limits and may be supplemented by certain nonstatistical risk measures such as profit and loss drawdowns. Limits may also be set within the LOBs and Corporate, as well as at the legal entity level.

Market Risk Management sets limits and regularly reviews and updates them as appropriate. Senior management is responsible for reviewing and approving certain of these risk limits on an ongoing basis. Limits that have not been reviewed within specified time periods by Market Risk Management are reported to senior management. The LOBs and Corporate are responsible for adhering to established limits against which exposures are monitored and reported.
Limit breaches are required to be reported in a timely manner to limit approvers, which include Market Risk Management and senior management. In the event of a breach, Market Risk Management consults with senior members of appropriate groups within the Firm to determine the suitable course of action required to return the applicable positions to compliance, which may include a reduction in risk in order to remedy the breach or granting a temporary increase in limits to accommodate an expected increase in client activity and/or market volatility. Certain Firm, Corporate or LOB-level limit breaches are escalated as appropriate.
Models used to measure market risk are inherently imprecise and are limited in their ability to measure certain risks or to predict losses. This imprecision may be heightened when sudden or severe shifts in market conditions occur. For additional discussion on model uncertainty refer to Estimations and Model Risk Management on page 148.
Market Risk Management periodically reviews the Firm's existing market risk measures to identify opportunities for enhancement, and to the extent appropriate, will calibrate those measures accordingly over time.

## Management's discussion and analysis

The following table summarizes the predominant business activities and related market risks, as well as positions which give rise to market risk and certain measures used to capture those risks, for each LOB and Corporate.

In addition to the predominant business activities, each LOB and Corporate may engage in principal investing activities. To the extent principal investments are deemed market risk sensitive, they are reflected in relevant risk measures and captured in the table below. Refer to Investment Portfolio Risk Management on page 130 for additional discussion on principal investments.

| LOBs and Corporate | Predominant business activities | Related market risks | Positions included in Risk Management VaR | Positions included in earnings-at-risk | Positions included in other sensitivity-based measures |
| :---: | :---: | :---: | :---: | :---: | :---: |
| CCB | - Originates and services mortgage loans <br> - Originates loans and takes deposits | - Risk from changes in the probability of newly originated mortgage commitments closing <br> - Interest rate risk and prepayment risk | - Mortgage commitments, classified as derivatives <br> - Warehouse loans that are fair value option elected, classified as loans - debt instruments <br> - MSRs <br> - Hedges of mortgage commitments, warehouse loans and MSRs, classified as derivatives <br> - Interest-only and mortgagebacked securities, classified as trading assets debt instruments, and related hedges, classified as derivatives <br> - Fair value option elected liabilities ${ }^{(a)}$ | - Retained loan portfolio <br> - Deposits | - Fair value option elected liabilities DVA ${ }^{(a)}$ |
| CIB | - Makes markets and services clients across fixed income, foreign exchange, equities and commodities <br> - Originates loans and takes deposits | - Risk of loss from adverse movements in market prices and implied volatilities across interest rate, foreign exchange, credit, commodity and equity instruments <br> - Basis and correlation risk from changes in the way asset values move relative to one another <br> - Interest rate risk and prepayment risk | - Trading assets/liabilities debt and marketable equity instruments, and derivatives, including hedges of the retained loan portfolio <br> - Certain securities purchased, loaned or sold under resale agreements and securities borrowed <br> - Fair value option elected liabilities ${ }^{(\mathrm{a})}$ <br> - Certain fair value option elected loans <br> - Derivative CVA and associated hedges <br> - Marketable equity investments | - Retained Ioan portfolio <br> - Deposits | - Privately held equity and other investments measured at fair value; and certain real estate-related fair value option elected loans <br> - Derivatives FVA and fair value option elected liabilities DVA(a) <br> - Credit risk component of CVA and associated hedges for counterparties with credit spreads that have widened to elevated levels |
| CB | - Originates loans and takes deposits | - Interest rate risk and prepayment risk | - Marketable equity investments | - Retained Ioan portfolio <br> - Deposits |  |
| AWM | - Provides initial capital investments in products such as mutual funds and capital invested alongside third-party investors <br> - Originates loans and takes deposits | - Risk from adverse movements in market factors (e.g., market prices, rates and credit spreads) <br> - Interest rate risk and prepayment risk | - Debt securities held in advance of distribution to clients, classified as trading assets - debt instruments ${ }^{(b)}$ | - Retained loan portfolio <br> - Deposits | - Initial seed capital investments and related hedges, classified as derivatives <br> - Certain deferred compensation and related hedges, classified as derivatives <br> - Capital invested alongside third-party investors, typically in privately distributed collective vehicles managed by AWM (i.e., co-investments) |
| Corporate | - Manages the Firm's liquidity, funding, capital, structural interest rate and foreign exchange risks | - Structural interest rate risk from the Firm's traditional banking activities <br> - Structural non-USD foreign exchange risks | - Derivative positions measured through noninterest revenue in earnings <br> - Marketable equity investments | - Deposits with banks <br> - Investment securities portfolio and related interest rate hedges <br> - Long-term debt and related interest rate hedges <br> - Deposits | - Privately held equity and other investments measured at fair value <br> - Foreign exchange exposure related to Firm-issued nonUSD long-term debt ("LTD") and related hedges |

(a) Reflects structured notes in Risk Management VaR and the DVA on structured notes in other sensitivity-based measures.
(b) The AWM and CB contributions to Firmwide average VaR were not material for the years ended December 31, 2022 and 2021.

Value-at-risk
JPMorgan Chase utilizes value-at-risk ("VaR"), a statistical risk measure, to estimate the potential loss from adverse market moves in the current market environment. The Firm has a single VaR framework used as a basis for calculating Risk Management VaR and Regulatory VaR.
The framework is employed across the Firm using historical simulation based on data for the previous 12 months. The framework's approach assumes that historical changes in market values are representative of the distribution of potential outcomes in the immediate future. The Firm believes the use of Risk Management VaR provides a daily measure of risk that is closely aligned to risk management decisions made by the LOBs and Corporate and, along with other market risk measures, provides the appropriate information needed to respond to risk events.

The Firm's Risk Management VaR is calculated assuming a one-day holding period and an expected tail-loss methodology which approximates a 95\% confidence level. Risk Management VaR provides a consistent framework to measure risk profiles and levels of diversification across product types and is used for aggregating risks and monitoring limits across businesses. VaR results are reported to senior management, the Board of Directors and regulators.

Underlying the overall VaR model framework are individual VaR models that simulate historical market returns for individual risk factors and/or product types. To capture material market risks as part of the Firm's risk management framework, comprehensive VaR model calculations are performed daily for businesses whose activities give rise to market risk. These VaR models are granular and incorporate numerous risk factors and inputs to simulate daily changes in market values over the historical period; inputs are selected based on the risk profile of each portfolio, as sensitivities and historical time series used to generate daily market values may be different across product types or risk management systems. The VaR model results across all portfolios are aggregated at the Firm level.

As VaR is based on historical data, it is an imperfect measure of market risk exposure and potential future losses. In addition, based on their reliance on available historical data, limited time horizons, and other factors, VaR measures are inherently limited in their ability to measure certain risks and to predict losses, particularly those associated with market illiquidity and sudden or severe shifts in market conditions.

For certain products, specific risk parameters are not captured in VaR due to the lack of liquidity and availability of appropriate historical data. The Firm uses proxies to estimate the VaR for these and other products when daily time series are not available. It is likely that using an actual price-based time series for these products, if available, would affect the VaR results presented. The Firm therefore considers other nonstatistical measures such as stress
testing, in addition to VaR, to capture and manage its market risk positions.
The daily market data used in VaR models may be different than the independent third-party data collected for VCG price testing in its monthly valuation process. For example, in cases where market prices are not observable, or where proxies are used in VaR historical time series, the data sources may differ. Refer to Valuation process in Note 2 for further information on the Firm's valuation process. As VaR model calculations require daily data and a consistent source for valuation, it may not be practical to use the data collected in the VCG monthly valuation process for VaR model calculations.
The Firm's VaR model calculations are periodically evaluated and enhanced in response to changes in the composition of the Firm's portfolios, changes in market conditions, improvements in the Firm's modeling techniques and measurements, and other factors. Such changes may affect historical comparisons of VaR results. Refer to Estimations and Model Risk Management on page 148 for information regarding model reviews and approvals.
The Firm calculates separately a daily aggregated VaR in accordance with regulatory rules ("Regulatory VaR"), which is used to derive the Firm's regulatory VaR-based capital requirements under Basel III capital rules. This Regulatory VaR model framework currently assumes a ten business-day holding period and an expected tail loss methodology which approximates a 99\% confidence level. Regulatory VaR is applied to "covered" positions as defined by Basel III capital rules, which may be different than the positions included in the Firm's Risk Management VaR. For example, credit derivative hedges of accrual loans are included in the Firm's Risk Management VaR, while Regulatory VaR excludes these credit derivative hedges. In addition, in contrast to the Firm's Risk Management VaR, Regulatory VaR currently excludes the diversification benefit for certain VaR models.

Refer to JPMorgan Chase's Basel III Pillar 3 Regulatory Capital Disclosures reports, which are available on the Firm's website, for additional information on Regulatory VaR and the other components of market risk regulatory capital for the Firm (e.g., VaR-based measure, stressed VaR-based measure and the respective backtesting).

## Management's discussion and analysis

The table below shows the results of the Firm's Risk Management VaR measure using a 95\% confidence level. VaR can vary significantly as positions change, market volatility fluctuates, and diversification benefits change.
Total VaR

| As of or for the year ended December 31, (in millions) | 2022 |  |  |  |  |  | 2021 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Avg. |  | Min |  | Max |  | Avg. |  | Min |  | Max |
| CIB trading VaR by risk type |  |  |  |  |  |  |  |  |  |  |  |  |
| Fixed income | \$ | 59 | \$ | 33 | \$ | 82 | \$ | 60 | \$ | 30 | \$ | 153 |
| Foreign exchange |  | 8 |  | 3 |  | 15 |  | 6 |  | 2 |  | 27 |
| Equities |  | 12 |  | 7 |  | 20 |  | 16 |  | 8 |  | 38 |
| Commodities and other |  | 15 |  | 10 |  | 28 |  | 19 |  | 9 |  | 43 |
| Diversification benefit to CIB trading VaR |  | (43) ${ }^{(2)}$ |  | NM ${ }^{(e)}$ |  | NM ${ }^{(e)}$ |  | (49) ${ }^{(2)}$ |  | NM ${ }^{(e)}$ |  | NM ${ }^{(e)}$ |
| CIB trading VaR |  | 51 |  | 34 |  | 69 |  | 52 |  | 22 |  | 134 |
| Credit Portfolio VaR |  | $16^{(b)(c)}$ |  |  |  | $235{ }^{\text {(b)(c) }}$ |  | 6 |  | 4 |  | 12 |
| Diversification benefit to CIB VaR |  | (10) ${ }^{(2)}$ |  | NM ${ }^{(\mathrm{e})}$ |  | NM ${ }^{(e)}$ |  | (6) ${ }^{(a)}$ |  | NM ${ }^{(e)}$ |  | NM ${ }^{(e)}$ |
| CIB VaR |  | 57 |  | 35 |  | 240 |  | 52 |  | 22 |  | 133 |
| CCB VaR |  | 6 |  | 2 |  | 20 |  | 5 |  | 3 |  | 11 |
| Corporate and other LOB VaR |  | $12{ }^{\text {(d) }}$ |  | 9 |  | $16^{(d)}$ |  | $24^{(d)}$ |  | 14 |  | $94^{(d)}$ |
| Diversification benefit to other VaR |  | (4) ${ }^{(a)}$ |  | NM ${ }^{(e)}$ |  | NM ${ }^{(e)}$ |  | (4) ${ }^{(a)}$ |  | NM ${ }^{(e)}$ |  | NM ${ }^{(e)}$ |
| Other VaR |  | 14 |  | 10 |  | 24 |  | 25 |  | 14 |  | 94 |
| Diversification benefit to CIB and other VaR |  | (13) ${ }^{(1)}$ |  | NM ${ }^{(e)}$ |  | NM ${ }^{(e)}$ |  | (22) ${ }^{\left({ }^{(2)}\right.}$ |  | NM ${ }^{(\mathrm{e})}$ |  | NM ${ }^{(e)}$ |
| Total VaR | \$ | 58 | \$ | 34 | \$ | 242 | \$ | 55 | \$ | 24 | \$ |  |

(a) Diversification benefit represents the difference between the portfolio VaR and the sum of its individual components. This reflects the non-additive nature of VaR due to imperfect correlation across LOBs, Corporate, and risk types.
(b) In the first quarter of 2022, in line with the Firm's internal model governance, the credit risk component of CVA related to certain counterparties was removed from Credit Portfolio VaR due to the widening of the credit spreads for those counterparties to elevated levels. The related hedges were also removed to maintain consistency. This exposure is now reflected in other sensitivity-based measures.
(c) In March 2022, the effects of nickel price increases and the associated volatility in the nickel market resulted in elevated average and maximum Credit Portfolio VaR.
(d) The decrease in Corporate and other LOB VaR was driven by lower market values for a legacy private equity position in Corporate which is publicly traded.
(e) The maximum and minimum VaR for each portfolio may have occurred on different trading days than the components, and consequently, diversification benefit is not meaningful.
Average Total VaR increased by $\$ 3$ million for the year ended December 31, 2022 when compared with the prior year. The increase was driven by the effects of nickel price increases and the associated volatility in the nickel market observed in March 2022 impacting Credit Portfolio VaR, predominantly offset by a decrease in Corporate and other LOB VaR.
The following graph presents daily Risk Management VaR for the four trailing quarters. The movement in VaR in March 2022 was driven by changes in nickel-related counterparty exposure in the Firm's Credit Portfolio.

## Daily Risk Management VaR



## VaR backtesting

The Firm performs daily VaR model backtesting, which compares the daily Risk Management VaR results with the daily gains and losses that are utilized for VaR backtesting purposes. The gains and losses depicted in the chart below do not reflect the Firm's reported revenue as they exclude certain components of total net revenue, such as those associated with the execution of new transactions (i.e., intraday client-driven trading and intraday risk management activities), fees, commissions, other valuation adjustments and net interest income. These excluded components of total net revenue may more than offset the backtesting gain or loss on a particular day. The definition of backtesting gains and losses above is consistent with the requirements for backtesting under Basel III capital rules.
A backtesting exception occurs when the daily backtesting loss exceeds the daily Risk Management VaR for the prior day. Under the Firm's Risk Management VaR methodology, assuming current changes in market values are consistent with the historical changes used in the simulation, the Firm would expect to incur VaR backtesting exceptions five times every 100 trading days on average. The number of VaR backtesting exceptions observed can differ from the statistically expected number of backtesting exceptions if the current level of market volatility is materially different from the level of market volatility during the 12 months of historical data used in the VaR calculation.
For the 12 months ended December 31, 2022, the Firm posted backtesting gains on 136 of the 259 days, and observed 17 VaR backtesting exceptions. Firmwide backtesting loss days can differ from the loss days for which Fixed Income Markets and Equity Markets posted losses, as disclosed in CIB Markets revenue, as the population of positions which compose each metric are different and due to the exclusion of certain components of total net revenue in backtesting gains and losses as described above. For more information on CIB Markets revenue, refer to pages 70-71.
The following chart presents the distribution of Firmwide daily backtesting gains and losses for the trailing 12 months and three months ended December 31, 2022. The daily backtesting losses are displayed as a percentage of the corresponding daily Risk Management VaR. The count of days with backtesting losses are shown in aggregate, in fifty percentage point intervals. Backtesting exceptions are displayed within the intervals that are greater than one hundred percent. The results in the chart below differ from the results of backtesting disclosed in the Market Risk section of the Firm's Basel III Pillar 3 Regulatory Capital Disclosures reports, which are based on Regulatory VaR applied to the Firm's covered positions.

Distribution of Daily Backtesting Gains and Losses


# Management's discussion and analysis 

## Other risk measures

## Stress testing

Along with VaR, stress testing is an important tool used to assess risk. While VaR reflects the risk of loss due to adverse changes in markets using recent historical market behavior, stress testing reflects the risk of loss from hypothetical changes in the value of market risk sensitive positions applied simultaneously. Stress testing measures the Firm's vulnerability to losses under a range of stressed but possible economic and market scenarios. The results are used to understand the exposures responsible for those potential losses and are measured against limits.
The Firm's stress framework covers market risk sensitive positions in the LOBs and Corporate. The framework is used to calculate multiple magnitudes of potential stress for both market rallies and market sell-offs, assuming significant changes in market factors such as credit spreads, equity prices, interest rates, currency rates and commodity prices, and combines them in multiple ways to capture an array of hypothetical economic and market scenarios.
The Firm generates a number of scenarios that focus on tail events in specific asset classes and geographies, including how the event may impact multiple market factors simultaneously. Scenarios also incorporate specific idiosyncratic risks and stress basis risk between different products. The flexibility in the stress framework allows the Firm to construct new scenarios that can test the outcomes against possible future stress events. Stress testing results are reported periodically to senior management of the Firm, as appropriate.
Stress scenarios are governed by the overall stress framework, under the oversight of Market Risk Management, and the models to calculate the stress results are subject to the Firm's Estimations and Model Risk Management Policy. The Firmwide Market Risk Stress Methodology Committee reviews and approves changes to stress testing methodology and scenarios across the Firm. Significant changes to the framework are escalated to senior management, as appropriate.
The Firm's stress testing framework is utilized in calculating the Firm's CCAR and other stress test results, which are reported periodically to the Board of Directors. In addition, stress testing results are incorporated into the Firm's Risk Appetite framework, and are reported periodically to the Board Risk Committee.

## Profit and loss drawdowns

Profit and loss drawdowns are used to highlight trading losses above certain levels of risk tolerance. A profit and loss drawdown is a decline in revenue from its year-to-date peak level.

## Earnings-at-risk

The effect of interest rate exposure on the Firm's reported net income is important as interest rate risk represents one of the Firm's significant market risks. Interest rate risk arises not only from trading activities but also from the

Firm's traditional banking activities, which include extension of loans and credit facilities, taking deposits, issuing debt and the investment securities portfolio. Refer to the table on page 132 for a summary by LOB and Corporate, identifying positions included in earnings-at-risk.
The CTC Risk Committee establishes the Firm's structural interest rate risk policy and related limits, which are subject to approval by the Board Risk Committee. Treasury and CIO, working in partnership with the LOBs, calculates the Firm's structural interest rate risk profile and reviews it with senior management, including the CTC Risk Committee. In addition, oversight of structural interest rate risk is managed through a dedicated risk function reporting to the CTC CRO. This risk function is responsible for providing independent oversight and governance around assumptions and establishing and monitoring limits for structural interest rate risk. The Firm manages structural interest rate risk generally through its investment securities portfolio and interest rate derivatives.
Structural interest rate risk can arise due to a variety of factors, including:

- Differences in timing among the maturity or repricing of assets, liabilities and off-balance sheet instruments
- Differences in the amounts of assets, liabilities and offbalance sheet instruments that are maturing or repricing at the same time
- Differences in the amounts by which short-term and longterm market interest rates change (for example, changes in the slope of the yield curve)
- The impact of changes in the maturity of various assets, liabilities or off-balance sheet instruments as interest rates change
The Firm manages interest rate exposure related to its assets and liabilities on a consolidated, Firmwide basis. Business units transfer their interest rate risk to Treasury and CIO through funds transfer pricing, which takes into account the elements of interest rate exposure that can be risk-managed in financial markets. These elements include asset and liability balances and contractual rates of interest, contractual principal payment schedules, expected prepayment experience, interest rate reset dates and maturities, rate indices used for repricing, and any interest rate ceilings or floors for adjustable rate products.
One way that the Firm evaluates its structural interest rate risk is through earnings-at-risk. Earnings-at-risk estimates the Firm's interest rate exposure for a given interest rate scenario. It is presented as a sensitivity to a baseline, which includes net interest income and certain interest rate sensitive fees. The baseline uses market interest rates and, in the case of deposits, pricing assumptions. The Firm conducts simulations of changes to this baseline for interest rate-sensitive assets and liabilities denominated in U.S. dollars and other currencies ("non-U.S. dollar" currencies). These simulations primarily include retained loans,
deposits, deposits with banks, investment securities, longterm debt and any related interest rate hedges, and funds transfer pricing of other positions in risk management VaR and other sensitivity-based measures as described on page 132.

Earnings-at-risk scenarios estimate the potential change to a net interest income baseline over the following 12 months utilizing multiple assumptions. These scenarios include a parallel shift involving changes to both short-term and longterm rates by an equal amount; a steeper yield curve involving holding short-term rates constant and increasing long-term rates; and a flatter yield curve involving increasing short-term rates and holding long-term rates constant or holding short-term rates constant and decreasing long-term rates. These scenarios consider many different factors, including:

- The impact on exposures as a result of instantaneous changes in interest rates from baseline rates.
- Forecasted balance sheet, as well as modeled prepayment and reinvestment behavior, but excluding assumptions about actions that could be taken by the Firm or its clients and customers in response to instantaneous rate changes. Mortgage prepayment assumptions are based on the interest rates used in the scenarios compared with underlying contractual rates, the time since origination, and other factors which are updated periodically based on historical experience. Deposit forecasts are a key assumption in the Firm's earnings-at-risk. The baseline reflects certain assumptions relating to the reversal of Quantitative Easing that are highly uncertain and require management judgment. Therefore, the actual amount of deposits held by the Firm, at any particular time, could be impacted by actions the Federal Reserve may take as part of monetary policy, including through the use of the Reverse Repurchase Facility. In addition, there are other factors that impact the amount of deposits held at the Firm such as the level of loans across the industry and competition for deposits.
- The pricing sensitivity of deposits, known as deposit betas, represent the amount by which deposit rates paid could change upon a given change in market interest rates. The deposit rates paid in these scenarios differ from actual deposit rates paid, due to repricing lags and other factors.

The Firm's earnings-at-risk scenarios are periodically evaluated and enhanced in response to changes in the composition of the Firm's balance sheet, changes in market conditions, improvements in the Firm's simulation and other factors. The Firm is currently evaluating the modeling of repricing lags for deposits in its earnings-at-risk scenarios. Incorporating repricing lags, in the current environment, would significantly affect the U.S. dollar interest rate scenarios, with higher interest rate scenarios expected to result in a positive impact, and lower interest rate scenarios expected to result in a negative impact, on the Firm's earnings-at-risk. While a relevant measure of the

Firm's interest rate exposure, the earnings-at-risk analysis does not represent a forecast of the Firm's net interest income (Refer to Outlook on page 49 for additional information).
The Firm's U.S. dollar sensitivities are presented in the table below.

| December 31, (in billions) | 2022 |  | 2021 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Parallel shift: |  |  |  |  |  |
| +100 bps shift in rates | \$ | (2.0) | \$ | 5.0 |  |
| -100 bps shift in rates |  | 2.4 |  | NM |  |
| Steeper yield curve: |  |  |  |  |  |
| +100 bps shift in long-term rates |  | 0.8 |  | 1.8 |  |
| -100 bps shift in short-term rates |  | 3.2 |  | NM |  |
| Flatter yield curve: |  |  |  |  |  |
| +100 bps shift in short-term rates |  | (2.8) |  | 3.2 |  |
| -100 bps shift in long-term rates |  | (0.9) |  | NM | (a) |

(a) Given the level of market interest rates, these scenarios were not considered to be meaningful as of December 31, 2021.

The change in the Firm's U.S. dollar sensitivities as of December 31, 2022 compared to December 31, 2021 reflected updates to the Firm's baseline for higher interest rates and higher corresponding modeled deposit betas, as well as the impact of changes in the Firm's balance sheet.
As of December 31, 2022, the Firm's sensitivity to the $+/-100$ basis points parallel and short-term shift in rates is primarily the result of a greater impact from liabilities repricing compared to the impact of assets repricing, while a $+/-100$ basis points shift in long-term rates is primarily the result of a greater impact from assets repricing compared to the impact of liabilities repricing.
The Firm's non-U.S. dollar sensitivities are presented in the table below.

| December 31, (in billions) | 2022 |  | 2021 |  |
| :---: | :---: | :---: | :---: | :---: |
| Parallel shift: |  |  |  |  |
| +100 bps shift in rates | \$ | 0.7 | \$ | 0.8 |
| -100 bps shift in rates | \$ | (0.6) |  | NM |
| Steeper yield curve: |  |  |  |  |
| -100 bps shift in short-term rates | \$ | (0.6) |  | NM |
| Flatter yield curve: |  |  |  |  |
| +100 bps shift in short-term rates |  | 0.6 |  | 0.8 |

(a) Given the level of market interest rates, these scenarios were not considered to be meaningful as of December 31, 2021.
The results of the non-U.S. dollar interest rate scenario involving a steeper/flatter yield curve with long-term rates increasing/decreasing by 100 basis points and short-term rates staying at current levels were not material to the Firm's earnings-at-risk at December 31, 2022 and 2021.

## Management's discussion and analysis

## Non-U.S. dollar foreign exchange risk

Non-U.S. dollar FX risk is the risk that changes in foreign exchange rates affect the value of the Firm's assets or liabilities or future results. The Firm has structural non-U.S. dollar FX exposures arising from capital investments, forecasted expense and revenue, the investment securities portfolio and non-U.S. dollar-denominated debt issuance. Treasury and CIO, working in partnership with the LOBs, primarily manage these risks on behalf of the Firm. Treasury and CIO may hedge certain of these risks using derivatives. Refer to Business Segment Results on page 62 for additional information.

## Other sensitivity-based measures

The Firm quantifies the market risk of certain debt and equity and credit and funding-related exposures by assessing the potential impact on net revenue, other comprehensive income ("OCI") and noninterest expense due to changes in relevant market variables. Refer to the predominant business activities that give rise to market risk on page 132 for additional information on the positions captured in other sensitivity-based measures.

The table below represents the potential impact to net revenue, OCI or noninterest expense for market risk sensitive instruments that are not included in VaR or earnings-at-risk. Where appropriate, instruments used for hedging purposes are reported net of the positions being hedged. The sensitivities disclosed in the table below may not be representative of the actual gain or loss that would have been realized at December 31, 2022 and 2021, as the movement in market parameters across maturities may vary and are not intended to imply management's expectation of future changes in these sensitivities.

| Gain/(loss) (in millions) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Activity | Description | Sensitivity measure |  | $\begin{array}{r} \text { nber 31, } \\ 2022 \end{array}$ | $\begin{array}{r} \text { December 31, } \\ 2021 \\ \hline \end{array}$ |
| Debt and equity ${ }^{(a)}$ |  |  |  |  |  |
| Asset Management activities | Consists of seed capital and related hedges; fund co-investments ${ }^{\text {(c) }}$; and certain deferred compensation and related hedges ${ }^{(\mathrm{d})}$ | $10 \%$ decline in market value | \$ | (56) \$ | (69) |
| Other debt and equity | Consists of certain real estate-related fair value option elected loans, privately held equity and other investments held at fair value | 10\% decline in market value |  | $(1,046)$ | (971) |
| Credit- and funding-related exposures |  |  |  |  |  |
| Non-USD LTD cross-currency basis | Represents the basis risk on derivatives used to hedge the foreign exchange risk on the non-USD LTD ${ }^{\text {te }}$ | 1 basis point parallel tightening of cross currency basis |  | (12) | (16) |
| Non-USD LTD hedges foreign currency ("FX") exposure | Primarily represents the foreign exchange revaluation on the fair value of the derivative hedges ${ }^{(\text {e })}$ | 10\% depreciation of currency |  | 3 | 15 |
| Derivatives - funding spread risk | Impact of changes in the spread related to derivatives FVA | 1 basis point parallel increase in spread |  | (4) | (7) |
| CVA - counterparty credit risk ${ }^{(\text {b) }}$ | Credit risk component of CVA and associated hedges | 10\% credit spread widening |  | (1) | N/A |
| Fair value option elected liabilities funding spread risk | Impact of changes in the spread related to fair value option elected liabilities DVA ${ }^{(\text {e) }}$ | 1 basis point parallel increase in spread |  | 43 | 41 |
| Fair value option elected liabilities interest rate sensitivity | Interest rate sensitivity on fair value option elected liabilities resulting from a change in the Firm's own credit spread ${ }^{(8)}$ | 1 basis point parallel increase in spread |  | - | (3) |
|  | Interest rate sensitivity related to risk management of changes in the Firm's own credit spread on the fair value option elected liabilities noted above ${ }^{(c)}$ | 1 basis point parallel increase in spread |  | - | 3 |

(a) Excludes equity securities without readily determinable fair values that are measured under the measurement alternative. Refer to Note 2 for additional information.
(b) In the first quarter of 2022, in line with the Firm's internal model governance, the credit risk component of CVA related to certain counterparties was removed from Credit Portfolio VaR due to the widening of the credit spreads for those counterparties to elevated levels. The related hedges were also removed to maintain consistency. This exposure is now reflected in other sensitivity-based measures.
(c) Impact recognized through net revenue.
(d) Impact recognized through noninterest expense.
(e) Impact recognized through OCI.

The Firm, through its LOBs and Corporate, may be exposed to country risk resulting from financial, economic, political or other significant developments which adversely affect the value of the Firm's exposures related to a particular country or set of countries. The Country Risk Management group actively monitors the various portfolios which may be impacted by these developments and measures the extent to which the Firm's exposures are diversified given the Firm's strategy and risk tolerance relative to a country.

## Organization and management

Country Risk Management is an independent risk management function that assesses, manages and monitors exposure to country risk across the Firm.

The Firm's country risk management function includes the following activities:

- Maintaining policies, procedures and standards consistent with a comprehensive country risk framework
- Assigning sovereign ratings, assessing country risks and establishing risk tolerance relative to a country
- Measuring and monitoring country risk exposure and stress across the Firm
- Managing and approving country limits and reporting trends and limit breaches to senior management
- Developing surveillance tools, such as signaling models and ratings indicators, for early identification of potential country risk concerns
- Providing country risk scenario analysis


## Sources and measurement

The Firm is exposed to country risk through its lending and deposits, investing, and market-making activities, whether cross-border or locally funded. Country exposure includes activity with both government and private-sector entities in a country.
Under the Firm's internal country risk management approach, attribution of exposure to an individual country is based on the country where the largest proportion of the assets of the counterparty, issuer, obligor or guarantor are located or where the largest proportion of its revenue is derived, which may be different than the domicile (i.e. legal residence) or country of incorporation.
Individual country exposures reflect an aggregation of the Firm's risk to an immediate default, with zero recovery, of the counterparties, issuers, obligors or guarantors attributed to that country. Activities which result in contingent or indirect exposure to a country are not included in the country exposure measure (for example, providing clearing services or secondary exposure to collateral on securities financing receivables).
Assumptions are sometimes required in determining the measurement and allocation of country exposure, particularly in the case of certain non-linear or index products, or where the nature of the counterparty, issuer, obligor or guarantor is not suitable for attribution to an
individual country. The use of different measurement approaches or assumptions could affect the amount of reported country exposure.
Under the Firm's internal country risk measurement framework:

- Deposits with banks are measured as the cash balances placed with central banks, commercial banks, and other financial institutions
- Lending exposures are measured at the total committed amount (funded and unfunded), net of the allowance for credit losses and eligible cash and marketable securities collateral received
- Securities financing exposures are measured at their receivable balance, net of eligible collateral received
- Debt and equity securities are measured at the fair value of all positions, including both long and short positions
- Counterparty exposure on derivative receivables is measured at the derivative's fair value, net of the fair value of the eligible collateral received
- Credit derivatives exposure is measured at the net notional amount of protection purchased or sold for the same underlying reference entity, inclusive of the fair value of the derivative receivable or payable, reflecting the manner in which the Firm manages these exposures

The Firm's internal country risk reporting differs from the reporting provided under the FFIEC bank regulatory requirements.

## Management's discussion and analysis

## Stress testing

Stress testing is an important component of the Firm's country risk management framework, which aims to estimate and limit losses arising from a country crisis by measuring the impact of adverse asset price movements to a country based on market shocks combined with counterparty specific assumptions. Country Risk Management periodically designs and runs tailored stress scenarios to test vulnerabilities to individual countries or sets of countries in response to specific or potential market events, sector performance concerns, sovereign actions and geopolitical risks. These tailored stress results are used to inform potential risk reduction across the Firm, as necessary.

## Risk reporting

Country exposure and stress are measured and reported regularly, and used by Country Risk Management to identify trends and monitor high usages and breaches against limits.
For country risk management purposes, the Firm may report exposure to jurisdictions that are not fully autonomous, including Special Administrative Regions ("SAR") and dependent territories, separately from the independent sovereign states with which they are associated.

The following table presents the Firm's top 20 exposures by country (excluding the U.S.) as of December 31, 2022, and their comparative exposures as of December 31, 2021. The selection of countries represents the Firm's largest total exposures by individual country, based on the Firm's internal country risk management approach, and does not represent the Firm's view of any existing or potentially adverse credit conditions. Country exposures may fluctuate from period to period due to client activity and market flows.

The increase in exposure to Germany and the decrease in exposure to the U.K. were primarily due to changes in cash placements with the central banks of those countries driven by balance sheet and liquidity management activities.

The decrease in exposure to Australia was driven by reductions in cash placed with the central bank of Australia and government debt securities, due to client-driven market-making activities and lower client cash deposits resulting from higher interest rates.
As of December 31, 2022, exposure to Russia was approximately $\$ 500$ million. This amount excludes certain deposits placed on behalf of clients, largely at the Russian National Settlement Depository. In accordance with requirements of the Bank of Russia, these deposits were transferred to the Depository Insurance Agency of Russia on February 3, 2023.

Top 20 country exposures (excluding the U.S.) ${ }^{(\mathrm{a})}$

| December 31, (in billions) |  |  | 2022 |  |  |  |  |  |  |  | $2021{ }^{(f)}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { Deposits } \\ \text { with } \\ \text { banks }{ }^{(b)} \end{gathered}$ |  | Lending ${ }^{(\mathrm{c})}$ |  | $\begin{gathered} \begin{array}{c} \text { Trading } \\ \text { and } \\ \text { investing } \end{array} \\ \hline \end{gathered}$ |  | Other ${ }^{(\mathrm{e})}$ |  | Total exposure |  | Total exposure |  |
| Germany | \$ | 79.5 | \$ | 11.3 | \$ | 1.9 | \$ | 0.5 | \$ | 93.2 | \$ | 61.7 |
| United Kingdom |  | 30.8 |  | 23.0 |  | 14.5 |  | 1.8 |  | 70.1 |  | 96.4 |
| Japan |  | 48.2 |  | 3.1 |  | 4.2 |  | 0.3 |  | 55.8 |  | 45.5 |
| Australia |  | 15.9 |  | 6.2 |  | 3.6 |  | - |  | 25.7 |  | 39.1 |
| France |  | 0.4 |  | 11.4 |  | 2.6 |  | 3.7 |  | 18.1 |  | 14.0 |
| Brazil |  | 4.2 |  | 4.9 |  | 8.7 |  | - |  | 17.8 |  | 12.0 |
| Switzerland |  | 8.8 |  | 3.3 |  | 1.6 |  | 1.6 |  | 15.3 |  | 20.9 |
| Canada |  | 2.6 |  | 10.2 |  | 1.5 |  | 0.1 |  | 14.4 |  | 16.9 |
| China |  | 2.5 |  | 5.7 |  | 5.5 |  | - |  | 13.7 |  | 18.6 |
| South Korea |  | 1.4 |  | 3.5 |  | 4.9 |  | 0.2 |  | 10.0 |  | 8.7 |
| Singapore |  | 1.2 |  | 4.6 |  | 3.7 |  | 0.4 |  | 9.9 |  | 12.3 |
| Belgium |  | 6.3 |  | 1.7 |  | 1.2 |  | - |  | 9.2 |  | 6.8 |
| India |  | 1.3 |  | 4.0 |  | 2.8 |  | 0.9 |  | 9.0 |  | 14.7 |
| Saudi Arabia |  | 0.7 |  | 5.6 |  | 1.6 |  | - |  | 7.9 |  | 9.1 |
| Netherlands |  | 0.2 |  | 7.2 |  | (0.8) |  | 0.5 |  | 7.1 |  | 6.8 |
| Spain |  | 0.4 |  | 4.9 |  | 0.5 |  | - |  | 5.8 |  | 10.1 |
| Mexico |  | 0.5 |  | 4.4 |  | 0.5 |  | - |  | 5.4 |  | 4.9 |
| Luxembourg |  | 0.9 |  | 2.9 |  | 1.5 |  | - |  | 5.3 |  | 11.5 |
| Hong Kong SAR |  | 2.8 |  | 0.9 |  | 0.7 |  | 0.1 |  | 4.5 |  | 5.9 |
| Sweden |  | 1.1 |  | 3.1 |  | 0.2 |  | - |  | 4.4 |  | 4.4 |

(a) Country exposures presented in the table reflect $87 \%$ and $88 \%$ of total Firmwide non-U.S. exposure, where exposure is attributed to an individual country, at December 31, 2022 and 2021, respectively.
(b) Predominantly represents cash placed with central banks.
(c) Includes loans and accrued interest receivable, lending-related commitments (net of eligible collateral and the allowance for credit losses). Excludes intra-day and operating exposures, such as those from settlement and clearing activities.
(d) Includes market-making inventory, Investment securities, and counterparty exposure on derivative and securities financings net of eligible collateral and hedging. Includes exposure from single reference entity ("single-name"), index and other multiple reference entity transactions for which one or more of the underlying reference entities is in a country listed in the above table.
(e) Includes physical commodities inventory and clearing house guarantee funds.
(f) The country rankings presented in the table as of December 31, 2021, are based on the country rankings of the corresponding exposures at December 31, 2022, not actual rankings of such exposures at December 31, 2021.

Climate risk is the risk associated with the impacts of climate change on the Firm's clients, customers, operations and business strategy. Climate change is viewed as a driver of risk that may impact existing types of risks managed by the Firm. Climate risk is categorized into physical risk and transition risk.

Physical risk refers to economic costs and financial loss associated with a changing climate. Acute physical risk drivers include the increased frequency or severity of climate and weather events, such as floods, wildfires and tropical storms. Chronic physical risk drivers include more gradual shifts in the climate, such as rising sea levels, persistent changes in precipitation levels and increases in average ambient temperatures.

Transition risk refers to the financial and economic implications associated with a societal adjustment to a lowcarbon economy. Transition risk drivers include possible changes in public policy, adoption of new technologies and shifts in consumer preferences. Transition risks may also be influenced by changes in the physical climate.

## Organization and management

The Firm has a Climate Risk Management function that is responsible for establishing the Firmwide framework and strategy for managing climate risk. The Climate Risk Management function engages across the Firm to help integrate climate risk considerations into existing risk management frameworks, as appropriate.

Other responsibilities of Climate Risk Management include:

- Setting policies, standards, procedures and processes to support identification, escalation, monitoring and management of climate risk across the Firm
- Developing metrics, scenarios, and stress testing mechanisms designed to assess the range of potential climate-related financial and economic impacts to the Firm
- Establishing a Firmwide climate risk data strategy and the supporting climate risk technology infrastructure

The LOBs and Corporate are responsible for the identification, assessment and management of climate risks present in their business activities and for adherence to applicable climate-related laws, rules and regulations.

## Governance and oversight

The Firm's approach to managing climate risk is consistent with the Firm's risk governance structure. The LOBs and Corporate are responsible for integrating climate risk management into existing governance frameworks, or creating new governance frameworks, as appropriate.

The LOBs, Corporate and Climate Risk Management are responsible for providing the Board Risk Committee with information on significant climate risks and climate-related initiatives, as appropriate.

# Management's discussion and analysis 

## OPERATIONAL RISK MANAGEMENT

Operational risk is the risk of an adverse outcome resulting from inadequate or failed internal processes or systems; human factors; or external events impacting the Firm's processes or systems. Operational Risk includes compliance, conduct, legal, and estimations and model risk. Operational risk is inherent in the Firm's activities and can manifest itself in various ways, including fraudulent acts, business disruptions (including those caused by extraordinary events beyond the Firm's control), cyber attacks, inappropriate employee behavior, failure to comply with applicable laws, rules and regulations or failure of vendors or other third party providers to perform in accordance with their agreements. Operational Risk Management attempts to manage operational risk at appropriate levels in light of the Firm's financial position, the characteristics of its businesses, and the markets and regulatory environments in which it operates.

Operational Risk Management Framework
The Firm's Compliance, Conduct, and Operational Risk ("CCOR") Management Framework is designed to enable the Firm to govern, identify, measure, monitor and test, manage and report on the Firm's operational risk.

## Operational Risk Governance

The LOBs and Corporate are responsible for the management of operational risk. The Control Management Organization, which consists of control managers within each LOB and Corporate, is responsible for the day-to-day execution of the CCOR Framework.

The Firm's Global Chief Compliance Officer ("CCO") and FRE for Operational Risk and Qualitative Risk Appetite is responsible for defining the CCOR Management Framework and establishing the minimum standards for its execution. The LOB and Corporate aligned CCOR Lead Officers report to the Global CCO and FRE for Operational Risk and Qualitative Risk Appetite and are independent of the respective businesses or functions they oversee. The CCOR Management Framework is included in the Risk Governance and Oversight Policy that is reviewed and approved by the Board Risk Committee periodically.

## Operational Risk Identification

The Firm utilizes a structured risk and control selfassessment process that is executed by the LOBs and Corporate. As part of this process, the LOBs and Corporate evaluate the effectiveness of their respective control environment to assess where controls have failed, and to determine where remediation efforts may be required. The Firm's Operational Risk and Compliance organization ("Operational Risk and Compliance") provides oversight of and challenge to these evaluations and may also perform independent assessments of significant operational risk events and areas of concentrated or emerging risk.

Operational Risk Measurement
Operational Risk and Compliance performs an independent assessment of the operational risks inherent within the LOBs and Corporate, which includes evaluating the effectiveness of the control environments and reporting the results to senior management.

In addition, Operational Risk and Compliance assesses operational risks through quantitative means, including operational risk-based capital and estimation of operational risk losses under both baseline and stressed conditions.

The primary component of the operational risk capital estimate is the Loss Distribution Approach ("LDA") statistical model, which simulates the frequency and severity of future operational risk loss projections based on historical data. The LDA model is used to estimate an aggregate operational risk loss over a one-year time horizon, at a $99.9 \%$ confidence level. The LDA model incorporates actual internal operational risk losses in the quarter following the period in which those losses were realized, and the calculation generally continues to reflect such losses even after the issues or business activities giving rise to the losses have been remediated or reduced.
As required under the Basel III capital framework, the Firm's operational risk-based capital methodology, which uses the Advanced Measurement Approach ("AMA"), incorporates internal and external losses as well as management's view of tail risk captured through operational risk scenario analysis, and evaluation of key business environment and internal control metrics. The Firm does not reflect the impact of insurance in its AMA estimate of operational risk capital.

The Firm considers the impact of stressed economic conditions on operational risk losses and develops a forward looking view of material operational risk events that may occur in a stressed environment. The Firm's operational risk stress testing framework is utilized in calculating results for the Firm's CCAR and other stress testing processes.

Refer to Capital Risk Management on pages 86-96 for information related to operational risk RWA, and CCAR.

Operational Risk Monitoring and testing
The results of risk assessments performed by Operational Risk and Compliance are used in connection with their independent monitoring and testing compliance of the LOBs and Corporate with laws, rules and regulations. Through monitoring and testing, Operational Risk and Compliance independently identify areas of heightened operational risk and tests the effectiveness of controls within the LOBs and Corporate.

## Management of Operational Risk

The operational risk areas or issues identified through monitoring and testing are escalated to the LOBs and Corporate to be remediated through action plans, as needed, to mitigate operational risk. Operational Risk and Compliance may advise the LOBs and Corporate in the development and implementation of action plans.

## Operational Risk Reporting

All employees of the Firm are expected to escalate risks appropriately. Risks identified by Operational Risk and Compliance are escalated to the appropriate LOB and Corporate Control Committees, as needed. Operational Risk and Compliance has established standards designed to ensure that consistent operational risk reporting and operational risk reports are produced on a Firmwide basis as well as by the LOBs and Corporate. Reporting includes the evaluation of key risk and performance indicators against established thresholds as well as the assessment of different types of operational risk against stated risk appetite. The standards reinforce escalation protocols to senior management and to the Board of Directors.
Subcategories and examples of operational risks Operational risk can manifest itself in various ways. Operational risk subcategories include Compliance risk, Conduct risk, Legal risk, and Estimations and Model risk. Refer to pages $145,146,147$ and 148 , respectively for more information on Compliance, Conduct, Legal, and Estimations and Model risk. Details on other select examples of operational risks such as cybersecurity, business and technology resiliency, payment fraud and third-party outsourcing are provided below.

## War in Ukraine and Sanctions

In response to the war in Ukraine, numerous financial and economic sanctions have been imposed on Russia and Russia-associated entities and individuals by various governments around the world, including the authorities in the U.S., U.K. and EU. These sanctions are complex and continue to evolve. The Firm continues to face increased operational risk associated with addressing these complex compliance-related matters. To manage this increased risk, the Firm has implemented controls reasonably designed to mitigate the risk of non-compliance and to prevent dealing with sanctioned persons or in property subject to sanctions, as well as to block or restrict payments as required by the applicable regulations.

## Cybersecurity risk

Cybersecurity risk is the risk of the Firm's exposure to harm or loss resulting from misuse or abuse of technology by malicious actors. Cybersecurity risk is an important and continuously evolving focus for the Firm. Significant resources are devoted to protecting and enhancing the security of computer systems, software, networks, storage devices, and other technology assets. The Firm's security efforts are designed to protect against, among other things, cybersecurity attacks by unauthorized parties attempting to obtain access to confidential information, destroy data,
disrupt or degrade service, sabotage systems or cause other damage.

The Firm has experienced, and expects that it will continue to experience, a higher volume and complexity of cyber attacks against the backdrop of heightened geopolitical tensions. The Firm has implemented precautionary measures and controls reasonably designed to address this increased risk, such as enhanced threat monitoring. There can be no assurance that the measures taken by the Firm will be successful in defending against cyber attacks.

Ongoing business expansions may expose the Firm to potential new threats as well as expanded regulatory scrutiny including the introduction of new cybersecurity requirements. The Firm continues to make significant investments in enhancing its cyber defense capabilities and to strengthen its partnerships with the appropriate government and law enforcement agencies and other businesses in order to understand the full spectrum of cybersecurity risks in the operating environment, enhance defenses and improve resiliency against cybersecurity threats. The Firm actively participates in discussions and simulations of cybersecurity risks both internally and with law enforcement, government officials, peer and industry groups, and has significantly increased efforts to educate employees and certain clients on the topic of cybersecurity risks.

Third parties with which the Firm does business or that facilitate the Firm's business activities (e.g., vendors, supply chain, exchanges, clearing houses, central depositories, and financial intermediaries) are also sources of cybersecurity risk to the Firm. Third party cybersecurity incidents such as system breakdowns or failures, misconduct by the employees of such parties, or cyber attacks, including ransomware and supply-chain compromises, could affect their ability to deliver a product or service to the Firm or result in lost or compromised information of the Firm or its clients. Clients are also sources of cybersecurity risk to the Firm and its information assets, particularly when their activities and systems are beyond the Firm's own security and control systems. As a result, the Firm engages in regular and ongoing discussions with certain vendors and clients regarding cybersecurity risks and opportunities to improve security. However, where cybersecurity incidents occur as a result of client failures to maintain the security of their own systems and processes, clients are responsible for losses incurred.
To help safeguard the confidentiality, integrity and availability of the Firm's infrastructure, resources and information, the Firm maintains a Information Security Program designed to prevent, detect, and respond to cyberattacks. The Board of Directors is periodically provided with updates on the Firm's Information Security Program, recommended changes, cybersecurity policies and practices, ongoing efforts to improve security, as well as the Firm's efforts regarding significant cybersecurity events. In addition, the Firm has a cybersecurity incident response

## Management's discussion and analysis

plan ("IRP") designed to enable the Firm to respond to attempted cybersecurity incidents, coordinate such responses with law enforcement and other government agencies, and notify clients and customers, as applicable. Among other key focus areas, the IRP is designed to mitigate the risk of insider trading connected to a cybersecurity incident, and includes various escalation points.

The Global Cybersecurity and Technology Controls organization, working with each of the Firm's LOBs and Corporate, is responsible for identifying technology and cybersecurity risks and is responsible for the controls to manage threats. The organization consists of business aligned information security personnel that are supported within the organization by the following products and services that execute the Information Security Program for the Firm:

- Cyber Operations
- Identity \& Access Management
- Governance, Risk \& Controls
- Global Technology Product Security

The Global Cybersecurity and Technology Controls governance structure is designed to identify, escalate, and mitigate information security risks. This structure uses key governance forums to disseminate information and monitor technology efforts. These forums are established at multiple levels throughout the Firm. The forums are used to escalate information security risks or other matters as appropriate.

The IRM function provides oversight of the activities designed to identify, assess, measure, and mitigate cybersecurity risk.
The Firm's Security Awareness Program includes training that reinforces the Firm's Information Technology Risk and Security Management policies, standards and practices, as well as the expectation that employees comply with these policies. The Security Awareness Program engages personnel through training on how to identify potential cybersecurity risks and protect the Firm's resources and information. This training is mandatory for all employees globally on a periodic basis, and it is supplemented by Firmwide testing initiatives, including periodic phishing tests. The Firm provides specialized security training for certain employee roles such as application developers. Finally, the Firm's Global Privacy Program requires all employees to take periodic awareness training on data privacy. This privacy-focused training includes information about confidentiality and security, as well as responding to unauthorized access to or use of information.

## Business and technology resiliency risk

Disruptions can occur due to forces beyond the Firm's control such as the spread of infectious diseases or pandemics, severe weather, power or telecommunications loss, failure of a third party to provide expected services, cyberattacks and terrorism. The Firmwide Business Resiliency Program is designed to enable the Firm to prepare for, adapt to, withstand and recover from business disruptions including occurrence of an extraordinary event beyond its control that may impact critical business functions and supporting assets (i.e., staff, technology, facilities and third parties). The program includes governance, awareness training, planning and testing of recovery strategies, as well as strategic and tactical initiatives to identify, assess, and manage business interruption and public safety risks.

## Payment fraud risk

Payment fraud risk is the risk of external and internal parties unlawfully obtaining personal monetary benefit through misdirected or otherwise improper payment. The Firm employs various controls for managing payment fraud risk as well as providing employee and client education and awareness trainings.

## Third-party outsourcing risk

The Firm‘s Third-Party Oversight ("TPO") and Inter-affiliates Oversight ("IAO") frameworks assist the LOBs and Corporate in selecting, documenting, onboarding, monitoring and managing their supplier relationships including services provided by affiliates. The objectives of the TPO framework are to hold suppliers and other third parties to a high level of operational performance and to mitigate key risks, including data loss and business disruptions. The Corporate Third-Party Oversight group is responsible for Firmwide training, monitoring, reporting and standards.

## Insurance

One of the ways in which operational risk may be mitigated is through insurance maintained by the Firm. The Firm purchases insurance from commercial insurers and maintains a wholly-owned captive insurer, Park Assurance Company. Insurance may also be required by third parties with whom the Firm does business.

Compliance risk, a subcategory of operational risk, is the risk of failing to comply with laws, rules, regulations or codes of conduct and standards of self-regulatory organizations.

## Overview

Each of the LOBs and Corporate hold primary ownership of and accountability for managing their compliance risk. The Firm's Operational Risk and Compliance Organization ("Operational Risk and Compliance"), which is independent of the LOBs and Corporate, provides independent review, monitoring and oversight of business operations with a focus on compliance with the laws, rules, and regulations applicable to the delivery of the Firm's products and services to clients and customers.

These compliance risks relate to a wide variety of laws, rules and regulations varying across the LOBs and Corporate, and jurisdictions, and include risks related to financial products and services, relationships and interactions with clients and customers, and employee activities. For example, compliance risks include those associated with anti-money laundering compliance, trading activities, market conduct, and complying with the laws, rules, and regulations related to the offering of products and services across jurisdictional borders. Compliance risk is also inherent in the Firm's fiduciary activities, including the failure to exercise the applicable standard of care to act in the best interest of fiduciary clients and customers or to treat fiduciary clients and customers fairly.

Other functions provide oversight of significant regulatory obligations that are specific to their respective areas of responsibility.

Operational Risk and Compliance implements policies and standards designed to govern, identify, measure, monitor and test, manage, and report on compliance risk.

Governance and oversight
Operational Risk and Compliance is led by the Firm's Global CCO and FRE for Operational Risk and Qualitative Risk Appetite.

The Firm maintains oversight and coordination of its compliance risk through the implementation of the CCOR Management Framework. The Firm's Global CCO and FRE for Operational Risk and Qualitative Risk Appetite also provides regular updates to the Board Risk Committee and the Audit Committee on significant compliance risk issues, as appropriate.

## Code of Conduct

The Firm has a Code of Conduct (the "Code") that sets forth the Firm's expectation that employees will conduct themselves with integrity at all times and provides the principles that govern employee conduct with clients, customers, shareholders and one another, as well as with the markets and communities in which the Firm does business. The Code requires employees to promptly report any potential or actual violation of the Code, any Firm policy, or any law or regulation applicable to the Firm's business. It also requires employees to report any illegal conduct, or conduct that violates the underlying principles of the Code, by any of the Firm's employees, clients, customers, suppliers, contract workers, business partners, or agents. Training is assigned to newly hired employees upon joining the Firm, and to current employees periodically on an ongoing basis. Employees are required to affirm their compliance with the Code annually.

Employees can report any potential or actual violations of the Code through the Firm's Conduct Hotline by phone or the internet. The Hotline is anonymous, except in certain non-U.S. jurisdictions where laws prohibit anonymous reporting, and is available at all times globally, with translation services. It is administered by an outside service provider. The Code prohibits retaliation against anyone who raises an issue or concern in good faith. Periodically, the Audit Committee receives reports on the Code of Conduct program.

## CONDUCT RISK MANAGEMENT

Conduct risk, a subcategory of operational risk, is the risk that any action or misconduct by an employee could lead to unfair client or customer outcomes, impact the integrity of the markets in which the Firm operates, harm employees or the Firm, or compromise the Firm's reputation.

## Overview

Each LOB and Corporate is accountable for identifying and managing its conduct risk to provide appropriate engagement, ownership and sustainability of a culture consistent with the Firm's How We Do Business Principles (the "Principles"). The Principles serve as a guide for how employees are expected to conduct themselves. With the Principles serving as a guide, the Firm's Code sets out the Firm's expectations for each employee and provides information and resources to help employees conduct business ethically and in compliance with applicable laws, rules and regulations everywhere the Firm operates. Refer to Compliance Risk Management on page 145 for further discussion of the Code.

## Governance and oversight

The Conduct Risk Program is governed by the CCOR Management policy, which establishes the framework for governance, identification, measurement, monitoring and testing, management and reporting conduct risk in the Firm.

The Firm has a senior forum that provides oversight of the Firm's conduct initiatives to develop a more holistic view of conduct risks and to connect key programs across the Firm in order to identify opportunities and emerging areas of focus. This forum is responsible for setting overall program direction for strategic enhancements to the Firm's employee conduct framework and reviewing the consolidated Firmwide Conduct Risk Appetite Assessment.

Conduct risk management encompasses various aspects of people management practices throughout the employee life cycle, including recruiting, onboarding, training and development, performance management, promotion and compensation processes. Each LOB, Treasury and CIO, and each designated corporate function completes an assessment of conduct risk periodically, reviews metrics and issues which may involve conduct risk, and provides conduct education as appropriate.

Legal risk, a subcategory of operational risk, is the risk of loss primarily caused by the actual or alleged failure to meet legal obligations that arise from the rule of law in jurisdictions in which the Firm operates, agreements with clients and customers, and products and services offered by the Firm.

## Overview

The global Legal function ("Legal") provides legal services and advice to the Firm. Legal is responsible for managing the Firm's exposure to legal risk by:

- managing actual and potential litigation and enforcement matters, including internal reviews and investigations related to such matters
- advising on products and services, including contract negotiation and documentation
- advising on offering and marketing documents and new business initiatives
- managing dispute resolution
- interpreting existing laws, rules and regulations, and advising on changes to them
- advising on advocacy in connection with contemplated and proposed laws, rules and regulations, and
- providing legal advice to the LOBs, Corporate and the Board.

Legal selects, engages and manages outside counsel for the Firm on all matters in which outside counsel is engaged. In addition, Legal advises the Firm's Conflicts Office which reviews the Firm's wholesale transactions that may have the potential to create conflicts of interest for the Firm.

## Governance and oversight

The Firm's General Counsel reports to the CEO and is a member of the Operating Committee, the Firmwide Risk Committee and the Firmwide Control Committee. The Firm's General Counsel and other members of Legal report on significant legal matters to the Firm's Board of Directors and to the Audit Committee.

Legal serves on and advises various committees and advises the Firm's LOBs and Corporate on potential reputation risk issues.

Estimations and Model risk, a subcategory of operational risk, is the potential for adverse consequences from decisions based on incorrect or misused estimation outputs.

The Firm uses models and other analytical and judgmentbased estimations across various businesses and functions. The estimation methods are of varying levels of sophistication and are used for many purposes, such as the valuation of positions and measurement of risk, assessing regulatory capital requirements, conducting stress testing, evaluating the allowance for credit losses and making business decisions. A dedicated independent function, Model Risk Governance and Review ("MRGR"), defines and governs the Firm's policies relating to the management of model risk and risks associated with certain analytical and judgment-based estimations, such as those used in risk management, budget forecasting and capital planning and analysis.

The governance of analytical and judgment-based estimations within MRGR's scope follows a consistent approach which is used for models, as described in detail below.

Model risks are owned by the users of the models within the Firm based on the specific purposes of such models. Users and developers of models are responsible for developing, implementing and testing their models, as well as referring models to MRGR for review and approval. Once models have been approved, model users and developers are responsible for maintaining a robust operating environment, and must monitor and evaluate the performance of the models on an ongoing basis. Model users and developers may seek to enhance models in response to changes in the portfolios and in product and market developments, as well as to capture improvements in available modeling techniques and systems capabilities.

Models are tiered based on an internal standard according to their complexity, the exposure associated with the model and the Firm's reliance on the model. This tiering is subject to the approval of MRGR. In its review of a model, MRGR considers whether the model is suitable for the specific purposes for which it will be used. When reviewing a model, MRGR analyzes and challenges the model methodology and the reasonableness of model assumptions, and may perform or require additional testing, including back-testing of model outcomes. Model reviews are approved by the appropriate level of management within MRGR based on the relevant model tier.

Under the Firm's Estimations and Model Risk Management Policy, MRGR reviews and approves new models, as well as material changes to existing models, prior to their use. In certain circumstances, exceptions may be granted to the Firm's policy to allow a model to be used prior to review or approval. MRGR may also require the user to take appropriate actions to mitigate the model risk if it is to be used in the interim. These actions will depend on the model and may include, for example, limitation of trading activity.
While models are inherently imprecise, the degree of imprecision or uncertainty can be heightened by the market or economic environment. This is particularly true when the current and forecasted environments are significantly different from the historical environments upon which the models were developed, as the Firm experienced during the early stages of the COVID-19 pandemic. This increased uncertainty may necessitate a greater degree of judgment and analytics to inform any adjustments that the Firm may make to model outputs than would otherwise be the case.
Refer to Critical Accounting Estimates Used by the Firm on pages 149-152 and Note 2 for a summary of model-based valuations and other valuation techniques.

JPMorgan Chase's accounting policies and use of estimates are integral to understanding its reported results. The Firm's most complex accounting estimates require management's judgment to ascertain the appropriate carrying value of assets and liabilities. The Firm has established policies and control procedures intended to ensure that estimation methods, including any judgments made as part of such methods, are well-controlled, independently reviewed and applied consistently from period to period. The methods used and judgments made reflect, among other factors, the nature of the assets or liabilities and the related business and risk management strategies, which may vary across the Firm's businesses and portfolios. In addition, the policies and procedures are intended to ensure that the process for changing methodologies occurs in an appropriate manner. The Firm believes its estimates for determining the carrying value of its assets and liabilities are appropriate. The following is a brief description of the Firm's critical accounting estimates involving significant judgments.

## Allowance for credit losses

The Firm's allowance for credit losses represents management's estimate of expected credit losses over the remaining expected life of the Firm's financial assets measured at amortized cost and certain off-balance sheet lending-related commitments. The allowance for credit losses comprises:

- The allowance for Ioan losses, which covers the Firm's retained loan portfolios (scored and risk-rated),
- The allowance for lending-related commitments, and
- The allowance for credit losses on investment securities.

The allowance for credit losses involves significant judgment on a number of matters including development and weighting of macroeconomic forecasts, incorporation of historical loss experience, assessment of risk characteristics, assignment of risk ratings, valuation of collateral, and the determination of remaining expected life. Refer to Note 10 and Note 13 for further information on these judgments as well as the Firm's policies and methodologies used to determine the Firm's allowance for credit losses.
One of the most significant judgments involved in estimating the Firm's allowance for credit losses relates to the macroeconomic forecasts used to estimate credit losses over the eight-quarter forecast period within the Firm's methodology. The eight-quarter forecast incorporates hundreds of macroeconomic variables ("MEVs") that are relevant for exposures across the Firm, with modeled credit losses being driven primarily by a subset of less than twenty variables. The specific variables that have the greatest effect on the modeled losses of each portfolio vary by portfolio and geography.

- Key MEVs for the consumer portfolio include regional U.S. unemployment rates, HPI and U.S. real GDP.
- Key MEVs for the wholesale portfolio include U.S. real GDP, U.S. unemployment, U.S. equity prices, U.S. interest rates, corporate credit spreads, oil prices, commercial real estate prices and HPI.
Changes in the Firm's assumptions and forecasts of economic conditions could significantly affect its estimate of expected credit losses in the portfolio at the balance sheet date or lead to significant changes in the estimate from one reporting period to the next.
It is difficult to estimate how potential changes in any one factor or input might affect the overall allowance for credit losses because management considers a wide variety of factors and inputs in estimating the allowance for credit losses. Changes in the factors and inputs considered may not occur at the same rate and may not be consistent across all geographies or product types, and changes in factors and inputs may be directionally inconsistent, such that improvement in one factor or input may offset deterioration in others.
To consider the impact of a hypothetical alternate macroeconomic forecast, the Firm compared the modeled credit losses determined using its central and relative adverse macroeconomic scenarios, which are two of the five scenarios considered in estimating the allowances for loan losses and lending-related commitments. The central and relative adverse scenarios each included a full suite of MEVs, but differed in the levels, paths and peaks/troughs of those variables over the eight-quarter forecast period.
For example, compared to the Firm's central scenario shown on page 127 and in Note 13, the Firm's relative adverse scenario assumes an elevated U.S. unemployment rate, averaging approximately $1.9 \%$ higher over the eightquarter forecast, with a peak difference of approximately $2.8 \%$ in the fourth quarter of 2023 ; lower U.S. real GDP with a slower recovery, remaining nearly $3.1 \%$ lower at the end of the eight-quarter forecast, with a peak difference of approximately $3.9 \%$ in the fourth quarter of 2023; and lower national HPI with a peak difference of approximately $8.4 \%$ in the third quarter of 2024.
This analysis is not intended to estimate expected future changes in the allowance for credit losses, for a number of reasons, including:
- The allowance as of December 31, 2022, reflects credit losses beyond those estimated under the central scenario due to the weight placed on the adverse scenarios.
- The impacts of changes in many MEVs are both interrelated and nonlinear, so the results of this analysis cannot be simply extrapolated for more severe changes in macroeconomic variables.
- Expectations of future changes in portfolio composition and borrower behavior can significantly affect the allowance for credit losses.
To demonstrate the sensitivity of credit loss estimates to macroeconomic forecasts as of December 31, 2022, the


## Management's discussion and analysis

Firm compared the modeled estimates under its relative adverse scenario to its central scenario. Without considering offsetting or correlated effects in other qualitative components of the Firm's allowance for credit losses, the comparison between these two scenarios for the exposures below reflect the following differences:

- An increase of approximately \$500 million for residential real estate loans and lending-related commitments
- An increase of approximately $\$ 2.2$ billion for credit card Ioans
- An increase of approximately $\$ 3.9$ billion for wholesale loans and lending-related commitments

This analysis relates only to the modeled credit loss estimates and is not intended to estimate changes in the overall allowance for credit losses as it does not reflect any potential changes in other adjustments to the quantitative calculation, which would also be influenced by the judgment management applies to the modeled lifetime loss estimates to reflect the uncertainty and imprecision of these modeled lifetime loss estimates based on then-current circumstances and conditions.

Recognizing that forecasts of macroeconomic conditions are inherently uncertain, particularly in light of the recent economic conditions, the Firm believes that its process to consider the available information and associated risks and uncertainties is appropriately governed and that its estimates of expected credit losses were reasonable and appropriate for the period ended December 31, 2022.

## Fair value

JPMorgan Chase carries a portion of its assets and liabilities at fair value. The majority of such assets and liabilities are measured at fair value on a recurring basis, including derivatives, structured note products and certain securities financing agreements. Certain assets and liabilities are measured at fair value on a nonrecurring basis, including certain mortgage, home equity and other loans, where the carrying value is based on the fair value of the underlying collateral.

## Assets measured at fair value

The following table includes the Firm's assets measured at fair value and the portion of such assets that are classified within level 3 of the fair value hierarchy. Refer to Note 2 for further information.

| December 31, 2022 <br> (in millions, except ratios) | Total assets at fair value | Total level 3 assets |
| :---: | :---: | :---: |
| Federal funds sold and securities purchased under resale agreements | \$ 311,883 | \$ - |
| Securities borrowed | 70,041 | - |
| Trading assets: |  |  |
| Trading-debt and equity instruments | 382,876 | 2,909 |
| Derivative receivables ${ }^{(a)}$ | 70,880 | 10,682 |
| Total trading assets | 453,756 | 13,591 |
| AFS securities | 205,857 | 239 |
| Loans | 42,079 | 1,418 |
| MSRs | 7,973 | 7,973 |
| Other | 14,014 | 405 |
| Total assets measured at fair value on a recurring basis | 1,105,603 | 23,626 |
| Total assets measured at fair value on a nonrecurring basis | 2,658 | 1,979 |
| Total assets measured at fair value | \$ 1,108,261 | \$ 25,605 |
| Total Firm assets | \$ 3,665,743 |  |
| Level 3 assets at fair value as a percentage of total Firm assets ${ }^{(\text {a })}$ |  | 0.7\% |
| Level 3 assets at fair value as a percentage of total Firm assets at fair value ${ }^{(\mathrm{a})}$ |  | 2.3\% |

(a) For purposes of the table above, the derivative receivables total reflects the impact of netting adjustments; however, the $\$ 10.7$ billion of derivative receivables classified as level 3 does not reflect the netting adjustment as such netting is not relevant to a presentation based on the transparency of inputs to the valuation of an asset. The level 3 balances would be reduced if netting were applied, including the netting benefit associated with cash collateral.

## Valuation

Details of the Firm's processes for determining fair value are set out in Note 2. Estimating fair value requires the application of judgment. The type and level of judgment required is largely dependent on the amount of observable market information available to the Firm. For instruments valued using internally developed valuation models and other valuation techniques that use significant unobservable inputs and are therefore classified within level 3 of the fair value hierarchy, judgments used to estimate fair value are more significant than those required when estimating the fair value of instruments classified within levels 1 and 2.

In arriving at an estimate of fair value for an instrument within level 3, management must first determine the appropriate valuation model or other valuation technique to use. Second, the lack of observability of certain significant inputs requires management to assess relevant empirical data in deriving valuation inputs including, for example, transaction details, yield curves, interest rates, prepayment speed, default rates, volatilities, correlations, prices (such as commodity, equity or debt prices), valuations of comparable instruments, foreign exchange rates and credit curves. Refer to Note 2 for a further discussion of the valuation of level 3 instruments, including unobservable inputs used.
For instruments classified in levels 2 and 3, management judgment must be applied to assess the appropriate level of valuation adjustments to reflect counterparty credit quality, the Firm's creditworthiness, market funding rates, liquidity considerations, unobservable parameters, and for portfolios that meet specified criteria, the size of the net open risk position. The judgments made are typically affected by the type of product and its specific contractual terms, and the level of liquidity for the product or within the market as a whole. In periods of heightened market volatility and uncertainty judgments are further affected by the wider variation of reasonable valuation estimates, particularly for positions that are less liquid. Refer to Note 2 for a further discussion of valuation adjustments applied by the Firm.

Imprecision in estimating unobservable market inputs or other factors can affect the amount of gain or loss recorded for a particular position. Furthermore, while the Firm believes its valuation methods are appropriate and consistent with those of other market participants, the methods and assumptions used reflect management judgment and may vary across the Firm's businesses and portfolios.

The Firm uses various methodologies and assumptions in the determination of fair value. The use of methodologies or assumptions different than those used by the Firm could result in a different estimate of fair value at the reporting date. Refer to Note 2 for a detailed discussion of the Firm's valuation process and hierarchy, and its determination of fair value for individual financial instruments.

Goodwill impairment
Under U.S. GAAP, goodwill must be allocated to reporting units and tested for impairment at least annually. The Firm's process and methodology used to conduct goodwill impairment testing is described in Note 15.
Management applies significant judgment when testing goodwill for impairment. The goodwill associated with each business combination is allocated to the related reporting units for goodwill impairment testing.

For the year ended December 31, 2022, the Firm reviewed current economic conditions, estimated market cost of equity, as well as actual business results and projections of business performance. Based on such reviews, the Firm has concluded that goodwill was not impaired as of December 31, 2022. For each of the reporting units, fair value exceeded carrying value by at least $10 \%$ and there was no indication of a significant risk of goodwill impairment based on current projections and valuations.

The projections for the Firm's reporting units are consistent with management's current business outlook assumptions in the short term, and the Firm's best estimates of longterm growth and return on equity in the longer term. Where possible, the Firm uses third-party and peer data to benchmark its assumptions and estimates.
Refer to Note 15 for additional information on goodwill, including the goodwill impairment assessment as of December 31, 2022.

## Credit card rewards liability

JPMorgan Chase offers credit cards with various rewards programs which allow cardholders to earn rewards points based on their account activity and the terms and conditions of the rewards program. Generally, there are no limits on the points that an eligible cardholder can earn, nor do the points expire, and the points can be redeemed for a variety of rewards, including cash (predominantly in the form of account credits), gift cards and travel. The Firm maintains a rewards liability which represents the estimated cost of rewards points earned and expected to be redeemed by cardholders. The liability is accrued as the cardholder earns the benefit and is reduced when the cardholder redeems points. This liability was $\$ 11.3$ billion and $\$ 9.8$ billion at December 31, 2022 and 2021, respectively, and is recorded in accounts payable and other liabilities on the Consolidated balance sheets. The increase in the liability was driven by continued growth in rewards points earned on increased cardholder spending and promotional offers outpacing redemptions throughout 2022.

The rewards liability is sensitive to redemption rate ("RR") and cost per point ("CPP") assumptions. The RR assumption is used to estimate the number of points earned by customers that will be redeemed over the life of the account. The CPP assumption is used to estimate the cost of future point redemptions. These assumptions are evaluated periodically considering historical actuals, cardholder redemption behavior and management judgment. Updates

## Management's discussion and analysis

to these assumptions will impact the rewards liability. As of December 31, 2022, a combined increase of 25 basis points in RR and 1 basis point in CPP would increase the rewards liability by approximately $\$ 315$ million.

## Income taxes

JPMorgan Chase is subject to the income tax laws of the various jurisdictions in which it operates, including U.S. federal, state and local, and non-U.S. jurisdictions. These laws are often complex and may be subject to different interpretations. To determine the financial statement impact of accounting for income taxes, including the provision for income tax expense and unrecognized tax benefits, JPMorgan Chase must make assumptions and judgments about how to interpret and apply these complex tax laws to numerous transactions and business events, as well as make judgments regarding the timing of when certain items may affect taxable income in the U.S. and non-U.S. tax jurisdictions.
JPMorgan Chase's interpretations of tax laws around the world are subject to review and examination by the various taxing authorities in the jurisdictions where the Firm operates, and disputes may occur regarding its view on a tax position. These disputes over interpretations with the various taxing authorities may be settled by audit, administrative appeals or adjudication in the court systems of the tax jurisdictions in which the Firm operates. JPMorgan Chase regularly reviews whether it may be assessed additional income taxes as a result of the resolution of these matters, and the Firm records additional unrecognized tax benefits, as appropriate. In addition, the Firm may revise its estimate of income taxes due to changes in income tax laws, legal interpretations, and business strategies. It is possible that revisions in the Firm's estimate of income taxes may materially affect the Firm's results of operations in any reporting period.
Deferred taxes arise from differences between assets and liabilities measured for financial reporting versus income tax return purposes. Deferred tax assets are recognized if, in management's judgment, their realizability is determined to be more likely than not. Deferred taxes are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred taxes of a change in tax rates is recognized within the provision for income taxes in the period enacted.

The Firm has also recognized deferred tax assets in connection with certain tax attributes, including net operating loss ("NOL") carryforwards and foreign tax credit ("FTC") carryforwards. The Firm performs regular reviews to ascertain whether its deferred tax assets are realizable. These reviews include management's estimates and assumptions regarding future taxable income, including foreign source income, and may incorporate various tax planning strategies, including strategies that may be available to utilize NOLs and FTCs before they expire. In connection with these reviews, if it is determined that a deferred tax asset is not realizable, a valuation allowance is
established. The valuation allowance may be reversed in a subsequent reporting period if the Firm determines that, based on revised estimates of future taxable income or changes in tax planning strategies, it is more likely than not that all or part of the deferred tax asset will become realizable. As of December 31, 2022, management has determined it is more likely than not that the Firm will realize its deferred tax assets, net of the existing valuation allowance.

The Firm adjusts its unrecognized tax benefits as necessary when new information becomes available, including changes in tax law and regulations, and interactions with taxing authorities. Uncertain tax positions that meet the more-likely-than-not recognition threshold are measured to determine the amount of benefit to recognize. An uncertain tax position is measured at the largest amount of benefit that management believes is more likely than not to be realized upon settlement. It is possible that the reassessment of JPMorgan Chase's unrecognized tax benefits may have a material impact on its effective income tax rate in the period in which the reassessment occurs. Although the Firm believes that its estimates are reasonable, the final tax amount could be different from the amounts reflected in the Firm's income tax provisions and accruals. To the extent that the final outcome of these amounts is different than the amounts recorded, such differences will generally impact the Firm's provision for income taxes in the period in which such a determination is made.

The Firm's provision for income taxes is composed of current and deferred taxes. The current and deferred tax provisions are calculated based on estimates and assumptions that could differ from the actual results reflected in income tax returns filed during the subsequent year. Adjustments based on filed returns are generally recorded in the period when the tax returns are filed and the global tax implications are known, which could impact the Firm's effective tax rate.

Refer to Note 25 for additional information on income taxes.

Litigation reserves
Refer to Note 30 for a description of the significant estimates and judgments associated with establishing litigation reserves.

Financial Accounting Standards Board ("FASB") Standards Adopted since January 1, 2021

| Standard | Summary of guidance |  |
| :---: | :---: | :---: |
|  | - Provides optional expedients and exceptions to current accounting guidance when financial instruments, hedge accounting relationships, and other transactions are amended due to reference rate reform. <br> - Provides an election to account for certain contract amendments related to reference rate reform as modifications rather than extinguishments without the requirement to assess the significance of the amendments. <br> - Allows for changes in critical terms of a hedge accounting relationship without automatic termination of that relationship. Provides various practical expedients and elections designed to allow hedge accounting to continue uninterrupted during | - Issued and effective March 12, 2020. The January 7, 2021 and December 21, 2022 updates were effective when issued. <br> - The Firm elected to apply certain of the practical expedients related to contract modifications and hedge accounting relationships, and discounting transition beginning in the third quarter of 2020. The discounting transition election was applied retrospectively. The main purpose of the practical expedients is to ease the administrative burden of accounting for contracts impacted by reference rate reform. These elections did not have a material impact on the Consolidated Financial Statements. |
| sued March |  |  |
|  |  |  |
|  |  |  |

- Provides a one-time election to transfer securities out of the held-to-maturity classification if certain criteria are met.
- The January 2021 update provides an election to account for derivatives modified to change the rate used for discounting, margining, or contract price alignment (collectively "discounting transition") as modifications.
- The December 2022 update extends the termination date of the optional expedients and exceptions to current accounting guidance to December 31, 2024.
FASB Standards Issued but Not Adopted as of December 31, 2022

| Standard | Summary of guidance | Effects on financial statements |
| :--- | :--- | :--- |
| Derivatives and | • Expands the current ability to hedge a portfolio of | • Adopted prospectively on January 1, 2023 |
| Hedging: Fair Value | prepayable assets to allow more of the portfolio to be | and, as permitted by the guidance, in January |
| Hedging - Portfolio | hedged. Non-prepayable assets can also be included <br> in the same portfolio, thus increasing the size of the | 2023 the Firm transferred and designated <br> Layer Method |
| portfolio and the amount available to be hedged. | into a closed AFS securities portfolio hedged |  |
| Issued March 2022 | Clarifies the types of derivatives that can be used as | under the portfolio layer method. |位, and the balance sheet presentation and disclosure requirements for the hedge accounting adjustments.

- Allows a one-time reclassification from HTM to AFS upon adoption.

Financial
Instruments -
Credit Losses:
Troubled Debt
Restructurings and
Vintage Disclosures
Issued March 2022

- Eliminates existing accounting and disclosure requirements for Troubled Debt Restructurings, including the requirement to measure the allowance using a discounted cash flow methodology.
- Requires disclosure of Ioan modifications for borrowers experiencing financial difficulty involving principal forgiveness, interest rate reduction, other-than-insignificant payment delay, term extension or a combination of these modifications.
- Requires disclosure of current period loan charge-off information by origination year.
- May be adopted prospectively, or by using a modified retrospective method wherein the effect of adoption is reflected as an adjustment to retained earnings at the effective date.
- Adopted January 1, 2023.
- This guidance was adopted using a modified retrospective method which resulted in a net decrease to the allowance for credit losses of approximately $\$ 600$ million and an increase to retained earnings of approximately $\$ 450$ million after-tax, predominantly driven by residential real estate and credit card. Refer to Note 1 for further information.


## Management's discussion and analysis

## FORWARD-LOOKING STATEMENTS

From time to time, the Firm has made and will make forward-looking statements. These statements can be identified by the fact that they do not relate strictly to historical or current facts. Forward-looking statements often use words such as "anticipate," "target," "expect," "estimate," "intend," "plan," "goal," "believe," or other words of similar meaning. Forward-looking statements provide JPMorgan Chase's current expectations or forecasts of future events, circumstances, results or aspirations. JPMorgan Chase's disclosures in this 2022 Form 10-K contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. The Firm also may make forward-looking statements in its other documents filed or furnished with the SEC. In addition, the Firm's senior management may make forward-looking statements orally to investors, analysts, representatives of the media and others.

All forward-looking statements are, by their nature, subject to risks and uncertainties, many of which are beyond the Firm's control. JPMorgan Chase's actual future results may differ materially from those set forth in its forward-looking statements. While there is no assurance that any list of risks and uncertainties or risk factors is complete, below are certain factors which could cause actual results to differ from those in the forward-looking statements:

- Local, regional and global business, economic and political conditions and geopolitical events, including the war in Ukraine;
- Changes in laws, rules, and regulatory requirements, including capital and liquidity requirements affecting the Firm's businesses, and the ability of the Firm to address those requirements;
- Heightened regulatory and governmental oversight and scrutiny of JPMorgan Chase's business practices, including dealings with retail customers;
- Changes in trade, monetary and fiscal policies and laws;
- Changes in the level of inflation;
- Changes in income tax laws, rules, and regulations;
- Securities and capital markets behavior, including changes in market liquidity and volatility;
- Changes in investor sentiment or consumer spending or savings behavior;
- Ability of the Firm to manage effectively its capital and liquidity;
- Changes in credit ratings assigned to the Firm or its subsidiaries;
- Damage to the Firm's reputation;
- Ability of the Firm to appropriately address social, environmental and sustainability concerns that may arise, including from its business activities;
- Ability of the Firm to deal effectively with an economic slowdown or other economic or market disruption, including, but not limited to, in the interest rate environment;
- Technology changes instituted by the Firm, its counterparties or competitors;
- The effectiveness of the Firm's control agenda;
- Ability of the Firm to develop or discontinue products and services, and the extent to which products or services previously sold by the Firm require the Firm to incur liabilities or absorb losses not contemplated at their initiation or origination;
- Acceptance of the Firm's new and existing products and services by the marketplace and the ability of the Firm to innovate and to increase market share;
- Ability of the Firm to attract and retain qualified and diverse employees;
- Ability of the Firm to control expenses;
- Competitive pressures;
- Changes in the credit quality of the Firm's clients, customers and counterparties;
- Adequacy of the Firm's risk management framework, disclosure controls and procedures and internal control over financial reporting;
- Adverse judicial or regulatory proceedings;
- Changes in applicable accounting policies, including the introduction of new accounting standards;
- Ability of the Firm to determine accurate values of certain assets and liabilities;
- Occurrence of natural or man-made disasters or calamities, including health emergencies, the spread of infectious diseases, epidemics or pandemics, an outbreak or escalation of hostilities or other geopolitical instabilities, the effects of climate change or extraordinary events beyond the Firm's control, and the Firm's ability to deal effectively with disruptions caused by the foregoing;
- Ability of the Firm to maintain the security of its financial, accounting, technology, data processing and other operational systems and facilities;
- Ability of the Firm to withstand disruptions that may be caused by any failure of its operational systems or those of third parties;
- Ability of the Firm to effectively defend itself against cyber attacks and other attempts by unauthorized parties to access information of the Firm or its customers or to disrupt the Firm's systems; and
- The other risks and uncertainties detailed in Part I, Item 1A: Risk Factors in JPMorgan Chase’s 2022 Form 10-K.

Any forward-looking statements made by or on behalf of the Firm speak only as of the date they are made, and JPMorgan Chase does not undertake to update any forward-looking statements. The reader should, however, consult any further disclosures of a forward-looking nature the Firm may make in any subsequent Form 10-Ks, Quarterly Reports on Form 10-Qs, or Current Reports on Form 8-K.

## Management's report on internal control over financial reporting

Management of JPMorgan Chase \& Co. ("JPMorgan Chase" or the "Firm") is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is a process designed by, or under the supervision of, the Firm's principal executive and principal financial officers, or persons performing similar functions, and effected by JPMorgan Chase's Board of Directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP").

JPMorgan Chase's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records, that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the Firm's assets; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with U.S. GAAP, and that receipts and expenditures of the Firm are being made only in accordance with authorizations of JPMorgan Chase's management and directors; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Firm's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate. Management has completed an assessment of the effectiveness of the Firm's internal control over financial reporting as of December 31, 2022. In making the assessment, management used the "Internal Control - Integrated Framework" ("COSO 2013") promulgated by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO").

Based upon the assessment performed, management concluded that as of December 31, 2022, JPMorgan Chase's internal control over financial reporting was effective based upon the COSO 2013 framework. Additionally, based upon management's assessment, the Firm determined that there were no material weaknesses in its internal control over financial reporting as of December 31, 2022.

The effectiveness of the Firm's internal control over financial reporting as of December 31, 2022, has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which appears herein.


James Demon
Chairman and Chief Executive Officer


Jeremy Barnum
Executive Vice President and Chief Financial Officer

February 21, 2023

## Report of Independent Registered Public Accounting Firm



To the Board of Directors and Shareholders of JPMorgan Chase \& Co.:

## Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of JPMorgan Chase \& Co. and its subsidiaries (the "Firm") as of December 31, 2022 and 2021, and the related consolidated statements of income, comprehensive income, changes in stockholders' equity and cash flows for each of the three years in the period ended December 31, 2022, including the related notes (collectively referred to as the "consolidated financial statements"). We also have audited the Firm's internal control over financial reporting as of December 31, 2022, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Firm as of December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2022 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Firm maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on criteria established in Internal Control - Integrated Framework (2013) issued by the COSO.

## Change in Accounting Principle

As discussed in Note 1 to the consolidated financial statements, the Firm changed the manner in which it accounts for credit losses on certain financial instruments in 2020.

## Basis for Opinions

The Firm's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's report on internal control over financial reporting. Our responsibility is to express opinions on the Firm's consolidated financial statements and on the Firm's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Firm in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.
Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

## Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

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## Report of Independent Registered Public Accounting Firm

## Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that (i) relate to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

## Allowance for Loan Losses - Portfolio-based component of Wholesale Loan and Credit Card Loan Portfolios

As described in Note 13 to the consolidated financial statements, the allowance for loan losses for the portfoliobased component of the wholesale and credit card loan portfolios was $\$ 17.0$ billion on total portfolio-based retained loans of $\$ 785.9$ billion at December 31, 2022. The Firm's allowance for loan losses represents management's estimate of expected credit losses over the remaining expected life of the Firm's Ioan portfolios and considers expected future changes in macroeconomic conditions. The portfolio-based component of the Firm's allowance for loan losses for the wholesale and credit card retained loan portfolios begins with a quantitative calculation of expected credit losses over the expected life of the loan by applying credit loss factors to the estimated exposure at default. The credit loss factors applied are determined based on the weighted average of five internally developed macroeconomic scenarios that take into consideration the Firm's economic outlook as derived through forecast macroeconomic variables, the most significant of which are U.S. unemployment and U.S. real gross domestic product. This quantitative calculation is further adjusted to take into consideration model imprecision, emerging risk assessments, trends and other subjective factors that are not yet otherwise reflected in the credit loss estimate.

The principal considerations for our determination that performing procedures relating to the allowance for loan losses for the portfolio-based component of the wholesale and credit card loan portfolios is a critical audit matter are (i) the significant judgment and estimation by management in the forecast of macroeconomic variables, specifically U.S. unemployment and U.S. real gross domestic product, as the Firm's forecasts of economic conditions significantly affect its estimate of expected credit losses at the balance sheet date, (ii) the significant judgment and estimation by management in determining the quantitative calculation utilized in their credit loss estimates and the adjustments to take into consideration model imprecision, emerging risk assessments, trends and other subjective factors that are not yet otherwise reflected in the credit loss estimate, which both in turn led to a high degree of auditor judgment, subjectivity, and effort in performing procedures and in
evaluating audit evidence obtained relating to the credit loss estimates and the appropriateness of the adjustments to the credit loss estimates, and (iii) the audit effort involved the use of professionals with specialized skill and knowledge.
Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to the Firm's allowance for Ioan losses, including controls over model validation and generation of macroeconomic scenarios. These procedures also included, among others, testing management's process for estimating the allowance for loan losses, which involved (i) evaluating the appropriateness of the models and methodologies used in quantitative calculations; (ii) evaluating the reasonableness of forecasts of U.S. unemployment and U.S. real gross domestic product; (iii) testing the completeness and accuracy of data used in the estimate; and (iv) evaluating the reasonableness of management's adjustments to the quantitative output for the impacts of model imprecision, emerging risk assessments, trends and other subjective factors that are not yet otherwise reflected in the credit loss estimate. These procedures also included the use of professionals with specialized skill and knowledge to assist in evaluating the appropriateness of certain models, methodologies and macroeconomic variables.

## Fair Value of Certain Level 3 Financial Instruments

As described in Notes 2 and 3 to the consolidated financial statements, the Firm carries \$1.1 trillion of its assets and $\$ 453.7$ billion of its liabilities at fair value on a recurring basis. Included in these balances are $\$ 13.6$ billion of trading assets and $\$ 37.8$ billion of liabilities measured at fair value on a recurring basis, collectively financial instruments, which are classified as level 3 as they contain one or more inputs to valuation which are unobservable and significant to their fair value measurement. The Firm utilized internally developed valuation models and unobservable inputs to estimate fair value of the level 3 financial instruments. The unobservable inputs used by management to estimate the fair value of certain of these financial instruments include volatility relating to interest rates, correlation relating to interest rates, equity prices, credit and foreign exchange rates, and Bermudan switch values.

The principal considerations for our determination that performing procedures relating to the fair value of certain level 3 financial instruments is a critical audit matter are (i) the significant judgment and estimation by management in determining the inputs to estimate fair value, which in turn led to a high degree of auditor judgment, subjectivity, and effort in performing procedures and in evaluating audit evidence obtained related to the fair value of these financial instruments, and (ii) the audit effort involved the use of professionals with specialized skill and knowledge.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to the Firm's determination of the fair value, including controls over models, inputs, and data. These procedures also included, among others, the involvement of professionals with specialized skill and knowledge to assist in developing an independent estimate of fair value for a sample of these financial instruments and comparing management's estimate to the independently developed estimate of fair value. Developing the independent estimate involved testing the completeness and accuracy of data provided by management, developing independent inputs and, as appropriate, evaluating and utilizing management's aforementioned unobservable inputs.


February 21, 2023
We have served as the Firm's auditor since 1965.

JPMorgan Chase \& Co.
Consolidated statements of income

| Year ended December 31, (in millions, except per share data) | 2022 |  | 2021 |  | 2020 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Revenue |  |  |  |  |  |  |
| Investment banking fees | \$ | 6,686 | \$ | 13,216 | \$ | 9,486 |
| Principal transactions |  | 19,912 |  | 16,304 |  | 18,021 |
| Lending- and deposit-related fees |  | 7,098 |  | 7,032 |  | 6,511 |
| Asset management, administration and commissions |  | 20,677 |  | 21,029 |  | 18,177 |
| Investment securities gains/(losses) |  | $(2,380)$ |  | (345) |  | 802 |
| Mortgage fees and related income |  | 1,250 |  | 2,170 |  | 3,091 |
| Card income |  | 4,420 |  | 5,102 |  | 4,435 |
| Other income |  | 4,322 |  | 4,830 |  | 4,865 |
| Noninterest revenue |  | 61,985 |  | 69,338 |  | 65,388 |
| Interest income |  | 92,807 |  | 57,864 |  | 64,523 |
| Interest expense |  | 26,097 |  | 5,553 |  | 9,960 |
| Net interest income |  | 66,710 |  | 52,311 |  | 54,563 |
| Total net revenue |  | 128,695 |  | 121,649 |  | 119,951 |
| Provision for credit losses |  | 6,389 |  | $(9,256)$ |  | 17,480 |
| Noninterest expense |  |  |  |  |  |  |
| Compensation expense |  | 41,636 |  | 38,567 |  | 34,988 |
| Occupancy expense |  | 4,696 |  | 4,516 |  | 4,449 |
| Technology, communications and equipment expense |  | 9,358 |  | 9,941 |  | 10,338 |
| Professional and outside services |  | 10,174 |  | 9,814 |  | 8,464 |
| Marketing |  | 3,911 |  | 3,036 |  | 2,476 |
| Other expense |  | 6,365 |  | 5,469 |  | 5,941 |
| Total noninterest expense |  | 76,140 |  | 71,343 |  | 66,656 |
| Income before income tax expense |  | 46,166 |  | 59,562 |  | 35,815 |
| Income tax expense |  | 8,490 |  | 11,228 |  | 6,684 |
| Net income | \$ | 37,676 | \$ | 48,334 | \$ | 29,131 |
| Net income applicable to common stockholders | \$ | 35,892 | \$ | 46,503 | \$ | 27,410 |
| Net income per common share data |  |  |  |  |  |  |
| Basic earnings per share | \$ | 12.10 | \$ | 15.39 | \$ | 8.89 |
| Diluted earnings per share |  | 12.09 |  | 15.36 |  | 8.88 |
| Weighted-average basic shares |  | 2,965.8 |  | 3,021.5 |  | 3,082.4 |
| Weighted-average diluted shares |  | 2,970.0 |  | 3,026.6 |  | 3,087.4 |

The Notes to Consolidated Financial Statements are an integral part of these statements.

JPMorgan Chase \& Co.
Consolidated statements of comprehensive income

| Year ended December 31, (in millions) | $\mathbf{2 0 2 2}$ | 2021 | 2020 |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Net income | $\$$ | $\mathbf{3 7 , 6 7 6}$ | $\$$ | 48,334 | $\$$ |
| Other comprehensive income/(loss), after-tax |  | 29,131 |  |  |  |
| Unrealized gains/(losses) on investment securities |  | $(\mathbf{1 1 , 7 6 4 )}$ | $(5,540)$ | 4,123 |  |
| Translation adjustments, net of hedges | $\mathbf{( 6 1 1 )}$ | $(461)$ | 234 |  |  |
| Fair value hedges | $\mathbf{9 8}$ | $(19)$ | 19 |  |  |
| Cash flow hedges | $\mathbf{( 5 , 3 6 0 )}$ | $(2,679)$ | 2,320 |  |  |
| Defined benefit pension and OPEB plans | $\mathbf{( 1 , 2 4 1 )}$ | 922 | 212 |  |  |
| DVA on fair value option elected liabilities | $\mathbf{1 , 6 2 1}$ | $(293)$ | $(491)$ |  |  |
| Total other comprehensive income/(loss), after-tax | $\mathbf{( 1 7 , 2 5 7 )}$ | $(8,070)$ | 6,417 |  |  |
| Comprehensive income | $\mathbf{\$}$ | $\mathbf{2 0 , 4 1 9}$ | $\$$ | 40,264 | $\$$ |

The Notes to Consolidated Financial Statements are an integral part of these statements.

JPMorgan Chase \& Co.
Consolidated balance sheets

| December 31, (in millions, except share data) | 2022 |  | 2021 |  |
| :---: | :---: | :---: | :---: | :---: |
| Assets |  |  |  |  |
| Cash and due from banks | \$ | 27,697 | \$ | 26,438 |
| Deposits with banks |  | 539,537 |  | 714,396 |
| Federal funds sold and securities purchased under resale agreements (included \$311,883 and \$252,720 at fair value) |  | 315,592 |  | 261,698 |
| Securities borrowed (included \$70,041 and \$81,463 at fair value) |  | 185,369 |  | 206,071 |
| Trading assets (included assets pledged of \$93,687 and \$102,710) |  | 453,799 |  | 433,575 |
| Available-for-sale securities (amortized cost of $\$ \mathbf{2 1 6 , 1 8 8}$ and $\$ 308,254$; included assets pledged of $\$ \mathbf{9 , 1 5 8}$ and $\$ 18,268$ ) |  | 205,857 |  | 308,525 |
| Held-to-maturity securities |  | 425,305 |  | 363,707 |
| Investment securities, net of allowance for credit losses |  | 631,162 |  | 672,232 |
| Loans (included \$42,079 and \$58,820 at fair value) |  | 1,135,647 |  | 1,077,714 |
| Allowance for loan losses |  | $(19,726)$ |  | $(16,386)$ |
| Loans, net of allowance for loan losses |  | 1,115,921 |  | 1,061,328 |
| Accrued interest and accounts receivable |  | 125,189 |  | 102,570 |
| Premises and equipment |  | 27,734 |  | 27,070 |
| Goodwill, MSRs and other intangible assets |  | 60,859 |  | 56,691 |
| Other assets (included \$14,921 and \$14,753 at fair value and assets pledged of \$7,998 and \$5,298) |  | 182,884 |  | 181,498 |
| Total assets ${ }^{\text {(a) }}$ | \$ | 3,665,743 | \$ | 3,743,567 |
| Liabilities |  |  |  |  |
| Deposits (included \$28,620 and \$11,333 at fair value) | \$ | 2,340,179 | \$ | 2,462,303 |
| Federal funds purchased and securities loaned or sold under repurchase agreements (included \$151,999 and \$126,435 at fair value) |  | 202,613 |  | 194,340 |
| Short-term borrowings (included \$15,792 and \$20,015 at fair value) |  | 44,027 |  | 53,594 |
| Trading liabilities |  | 177,976 |  | 164,693 |
| Accounts payable and other liabilities (included \$7,038 and \$5,651 at fair value) |  | 300,141 |  | 262,755 |
| Beneficial interests issued by consolidated VIEs (included \$5 and \$12 at fair value) |  | 12,610 |  | 10,750 |
| Long-term debt (included \$72,281 and \$74,934 at fair value) |  | 295,865 |  | 301,005 |
| Total liabilities ${ }^{(a)}$ |  | 3,373,411 |  | 3,449,440 |
| Commitments and contingencies (refer to Notes 28, 29 and 30) |  |  |  |  |
| Stockholders' equity |  |  |  |  |
| Preferred stock (\$1 par value; authorized 200,000,000 shares: issued 2,740,375 and 3,483,750 shares) |  | 27,404 |  | 34,838 |
| Common stock (\$1 par value; authorized 9,000,000,000 shares; issued 4,104,933,895 shares) |  | 4,105 |  | 4,105 |
| Additional paid-in capital |  | 89,044 |  | 88,415 |
| Retained earnings |  | 296,456 |  | 272,268 |
| Accumulated other comprehensive losses |  | $(17,341)$ |  | (84) |
| Treasury stock, at cost (1,170,676,094 and 1,160,784,750 shares) |  | $(107,336)$ |  | $(105,415)$ |
| Total stockholders' equity |  | 292,332 |  | 294,127 |
| Total liabilities and stockholders' equity | \$ | 3,665,743 | \$ | 3,743,567 |

(a) The following table presents information on assets and liabilities related to VIEs that are consolidated by the Firm at December 31, 2022 and 2021. The assets of the consolidated VIEs are used to settle the liabilities of those entities. The holders of the beneficial interests do not have recourse to the general credit of JPMorgan Chase. The assets and liabilities in the table below include third-party assets and liabilities of consolidated VIEs and exclude intercompany balances that eliminate in consolidation. Refer to Note 14 for a further discussion.

| December 31, (in millions) | 2022 |  | 2021 |  |
| :---: | :---: | :---: | :---: | :---: |
| Assets |  |  |  |  |
| Trading assets | \$ | 2,151 | \$ | 2,010 |
| Loans |  | 34,411 |  | 33,024 |
| All other assets |  | 550 |  | 490 |
| Total assets | \$ | 37,112 | \$ | 35,524 |
| Liabilities |  |  |  |  |
| Beneficial interests issued by consolidated VIEs | \$ | 12,610 | \$ | 10,750 |
| All other liabilities |  | 279 |  | 245 |
| Total liabilities | \$ | 12,889 | \$ | 10,995 |

The Notes to Consolidated Financial Statements are an integral part of these statements.

JPMorgan Chase \& Co.
Consolidated statements of changes in stockholders' equity

| Year ended December 31, (in millions, except per share data) | 2022 |  | 2021 |  | 2020 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Preferred stock |  |  |  |  |  |  |
| Balance at January 1 | \$ | 34,838 | \$ | 30,063 | \$ | 26,993 |
| Issuance |  | - |  | 7,350 |  | 4,500 |
| Redemption |  | $(7,434)$ |  | $(2,575)$ |  | $(1,430)$ |
| Balance at December 31 |  | 27,404 |  | 34,838 |  | 30,063 |
| Common stock |  |  |  |  |  |  |
| Balance at January 1 and December 31 |  | 4,105 |  | 4,105 |  | 4,105 |
| Additional paid-in capital |  |  |  |  |  |  |
| Balance at January 1 |  | 88,415 |  | 88,394 |  | 88,522 |
| Shares issued and commitments to issue common stock for employee share-based compensation awards, and related tax effects |  | 629 |  | 152 |  | (72) |
| Other |  | - |  | (131) |  | (56) |
| Balance at December 31 |  | 89,044 |  | 88,415 |  | 88,394 |
| Retained earnings |  |  |  |  |  |  |
| Balance at January 1 |  | 272,268 |  | 236,990 |  | 223,211 |
| Cumulative effect of change in accounting principles |  | - |  | - |  | $(2,650)$ |
| Net income |  | 37,676 |  | 48,334 |  | 29,131 |
| Dividends declared: |  |  |  |  |  |  |
| Preferred stock |  | $(1,595)$ |  | $(1,600)$ |  | $(1,583)$ |
| Common stock (\$4.00, \$3.80 and \$3.60 per share for 2022, 2021 and 2020, respectively) |  | $(11,893)$ |  | $(11,456)$ |  | $(11,119)$ |
| Balance at December 31 |  | 296,456 |  | 272,268 |  | 236,990 |
| Accumulated other comprehensive income/(loss) |  |  |  |  |  |  |
| Balance at January 1 |  | (84) |  | 7,986 |  | 1,569 |
| Other comprehensive income/(loss), after-tax |  | $(17,257)$ |  | $(8,070)$ |  | 6,417 |
| Balance at December 31 |  | $(17,341)$ |  | (84) |  | 7,986 |
| Shares held in restricted stock units ("RSU") Trust, at cost |  |  |  |  |  |  |
| Balance at January 1 |  | - |  | - |  | (21) |
| Liquidation of RSU Trust |  | - |  | - |  | 21 |
| Balance at December 31 |  | - |  | - |  | - |
| Treasury stock, at cost |  |  |  |  |  |  |
| Balance at January 1 |  | $(105,415)$ |  | $(88,184)$ |  | $(83,049)$ |
| Repurchase |  | $(3,122)$ |  | $(18,448)$ |  | $(6,397)$ |
| Reissuance |  | 1,201 |  | 1,217 |  | 1,262 |
| Balance at December 31 |  | $(107,336)$ |  | $(105,415)$ |  | $(88,184)$ |
| Total stockholders' equity | \$ | 292,332 | \$ | 294,127 | \$ | 279,354 |

Effective January 1, 2020, the Firm adopted the CECL accounting guidance. Refer to Note 1 for further information.
The Notes to Consolidated Financial Statements are an integral part of these statements.

JPMorgan Chase \& Co.
Consolidated statements of cash flows

| Year ended December 31, (in millions) | 2022 |  | 2021 |  | 2020 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Operating activities |  |  |  |  |  |  |
| Net income | \$ | 37,676 | \$ | 48,334 | \$ | 29,131 |
| Adjustments to reconcile net income to net cash provided by/(used in) operating activities: |  |  |  |  |  |  |
| Provision for credit losses |  | 6,389 |  | $(9,256)$ |  | 17,480 |
| Depreciation and amortization |  | 7,051 |  | 7,932 |  | 8,614 |
| Deferred tax (benefit)/expense |  | $(2,738)$ |  | 3,748 |  | $(3,573)$ |
| Other |  | 5,174 |  | 3,274 |  | 1,649 |
| Originations and purchases of loans held-for-sale |  | $(149,167)$ |  | $(347,864)$ |  | $(166,504)$ |
| Proceeds from sales, securitizations and paydowns of loans held-for-sale |  | 167,709 |  | 336,413 |  | 175,490 |
| Net change in: |  |  |  |  |  |  |
| Trading assets |  | $(31,449)$ |  | 85,710 |  | $(148,749)$ |
| Securities borrowed |  | 20,203 |  | $(45,635)$ |  | $(20,734)$ |
| Accrued interest and accounts receivable |  | $(22,970)$ |  | $(12,401)$ |  | $(18,012)$ |
| Other assets |  | $(2,882)$ |  | $(11,745)$ |  | $(42,430)$ |
| Trading liabilities |  | 11,170 |  | $(23,190)$ |  | 77,198 |
| Accounts payable and other liabilities |  | 58,614 |  | 43,162 |  | 7,415 |
| Other operating adjustments |  | 2,339 |  | (398) |  | 3,115 |
| Net cash provided by/(used in) operating activities |  | 107,119 |  | 78,084 |  | $(79,910)$ |
| Investing activities |  |  |  |  |  |  |
| Net change in: |  |  |  |  |  |  |
| Federal funds sold and securities purchased under resale agreements |  | $(54,278)$ |  | 34,473 |  | $(47,115)$ |
| Held-to-maturity securities: |  |  |  |  |  |  |
| Proceeds from paydowns and maturities |  | 48,626 |  | 50,897 |  | 21,360 |
| Purchases |  | $(33,676)$ |  | $(111,756)$ |  | $(12,400)$ |
| Available-for-sale securities: |  |  |  |  |  |  |
| Proceeds from paydowns and maturities |  | 39,159 |  | 50,075 |  | 57,675 |
| Proceeds from sales |  | 84,616 |  | 162,748 |  | 149,758 |
| Purchases |  | $(126,258)$ |  | $(248,785)$ |  | $(397,145)$ |
| Proceeds from sales and securitizations of loans held-for-investment |  | 44,892 |  | 35,845 |  | 23,559 |
| Other changes in loans, net |  | $(128,968)$ |  | $(91,797)$ |  | $(50,263)$ |
| All other investing activities, net |  | $(11,932)$ |  | $(11,044)$ |  | $(7,341)$ |
| Net cash (used in) investing activities |  | $(137,819)$ |  | $(129,344)$ |  | $(261,912)$ |
| Financing activities |  |  |  |  |  |  |
| Net change in: |  |  |  |  |  |  |
| Deposits |  | $(136,895)$ |  | 293,764 |  | 602,765 |
| Federal funds purchased and securities loaned or sold under repurchase agreements |  | 8,455 |  | $(20,799)$ |  | 31,528 |
| Short-term borrowings |  | $(8,984)$ |  | 7,773 |  | 4,438 |
| Beneficial interests issued by consolidated VIEs |  | 2,205 |  | $(4,254)$ |  | 1,347 |
| Proceeds from long-term borrowings |  | 78,442 |  | 82,409 |  | 78,686 |
| Payments of long-term borrowings |  | $(45,556)$ |  | $(54,932)$ |  | $(105,055)$ |
| Proceeds from issuance of preferred stock |  | - |  | 7,350 |  | 4,500 |
| Redemption of preferred stock |  | $(7,434)$ |  | $(2,575)$ |  | $(1,430)$ |
| Treasury stock repurchased |  | $(3,162)$ |  | $(18,408)$ |  | $(6,517)$ |
| Dividends paid |  | $(13,562)$ |  | $(12,858)$ |  | $(12,690)$ |
| All other financing activities, net |  | 234 |  | $(1,477)$ |  | (927) |
| Net cash provided by/(used in) financing activities |  | $(126,257)$ |  | 275,993 |  | 596,645 |
| Effect of exchange rate changes on cash and due from banks and deposits with banks |  | $(16,643)$ |  | $(11,508)$ |  | 9,155 |
| Net increase/(decrease) in cash and due from banks and deposits with banks |  | $(173,600)$ |  | 213,225 |  | 263,978 |
| Cash and due from banks and deposits with banks at the beginning of the period |  | 740,834 |  | 527,609 |  | 263,631 |
| Cash and due from banks and deposits with banks at the end of the period | \$ | 567,234 | \$ | 740,834 | \$ | 527,609 |
| Cash interest paid | \$ | 23,143 | \$ | 5,142 | \$ | 13,077 |
| Cash income taxes paid, net |  | 4,355 |  | 18,737 |  | 8,140 |

The Notes to Consolidated Financial Statements are an integral part of these statements.

## Notes to consolidated financial statements

## Note 1 - Basis of presentation

JPMorgan Chase \& Co. ("JPMorgan Chase" or the "Firm"), a financial holding company incorporated under Delaware law in 1968, is a leading financial services firm based in the U.S., with operations worldwide. The Firm is a leader in investment banking, financial services for consumers and small businesses, commercial banking, financial transaction processing and asset management. Refer to Note 32 for a further discussion of the Firm's business segments.

The accounting and financial reporting policies of JPMorgan Chase and its subsidiaries conform to U.S. GAAP. Additionally, where applicable, the policies conform to the accounting and reporting guidelines prescribed by regulatory authorities.

Certain amounts reported in prior periods have been revised to conform with the current presentation.

## Consolidation

The Consolidated Financial Statements include the accounts of JPMorgan Chase and other entities in which the Firm has a controlling financial interest. All material intercompany balances and transactions have been eliminated.

Assets held for clients in an agency or fiduciary capacity by the Firm are not assets of JPMorgan Chase and are not included on the Consolidated balance sheets.

The Firm determines whether it has a controlling financial interest in an entity by first evaluating whether the entity is a voting interest entity or a variable interest entity.

## Voting interest entities

Voting interest entities are entities that have sufficient equity and provide the equity investors voting rights that enable them to make significant decisions relating to the entity's operations. For these types of entities, the Firm's determination of whether it has a controlling interest is primarily based on the amount of voting equity interests held. Entities in which the Firm has a controlling financial interest, through ownership of the majority of the entities' voting equity interests, or through other contractual rights that give the Firm control, are consolidated by the Firm.

Investments in companies in which the Firm has significant influence over operating and financing decisions (but does not own a majority of the voting equity interests) are accounted for (i) in accordance with the equity method of accounting, or (ii) at fair value if the fair value option was elected. These investments are generally included in other assets, with income or loss included in noninterest revenue.

Certain Firm-sponsored asset management funds are structured as limited partnerships or limited liability companies. For many of these entities, the Firm is the general partner or managing member, but the nonaffiliated partners or members have the ability to remove the Firm as the general partner or managing member without cause (i.e., kick-out rights), based on a simple majority vote, or the non-affiliated partners or members
have rights to participate in important decisions. Accordingly, the Firm does not consolidate these voting interest entities. However, in the limited cases where the non-managing partners or members do not have substantive kick-out or participating rights, the Firm evaluates the funds as VIEs and consolidates the funds if the Firm is the general partner or managing member and has both power and a potentially significant interest.

The Firm's investment companies and asset management funds have investments in both publicly-held and privatelyheld entities, including investments in buyouts, growth equity and venture opportunities. These investments are accounted for under investment company guidelines and, accordingly, irrespective of the percentage of equity ownership interests held, are carried on the Consolidated balance sheets at fair value, and are recorded in other assets, with income or loss included in noninterest revenue. If consolidated, the Firm retains the accounting under such specialized investment company guidelines.

## Variable interest entities

VIEs are entities that, by design, either (1) lack sufficient equity to permit the entity to finance its activities without additional subordinated financial support from other parties, or (2) have equity investors that do not have the ability to make significant decisions relating to the entity's operations through voting rights, or do not have the obligation to absorb the expected losses, or do not have the right to receive the residual returns of the entity.

The most common type of VIE is an SPE. SPEs are commonly used in securitization transactions in order to isolate certain assets and distribute the cash flows from those assets to investors. The basic SPE structure involves a company selling assets to the SPE; the SPE funds the purchase of those assets by issuing securities to investors. The legal documents that govern the transaction specify how the cash earned on the assets must be allocated to the SPE's investors and other parties that have rights to those cash flows. SPEs are generally structured to insulate investors from claims on the SPE's assets by creditors of other entities, including the creditors of the seller of the assets.

The primary beneficiary of a VIE (i.e., the party that has a controlling financial interest) is required to consolidate the assets and liabilities of the VIE. The primary beneficiary is the party that has both (1) the power to direct the activities of the VIE that most significantly impact the VIE's economic performance; and (2) through its interests in the VIE, the obligation to absorb losses or the right to receive benefits from the VIE that could potentially be significant to the VIE.

To assess whether the Firm has the power to direct the activities of a VIE that most significantly impact the VIE's economic performance, the Firm considers all the facts and circumstances, including its role in establishing the VIE and its ongoing rights and responsibilities. This assessment
includes, first, identifying the activities that most significantly impact the VIE's economic performance; and second, identifying which party, if any, has power over those activities. In general, the parties that make the most significant decisions affecting the VIE (such as asset managers, collateral managers, servicers, or owners of call options or liquidation rights over the VIE's assets) or have the right to unilaterally remove those decision-makers are deemed to have the power to direct the activities of a VIE.

To assess whether the Firm has the obligation to absorb losses of the VIE or the right to receive benefits from the VIE that could potentially be significant to the VIE, the Firm considers all of its economic interests, including debt and equity investments, servicing fees, and derivatives or other arrangements deemed to be variable interests in the VIE. This assessment requires that the Firm apply judgment in determining whether these interests, in the aggregate, are considered potentially significant to the VIE. Factors considered in assessing significance include: the design of the VIE, including its capitalization structure; subordination of interests; payment priority; relative share of interests held across various classes within the VIE's capital structure; and the reasons why the interests are held by the Firm.

The Firm performs on-going reassessments of: (1) whether entities previously evaluated under the majority votinginterest framework have become VIEs, based on certain events, and are therefore subject to the VIE consolidation framework; and (2) whether changes in the facts and circumstances regarding the Firm's involvement with a VIE cause the Firm's consolidation conclusion to change.

Refer to Note 14 for further discussion of the Firm's VIEs.

## Revenue recognition

## Interest income

The Firm recognizes interest income on loans, debt securities, and other debt instruments, generally on a levelyield basis, based on the underlying contractual rate. Refer to Note 7 for further information.

## Revenue from contracts with customers

JPMorgan Chase recognizes noninterest revenue from certain contracts with customers, in investment banking fees, deposit-related fees, asset management administration and commissions, and components of card income, when the Firm's related performance obligations are satisfied. Refer to Note 6 for further discussion of the Firm's revenue from contracts with customers.

## Principal transactions revenue

JPMorgan Chase carries a portion of its assets and liabilities at fair value. Changes in fair value are reported primarily in principal transactions revenue. Refer to Notes 2 and 3 for further discussion of fair value measurement. Refer to Note 6 for further discussion of principal transactions revenue.

Use of estimates in the preparation of consolidated financial statements
The preparation of the Consolidated Financial Statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, revenue and expense, and disclosures of contingent assets and liabilities. Actual results could be different from these estimates.

## Foreign currency translation

JPMorgan Chase revalues assets, liabilities, revenue and expense denominated in non-U.S. currencies into U.S. dollars using applicable exchange rates.

Gains and losses relating to translating functional currency financial statements for U.S. reporting are included in the Consolidated statements of comprehensive income. Gains and losses relating to nonfunctional currency transactions, including non-U.S. operations where the functional currency is the U.S. dollar, are reported in the Consolidated statements of income.

## Offsetting assets and liabilities

U.S. GAAP permits entities to present derivative receivables and derivative payables with the same counterparty and the related cash collateral receivables and payables on a net basis on the Consolidated balance sheets when a legally enforceable master netting agreement exists. U.S. GAAP also permits securities sold and purchased under repurchase agreements and securities borrowed or loaned under securities loan agreements to be presented net when specified conditions are met, including the existence of a legally enforceable master netting agreement. The Firm has elected to net such balances where it has determined that the specified conditions are met.

The Firm uses master netting agreements to mitigate counterparty credit risk in certain transactions, including derivative contracts, resale, repurchase, securities borrowed and securities loaned agreements. A master netting agreement is a single agreement with a counterparty that permits multiple transactions governed by that agreement to be terminated or accelerated and settled through a single payment in a single currency in the event of a default (e.g., bankruptcy, failure to make a required payment or securities transfer or deliver collateral or margin when due). Upon the exercise of derivatives termination rights by the non-defaulting party (i) all transactions are terminated, (ii) all transactions are valued and the positive values of "in the money" transactions are netted against the negative values of "out of the money" transactions and (iii) the only remaining payment obligation is of one of the parties to pay the netted termination amount. Upon exercise of default rights under repurchase agreements and securities loan agreements in general (i) all transactions are terminated and accelerated, (ii) all values of securities or cash held or to be delivered are calculated, and all such sums are netted against each other and (iii) the only remaining payment obligation is of one of the parties to pay the netted termination amount.

## Notes to consolidated financial statements

Typical master netting agreements for these types of transactions also often contain a collateral/margin agreement that provides for a security interest in, or title transfer of, securities or cash collateral/margin to the party that has the right to demand margin (the "demanding party"). The collateral/margin agreement typically requires a party to transfer collateral/margin to the demanding party with a value equal to the amount of the margin deficit on a net basis across all transactions governed by the master netting agreement, less any threshold. The collateral/margin agreement grants to the demanding party, upon default by the counterparty, the right to set-off any amounts payable by the counterparty against any posted collateral or the cash equivalent of any posted collateral/margin. It also grants to the demanding party the right to liquidate collateral/margin and to apply the proceeds to an amount payable by the counterparty.
Refer to Note 5 for further discussion of the Firm's derivative instruments. Refer to Note 11 for further discussion of the Firm's securities financing agreements.

## Statements of cash flows

For JPMorgan Chase's Consolidated statements of cash flows, cash is defined as those amounts included in cash and due from banks and deposits with banks on the Consolidated balance sheets.

## Accounting standard adopted January 1, 2023 Financial Instruments - Credit Losses: Troubled Debt Restructurings ("TDRs")

The adoption of this guidance eliminates the accounting and disclosure requirements for TDRs, including the requirement to measure the allowance using a discounted cash flow ("DCF") methodology, and allows the option of a non-DCF portfolio-based approach for modified loans to troubled borrowers. If a DCF methodology is still applied for these modified loans, the discount rate must be the postmodification effective interest rate, instead of the premodification effective interest rate.
The Firm elected to apply its non-DCF, portfolio-based allowance approach for modified loans to troubled borrowers for all portfolios except modified nonaccrual risk-rated loans which the Firm elected to continue applying a DCF methodology. See Note 13 for a description of the portfolio-based allowance approach and the asset-specific allowance approach.

This guidance was adopted on January 1, 2023 under the modified retrospective method which resulted in a net decrease to the allowance for credit losses of approximately $\$ 600$ million and an increase to retained earnings of approximately $\$ 450$ million, after-tax predominantly driven by residential real estate and credit card.

## Accounting standard adopted January 1, 2020

## Financial Instruments - Credit Losses ("CECL")

The adoption of this guidance established a single allowance framework for all financial assets measured at amortized cost and certain off-balance sheet credit exposures. This framework requires that management's estimate reflects credit losses over the instrument's remaining expected life and considers expected future changes in macroeconomic conditions. Prior to the adoption of the CECL accounting guidance, the Firm's allowance for credit losses represented management's estimate of probable credit losses inherent in the Firm's retained loan portfolios and certain lending-related commitments.

Significant accounting policies The following table identifies JPMorgan Chase's other significant accounting policies and the Note and page where a detailed description of each policy can be found.

| Fair value measurement | Note 2 | page 167 |
| :---: | :---: | :---: |
| Fair value option | Note 3 | page 188 |
| Derivative instruments | Note 5 | page 194 |
| Noninterest revenue and noninterest expense | Note 6 | page 208 |
| Interest income and Interest expense | Note 7 | page 211 |
| Pension and other postretirement employee benefit plans | Note 8 | page 212 |
| Employee share-based incentives | Note 9 | page 215 |
| Investment securities | Note 10 | page 217 |
| Securities financing activities | Note 11 | page 222 |
| Loans | Note 12 | page 225 |
| Allowance for credit losses | Note 13 | page 242 |
| Variable interest entities | Note 14 | page 247 |
| Goodwill and Mortgage servicing rights | Note 15 | page 255 |
| Premises and equipment | Note 16 | page 259 |
| Leases | Note 18 | page 260 |
| Long-term debt | Note 20 | page 263 |
| Earnings per share | Note 23 | page 268 |
| Income taxes | Note 25 | page 270 |
| Off-balance sheet lending-related financial instruments, guarantees and other commitments | Note 28 | page 276 |
| Litigation | Note 30 | page 283 |

## Note 2 - Fair value measurement

JPMorgan Chase carries a portion of its assets and liabilities at fair value. These assets and liabilities are predominantly carried at fair value on a recurring basis (i.e., assets and liabilities that are measured and reported at fair value on the Firm's Consolidated balance sheets). Certain assets, liabilities and unfunded lending-related commitments are measured at fair value on a nonrecurring basis; that is, they are not measured at fair value on an ongoing basis but are subject to fair value adjustments only in certain circumstances (for example, when there is evidence of impairment).
Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair value is based on quoted market prices or inputs, where available. If prices or quotes are not available, fair value is based on valuation models and other valuation techniques that consider relevant transaction characteristics (such as maturity) and use, as inputs, observable or unobservable market parameters, including yield curves, interest rates, volatilities, prices (such as commodity, equity or debt prices), correlations, foreign exchange rates and credit curves. Valuation adjustments may be made to ensure that financial instruments are recorded at fair value, as described below.

The level of precision in estimating unobservable market inputs or other factors can affect the amount of gain or loss recorded for a particular position. Furthermore, while the Firm believes its valuation methods are appropriate and consistent with those of other market participants, the methods and assumptions used reflect management judgment and may vary across the Firm's businesses and portfolios.
The Firm uses various methodologies and assumptions in the determination of fair value. The use of different methodologies or assumptions by other market participants compared with those used by the Firm could result in the Firm deriving a different estimate of fair value at the reporting date.

## Valuation process

Risk-taking functions are responsible for providing fair value estimates for assets and liabilities carried on the Consolidated balance sheets at fair value. The Firm's Valuation Control Group ("VCG"), which is part of the Firm's Finance function and independent of the risk-taking functions, is responsible for verifying these estimates and determining any fair value adjustments that may be required to ensure that the Firm's positions are recorded at fair value. In addition, the Firm's Valuation Governance Forum ("VGF"), which is composed of senior finance and risk executives, is responsible for overseeing the management of risks arising from valuation activities conducted across the Firm. The Firmwide VGF is chaired by the Firmwide head of the VCG (under the direction of the Firm's Controller), and includes sub-forums covering the

CIB, CCB, CB, AWM and certain corporate functions including Treasury and CIO.

## Price verification process

The VCG verifies fair value estimates provided by the risktaking functions by leveraging independently derived prices, valuation inputs and other market data, where available. Where independent prices or inputs are not available, the VCG performs additional review to ensure the reasonableness of the estimates. The additional review may include evaluating the limited market activity including client unwinds, benchmarking valuation inputs to those used for similar instruments, decomposing the valuation of structured instruments into individual components, comparing expected to actual cash flows, reviewing profit and loss trends, and reviewing trends in collateral valuation. There are also additional levels of management review for more significant or complex positions.
The VCG determines any valuation adjustments that may be required to the estimates provided by the risk-taking functions. No adjustments to quoted prices are applied for instruments classified within level 1 of the fair value hierarchy (refer to the discussion below for further information on the fair value hierarchy). For other positions, judgment is required to assess the need for valuation adjustments to appropriately reflect liquidity considerations, unobservable parameters, and, for certain portfolios that meet specified criteria, the size of the net open risk position. The determination of such adjustments follows a consistent framework across the Firm:

- Liquidity valuation adjustments are considered where an observable external price or valuation parameter exists but is of lower reliability, potentially due to lower market activity. Liquidity valuation adjustments are made based on current market conditions. Factors that may be considered in determining the liquidity adjustment include analysis of: (1) the estimated bidoffer spread for the instrument being traded; (2) alternative pricing points for similar instruments in active markets; and (3) the range of reasonable values that the price or parameter could take.
- The Firm manages certain portfolios of financial instruments on the basis of net open risk exposure and, as permitted by U.S. GAAP, has elected to estimate the fair value of such portfolios on the basis of a transfer of the entire net open risk position in an orderly transaction. Where this is the case, valuation adjustments may be necessary to reflect the cost of exiting a larger-than-normal market-size net open risk position. Where applied, such adjustments are based on factors that a relevant market participant would consider in the transfer of the net open risk position, including the size of the adverse market move that is likely to occur during the period required to reduce the net open risk position to a normal market-size.


## Notes to consolidated financial statements

- Uncertainty adjustments related to unobservable parameters may be made when positions are valued using prices or input parameters to valuation models that are unobservable due to a lack of market activity or because they cannot be implied from observable market data. Such prices or parameters must be estimated and are, therefore, subject to management judgment. Adjustments are made to reflect the uncertainty inherent in the resulting valuation estimate.
- Where appropriate, the Firm also applies adjustments to its estimates of fair value in order to appropriately reflect counterparty credit quality (CVA), the Firm's own creditworthiness (DVA) and the impact of funding (FVA), using a consistent framework across the Firm. Refer to Credit and funding adjustments on page 184 of this Note for more information on such adjustments.


## Valuation model review and approval

If prices or quotes are not available for an instrument or a similar instrument, fair value is generally determined using valuation models that consider relevant transaction terms such as maturity and use as inputs market-based or independently sourced parameters. Where this is the case the price verification process described above is applied to the inputs in those models.
Under the Firm's Estimations and Model Risk Management Policy, MRGR reviews and approves new models, as well as material changes to existing models, prior to implementation in the operating environment. In certain circumstances exceptions may be granted to the Firm's policy to allow a model to be used prior to review or approval. MRGR may also require the user to take appropriate actions to mitigate the model risk if it is to be used in the interim. These actions will depend on the model and may include, for example, limitation of trading activity.

## Fair value hierarchy

A three-level fair value hierarchy has been established under U.S. GAAP for disclosure of fair value measurements. The fair value hierarchy is based on the observability of inputs to the valuation of an asset or liability as of the measurement date. The three levels are defined as follows.

- Level 1 - inputs to the valuation methodology are quoted prices (unadjusted) for identical assets or liabilities in active markets.
- Level 2 - inputs to the valuation methodology include quoted prices for similar assets and liabilities in active markets, and inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the financial instrument.
- Level 3 - one or more inputs to the valuation methodology are unobservable and significant to the fair value measurement.
A financial instrument's categorization within the fair value hierarchy is based on the lowest level of input that is significant to the fair value measurement.

The following table describes the valuation methodologies generally used by the Firm to measure its significant products/ instruments at fair value, including the general classification of such instruments pursuant to the fair value hierarchy.

|  |  | Classifications in the fair value |
| :--- | :---: | :--- |
| Product/instrument | Valuation methodology | hierarchy |

## Notes to consolidated financial statements

| Product/instrument | Valuation methodology | Classifications in the fair value <br> hierarchy |
| :--- | :--- | :--- |
| Derivatives | Actively traded derivatives, e.g., exchange-traded derivatives, that are <br> valued using quoted prices. | Level 1 |
|  | Derivatives that are valued using models such as the Black-Scholes <br> option pricing model, simulation models, or a combination of models <br> that may use observable or unobservable valuation inputs as well as <br> considering the contractual terms. | Level 2 or 3 |

(a) Excludes certain investments that are measured at fair value using the net asset value per share (or its equivalent) as a practical expedient.

| Product/instrument | Valuation methodology | Classification in the fair value <br> hierarchy |
| :--- | :--- | :--- |
| Structured notes (included in <br> deposits, short-term <br> borrowings and long-term <br> debt) | Valuations are based on discounted cash flow analyses that consider the <br> embedded derivative and the terms and payment structure of the note. | Level 2 or 3 <br> The embedded derivative features are considered using models such as <br> the Black-Scholes option pricing model, simulation models, or a <br> combination of models that may use observable or unobservable <br> valuation inputs, depending on the embedded derivative. The specific <br> inputs used vary according to the nature of the embedded derivative <br> features, as described in the discussion above regarding derivatives <br> valuation. Adjustments are then made to this base valuation to reflect <br> the Firm's own credit risk (DVA). Refer to page 184 of this Note. |

## Notes to consolidated financial statements

The following table presents the assets and liabilities reported at fair value as of December 31, 2022 and 2021, by major product category and fair value hierarchy.

Assets and liabilities measured at fair value on a recurring basis

| December 31, 2022 (in millions) | Fair value hierarchy |  |  |  |  |  | $\begin{gathered} \text { Derivative } \\ \text { netting } \\ \text { adjustments }^{(f)} \end{gathered}$ |  | Total fair value |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Level 1 |  | Level 2 |  | Level 3 |  |  |  |  |  |
| Federal funds sold and securities purchased under resale agreements | \$ | - | \$ | 311,883 | \$ | - | \$ | - | \$ | 311,883 |
| Securities borrowed |  | - |  | 70,041 |  | - |  | - |  | 70,041 |
| Trading assets: |  |  |  |  |  |  |  |  |  |  |
| Debt instruments: |  |  |  |  |  |  |  |  |  |  |
| Mortgage-backed securities: |  |  |  |  |  |  |  |  |  |  |
| U.S. GSEs and government agencies ${ }^{(\mathrm{a})}$ |  | - |  | 68,162 |  | 759 |  | - |  | 68,921 |
| Residential - nonagency |  | - |  | 2,498 |  | 5 |  | - |  | 2,503 |
| Commercial - nonagency |  | - |  | 1,448 |  | 7 |  | - |  | 1,455 |
| Total mortgage-backed securities |  | - |  | 72,108 |  | 771 |  | - |  | 72,879 |
| U.S. Treasury, GSEs and government agencies ${ }^{(a)}$ |  | 61,191 |  | 8,546 |  | - |  | - |  | 69,737 |
| Obligations of U.S. states and municipalities |  | - |  | 6,608 |  | 7 |  | - |  | 6,615 |
| Certificates of deposit, bankers' acceptances and commercial paper |  | - |  | 2,009 |  | - |  | - |  | 2,009 |
| Non-U.S. government debt securities |  | 18,213 |  | 48,429 |  | 155 |  | - |  | 66,797 |
| Corporate debt securities |  | - |  | 25,626 |  | 463 |  | - |  | 26,089 |
| Loans |  | - |  | 5,744 |  | 759 |  | - |  | 6,503 |
| Asset-backed securities |  | - |  | 2,536 |  | 23 |  | - |  | 2,559 |
| Total debt instruments |  | 79,404 |  | 171,606 |  | 2,178 |  | - |  | 253,188 |
| Equity securities |  | 82,483 |  | 2,060 |  | 665 |  | - |  | 85,208 |
| Physical commodities ${ }^{(b)}$ |  | 9,595 |  | 16,673 |  | 2 |  | - |  | 26,270 |
| Other |  | - |  | 18,146 |  | 64 |  | - |  | 18,210 |
| Total debt and equity instruments ${ }^{\text {(c) }}$ |  | 171,482 |  | 208,485 |  | 2,909 |  | - |  | 382,876 |
| Derivative receivables: |  |  |  |  |  |  |  |  |  |  |
| Interest rate |  | 3,390 |  | 292,956 |  | 4,069 |  | $(271,996)$ |  | 28,419 |
| Credit |  | - |  | 9,722 |  | 607 |  | $(9,239)$ |  | 1,090 |
| Foreign exchange |  | 169 |  | 240,207 |  | 1,203 |  | $(218,214)$ |  | 23,365 |
| Equity |  | - |  | 57,485 |  | 4,428 |  | $(52,774)$ |  | 9,139 |
| Commodity |  | - |  | 24,982 |  | 375 |  | $(16,490)$ |  | 8,867 |
| Total derivative receivables |  | 3,559 |  | 625,352 |  | 10,682 |  | $(568,713)$ |  | 70,880 |
| Total trading assets ${ }^{(\mathrm{d})}$ |  | 175,041 |  | 833,837 |  | 13,591 |  | $(568,713)$ |  | 453,756 |
| Available-for-sale securities: |  |  |  |  |  |  |  |  |  |  |
| Mortgage-backed securities: |  |  |  |  |  |  |  |  |  |  |
| U.S. GSEs and government agencies ${ }^{(\mathrm{a})}$ |  | 3 |  | 71,500 |  | - |  | - |  | 71,503 |
| Residential - nonagency |  | - |  | 4,620 |  | - |  | - |  | 4,620 |
| Commercial - nonagency |  | - |  | 1,958 |  | - |  | - |  | 1,958 |
| Total mortgage-backed securities |  | 3 |  | 78,078 |  | - |  | - |  | 78,081 |
| U.S. Treasury and government agencies |  | 92,060 |  | - |  | - |  | - |  | 92,060 |
| Obligations of U.S. states and municipalities |  | - |  | 6,786 |  | - |  | - |  | 6,786 |
| Non-U.S. government debt securities |  | 10,591 |  | 9,105 |  | - |  | - |  | 19,696 |
| Corporate debt securities |  | - |  | 118 |  | 239 |  | - |  | 357 |
| Asset-backed securities: |  |  |  |  |  |  |  |  |  |  |
| Collateralized Ioan obligations |  | - |  | 5,792 |  | - |  | - |  | 5,792 |
| Other |  | - |  | 3,085 |  | - |  | - |  | 3,085 |
| Total available-for-sale securities |  | 102,654 |  | 102,964 |  | 239 |  | - |  | 205,857 |
| Loans ${ }^{\text {(e) }}$ |  | - |  | 40,661 |  | 1,418 |  | - |  | 42,079 |
| Mortgage servicing rights |  | - |  | - |  | 7,973 |  | - |  | 7,973 |
| Other assets ${ }^{\text {(d) }}$ |  | 7,544 |  | 6,065 |  | 405 |  | - |  | 14,014 |
| Total assets measured at fair value on a recurring basis | \$ | 285,239 | \$ | 1,365,451 | \$ | 23,626 | \$ | (568,713) | \$ | 1,105,603 |
| Deposits | \$ | - | \$ | 26,458 | \$ | 2,162 | \$ | - | \$ | 28,620 |
| Federal funds purchased and securities loaned or sold under repurchase agreements |  | - |  | 151,999 |  | - |  | - |  | 151,999 |
| Short-term borrowings |  | - |  | 14,391 |  | 1,401 |  | - |  | 15,792 |
| Trading liabilities: |  |  |  |  |  |  |  |  |  |  |
| Debt and equity instruments ${ }^{(c)}$ |  | 98,719 |  | 28,032 |  | 84 |  | - |  | 126,835 |
| Derivative payables: |  |  |  |  |  |  |  |  |  |  |
| Interest rate |  | 2,643 |  | 284,280 |  | 3,368 |  | $(274,321)$ |  | 15,970 |
| Credit |  | - |  | 9,377 |  | 594 |  | $(9,217)$ |  | 754 |
| Foreign exchange |  | 160 |  | 250,647 |  | 714 |  | $(232,665)$ |  | 18,856 |
| Equity |  | - |  | 57,649 |  | 4,812 |  | $(53,657)$ |  | 8,804 |
| Commodity |  | - |  | 22,748 |  | 521 |  | $(16,512)$ |  | 6,757 |
| Total derivative payables |  | 2,803 |  | 624,701 |  | 10,009 |  | $(586,372)$ |  | 51,141 |
| Total trading liabilities |  | 101,522 |  | 652,733 |  | 10,093 |  | $(586,372)$ |  | 177,976 |
| Accounts payable and other liabilities |  | 5,702 |  | 1,283 |  | 53 |  | - |  | 7,038 |
| Beneficial interests issued by consolidated VIEs |  | - |  | 5 |  | - |  | - |  | 5 |
| Long-term debt |  | - |  | 48,189 |  | 24,092 |  | - |  | 72,281 |
| Total liabilities measured at fair value on a recurring basis | \$ | 107,224 | \$ | 895,058 | \$ | 37,801 | \$ | $(586,372)$ | \$ | 453,711 |


| December 31, 2021 (in millions) | Fair value hierarchy |  |  |  |  |  | Derivative netting adjustments ${ }^{(f)}$ |  | Total fair value |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Level 1 |  | Level 2 |  | Level 3 |  |  |  |  |  |
| Federal funds sold and securities purchased under resale agreements | \$ | - | \$ | 252,720 | \$ | - | \$ | - | \$ | 252,720 |
| Securities borrowed |  | - |  | 81,463 |  | - |  | - |  | 81,463 |
| Trading assets: |  |  |  |  |  |  |  |  |  |  |
| Debt instruments: |  |  |  |  |  |  |  |  |  |  |
| Mortgage-backed securities: |  |  |  |  |  |  |  |  |  |  |
| U.S. GSEs and government agencies ${ }^{(\mathrm{a})}$ |  | - |  | 38,944 |  | 265 |  | - |  | 39,209 |
| Residential - nonagency |  | - |  | 2,358 |  | 28 |  | - |  | 2,386 |
| Commercial - nonagency |  | - |  | 1,506 |  | 10 |  | - |  | 1,516 |
| Total mortgage-backed securities |  | - |  | 42,808 |  | 303 |  | - |  | 43,111 |
| U.S. Treasury, GSEs and government agencies ${ }^{(a)}$ |  | 68,527 |  | 9,181 |  | - |  | - |  | 77,708 |
| Obligations of U.S. states and municipalities |  | - |  | 7,068 |  | 7 |  | - |  | 7,075 |
| Certificates of deposit, bankers' acceptances and commercial paper |  | - |  | 852 |  | - |  | - |  | 852 |
| Non-U.S. government debt securities |  | 26,982 |  | 44,581 |  | 81 |  | - |  | 71,644 |
| Corporate debt securities |  | - |  | 24,491 |  | 332 |  | - |  | 24,823 |
| Loans |  | - |  | 7,366 |  | 708 |  | - |  | 8,074 |
| Asset-backed securities |  | - |  | 2,668 |  | 26 |  | - |  | 2,694 |
| Total debt instruments |  | 95,509 |  | 139,015 |  | 1,457 |  | - |  | 235,981 |
| Equity securities |  | 86,904 |  | 1,741 |  | 662 |  | - |  | 89,307 |
| Physical commodities ${ }^{(b)}$ |  | 5,357 |  | 20,788 |  | - |  | - |  | 26,145 |
| Other |  | - |  | 24,850 |  | 160 |  | - |  | 25,010 |
| Total debt and equity instruments ${ }^{\text {(c) }}$ |  | 187,770 |  | 186,394 |  | 2,279 |  | - |  | 376,443 |
| Derivative receivables: |  |  |  |  |  |  |  |  |  |  |
| Interest rate |  | 1,072 |  | 267,493 |  | 2,020 |  | $(248,611)$ |  | 21,974 |
| Credit |  | - |  | 9,321 |  | 518 |  | $(8,808)$ |  | 1,031 |
| Foreign exchange |  | 134 |  | 168,590 |  | 855 |  | $(156,954)$ |  | 12,625 |
| Equity |  | - |  | 65,139 |  | 3,492 |  | $(58,650)$ |  | 9,981 |
| Commodity |  | - |  | 26,232 |  | 421 |  | $(15,183)$ |  | 11,470 |
| Total derivative receivables |  | 1,206 |  | 536,775 |  | 7,306 |  | $(488,206)$ |  | 57,081 |
| Total trading assets ${ }^{\text {(d) }}$ |  | 188,976 |  | 723,169 |  | 9,585 |  | $(488,206)$ |  | 433,524 |
| Available-for-sale securities: |  |  |  |  |  |  |  |  |  |  |
| Mortgage-backed securities: |  |  |  |  |  |  |  |  |  |  |
| U.S. GSEs and government agencies ${ }^{(\mathrm{a})}$ |  | 4 |  | 72,539 |  | - |  | - |  | 72,543 |
| Residential - nonagency |  | - |  | 6,070 |  | - |  | - |  | 6,070 |
| Commercial - nonagency |  | - |  | 4,949 |  | - |  | - |  | 4,949 |
| Total mortgage-backed securities |  | 4 |  | 83,558 |  | - |  | - |  | 83,562 |
| U.S. Treasury and government agencies |  | 177,463 |  | - |  | - |  | - |  | 177,463 |
| Obligations of U.S. states and municipalities |  | - |  | 15,860 |  | - |  | - |  | 15,860 |
| Non-U.S. government debt securities |  | 5,430 |  | 10,779 |  | - |  | - |  | 16,209 |
| Corporate debt securities |  | - |  | 160 |  | 161 |  | - |  | 321 |
| Asset-backed securities: |  |  |  |  |  |  |  |  |  |  |
| Collateralized Ioan obligations |  | - |  | 9,662 |  | - |  | - |  | 9,662 |
| Other |  | - |  | 5,448 |  | - |  | - |  | 5,448 |
| Total available-for-sale securities |  | 182,897 |  | 125,467 |  | 161 |  | - |  | 308,525 |
| Loans ${ }^{\text {(e) }}$ |  | - |  | 56,887 |  | 1,933 |  | - |  | 58,820 |
| Mortgage servicing rights |  | - |  | - |  | 5,494 |  | - |  | 5,494 |
| Other assets ${ }^{(d)}$ |  | 9,558 |  | 4,139 |  | 306 |  | - |  | 14,003 |
| Total assets measured at fair value on a recurring basis | \$ | 381,431 | \$ | 1,243,845 | \$ | 17,479 | \$ | $(488,206)$ | \$ | 1,154,549 |
| Deposits | \$ | - | \$ | 9,016 | \$ | 2,317 | \$ | - | \$ | 11,333 |
| Federal funds purchased and securities loaned or sold under repurchase agreements |  | - |  | 126,435 |  | - |  | - |  | 126,435 |
| Short-term borrowings |  | - |  | 17,534 |  | 2,481 |  | - |  | 20,015 |
| Trading liabilities: |  |  |  |  |  |  |  |  |  |  |
| Debt and equity instruments ${ }^{\left({ }^{\text {c }} \text { ( }\right.}$ |  | 87,831 |  | 26,716 |  | 30 |  | - |  | 114,577 |
| Derivative payables: |  |  |  |  |  |  |  |  |  |  |
| Interest rate |  | 981 |  | 237,714 |  | 2,036 |  | $(232,537)$ |  | 8,194 |
| Credit |  | - |  | 10,468 |  | 444 |  | $(10,032)$ |  | 880 |
| Foreign exchange |  | 123 |  | 174,349 |  | 1,274 |  | $(161,649)$ |  | 14,097 |
| Equity |  | - |  | 72,609 |  | 7,118 |  | $(62,494)$ |  | 17,233 |
| Commodity |  | - |  | 26,600 |  | 1,328 |  | $(18,216)$ |  | 9,712 |
| Total derivative payables |  | 1,104 |  | 521,740 |  | 12,200 |  | $(484,928)$ |  | 50,116 |
| Total trading liabilities |  | 88,935 |  | 548,456 |  | 12,230 |  | $(484,928)$ |  | 164,693 |
| Accounts payable and other liabilities |  | 5,115 |  | 467 |  | 69 |  | - |  | 5,651 |
| Beneficial interests issued by consolidated VIEs |  | - |  | 12 |  | - |  | - |  | 12 |
| Long-term debt |  | - |  | 50,560 |  | 24,374 |  | - |  | 74,934 |
| Total liabilities measured at fair value on a recurring basis | \$ | 94,050 | \$ | 752,480 | \$ | 41,471 | \$ | $(484,928)$ | \$ | 403,073 |

(a) At December 31, 2022 and 2021, included total U.S. GSE obligations of $\$ 73.8$ billion and $\$ 73.9$ billion, respectively, which were mortgage-related.
(b) Physical commodities inventories are generally accounted for at the lower of cost or net realizable value. "Net realizable value" is a term defined in U.S. GAAP as not exceeding fair value less costs to sell ("transaction costs"). Transaction costs for the Firm's physical commodities inventories are either not applicable or immaterial to the value of the inventory. Therefore, net realizable value approximates fair value for the Firm's physical commodities inventories. When fair value hedging has been applied (or when net realizable value is below cost), the carrying value of physical commodities approximates fair value, because under fair value hedge accounting, the cost basis is adjusted for changes in fair value. Refer to Note 5 for a further discussion of the Firm's hedge accounting relationships. To provide consistent fair value disclosure information, all physical commodities inventories have been included in each period presented.
(c) Balances reflect the reduction of securities owned (long positions) by the amount of identical securities sold but not yet purchased (short positions).

## Notes to consolidated financial statements

(d) Certain investments that are measured at fair value using the net asset value per share (or its equivalent) as a practical expedient are not required to be classified in the fair value hierarchy. At December 31, 2022 and 2021, the fair values of these investments, which include certain hedge funds, private equity funds, real estate and other funds, were $\$ 950$ million and $\$ 801$ million, respectively. Included in these balances at December 31, 2022 and 2021 , were trading assets of $\$ 43$ million and $\$ 51$ million, respectively, and other assets of $\$ 907$ million and $\$ 750$ million, respectively.
(e) At December 31, 2022 and 2021, included $\$ 9.7$ billion and $\$ 26.2$ billion, respectively, of residential first-lien mortgages, and $\$ 6.8$ billion and $\$ 8.2$ billion, respectively, of commercial first-lien mortgages. Residential mortgage loans include conforming mortgage loans originated with the intent to sell to U.S. GSEs and government agencies of $\$ 2.4$ billion and $\$ 13.6$ billion, respectively.
(f) As permitted under U.S. GAAP, the Firm has elected to net derivative receivables and derivative payables and the related cash collateral received and paid when a legally enforceable master netting agreement exists. The level 3 balances would be reduced if netting were applied, including the netting benefit associated with cash collateral.

## Level 3 valuations

The Firm has established well-structured processes for determining fair value, including for instruments where fair value is estimated using significant unobservable inputs (level 3). Refer to pages 167-171 of this Note for further information on the Firm's valuation process and a detailed discussion of the determination of fair value for individual financial instruments.

Estimating fair value requires the application of judgment. The type and level of judgment required is largely dependent on the amount of observable market information available to the Firm. For instruments valued using internally developed valuation models and other valuation techniques that use significant unobservable inputs and are therefore classified within level 3 of the fair value hierarchy, judgments used to estimate fair value are more significant than those required when estimating the fair value of instruments classified within levels 1 and 2.
In arriving at an estimate of fair value for an instrument within level 3, management must first determine the appropriate valuation model or other valuation technique to use. Second, due to the lack of observability of significant inputs, management must assess relevant empirical data in deriving valuation inputs including transaction details, yield curves, interest rates, prepayment speed, default rates, volatilities, correlations, prices (such as commodity, equity or debt prices), valuations of comparable instruments, foreign exchange rates and credit curves.
The following table presents the Firm's primary level 3 financial instruments, the valuation techniques used to measure the fair value of those financial instruments, the significant unobservable inputs, the range of values for those inputs and the weighted or arithmetic averages of such inputs. While the determination to classify an instrument within level 3 is based on the significance of the unobservable inputs to the overall fair value measurement, level 3 financial instruments typically include observable components (that is, components that are actively quoted and can be validated to external sources) in addition to the unobservable components. The level 1 and/or level 2 inputs are not included in the table. In addition, the Firm manages the risk of the observable components of level 3 financial instruments using securities and derivative positions that are classified within levels 1 or 2 of the fair value hierarchy.

The range of values presented in the table is representative of the highest and lowest level input used to value the significant groups of instruments within a product/instrument classification. Where provided, the weighted averages of the input values presented in the table are calculated based on the fair value of the instruments that the input is being used to value.

In the Firm's view, the input range, weighted and arithmetic average values do not reflect the degree of input uncertainty or an assessment of the reasonableness of the Firm's estimates and assumptions. Rather, they reflect the characteristics of the various instruments held by the Firm and the relative distribution of instruments within the range of characteristics. For example, two option contracts may have similar levels of market risk exposure and valuation uncertainty, but may have significantly different implied volatility levels because the option contracts have different underlyings, tenors, or strike prices. The input range and weighted average values will therefore vary from period-toperiod and parameter-to-parameter based on the characteristics of the instruments held by the Firm at each balance sheet date.

## Notes to consolidated financial statements

Level 3 inputs ${ }^{(a)}$

| December 31, 2022 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Product/Instrument | Fair value (in millions) | Principal valuation technique | Unobservable inputs ${ }^{(\mathrm{g})}$ | Range of input values |  | Average ${ }^{(\mathrm{i})}$ |
| Residential mortgage-backed securities and loans ${ }^{(b)}$ | \$ 1,649 | Discounted cash flows | Yield | 4\% | 15\% | 7\% |
|  |  |  | Prepayment speed | 3\% | 11\% | 8\% |
|  |  |  | Conditional default rate | 0\% | 5\% | 0\% |
|  |  |  | Loss severity | 0\% | 110\% | 3\% |
| Commercial mortgage-backed securities and Ioans ${ }^{(c)}$ | 423 | Market comparables | Price | \$0 | \$99 | \$83 |
| Corporate debt securities | 702 | Market comparables | Price | \$0 | \$243 | \$95 |
| Loans ${ }^{\text {(d) }}$ | 876 | Market comparables | Price | \$0 | \$356 | \$77 |
| Non-U.S. government debt securities | 155 | Market comparables | Price | \$6 | \$100 | \$84 |
| Net interest rate derivatives | 735 | Option pricing | Interest rate volatility | 28bps | 674bps | 141bps |
|  |  |  | Interest rate spread volatility | 23bps | 35bps | 26bps |
|  |  |  | Bermudan switch value | 0\% | 57\% | 17\% |
|  |  |  | Interest rate correlation | (82)\% | 89\% | 16\% |
|  |  |  | IR-FX correlation | (35)\% | 60\% | 7\% |
|  | (34) | Discounted cash flows | Prepayment speed | 0\% | 21\% | 7\% |
| Net credit derivatives | (9) | Discounted cash flows | Credit correlation | 30\% | 60\% | 43\% |
|  |  |  | Credit spread | 1 bps | 12,107bps | 1,057bps |
|  |  |  | Recovery rate | 10\% | 67\% | 45\% |
|  | 22 | Market comparables | Price | \$15 | $\$ 115$ | \$82 |
| Net foreign exchange derivatives | 577 <br> (88) | Option pricing <br> Discounted cash flows | IR-FX correlation <br> Prepayment speed <br> Interest rate curve | (40)\% | $60 \%$ | 21\% |
|  |  |  |  | 9\% |  | $9 \%$ |
|  |  |  |  | 2\% | 29\% | 8\% |
| Net equity derivatives | (384) | Option pricing | Forward equity price ${ }^{(\mathrm{h})}$ |  | 144\% | 100\% |
|  |  |  | Equity volatility | 5\% | 141\% | 37\% |
|  |  |  | Equity correlation | 17\% | 99\% | 55\% |
|  |  |  | Equity-FX correlation | (86)\% | 60\% | (27)\% |
|  |  |  | Equity-IR correlation | (5)\% | 50\% | 23\% |
| Net commodity derivatives | (146) | Option pricing | Oil commodity forward | $\$ 72 \text { / BBL }$ | \$251/BBL | \$162 / BBL |
|  |  |  | Natural gas commodity forward | \$1/MMBTU | \$24/MMBTI | \$13/MMBTU |
|  |  |  | Commodity volatility |  | 154\% <br> 77\% | $\begin{aligned} & 79 \% \\ & 16 \% \end{aligned}$ |
|  |  |  | Commodity correlation | $\qquad$ |  |  |
| MSRs | 7,973 | Discounted cash flows | Refer to Note 15 |  |  |  |
| Long-term debt, short-term borrowings, and deposits ${ }^{(\mathrm{e})}$ | 26,583 | Option pricing | Interest rate volatility | 28bps | 674bps | 141bps |
|  |  |  | Bermudan switch value | 0\% | 57\% | 17\% |
|  |  |  | Interest rate correlation | (82)\% | 89\% | 16\% |
|  |  |  | IR-FX correlation | (35)\% | 60\% | 7\% |
|  |  |  | Equity correlation | 17\% | 99\% | 55\% |
|  |  |  | Equity-FX correlation | (86)\% | 60\% | (27)\% |
|  |  |  | Equity-IR correlation | (5)\% | 50\% | 23\% |
|  | 1,072 | Discounted cash flows | Credit correlation | 30\% | 60\% | 43\% |
| Other level 3 assets and liabilities, net ${ }^{(f)}$ | 1,029 |  |  |  |  |  |

(a) The categories presented in the table have been aggregated based upon the product type, which may differ from their classification on the Consolidated balance sheets. Furthermore, the inputs presented for each valuation technique in the table are, in some cases, not applicable to every instrument valued using the technique as the characteristics of the instruments can differ.
(b) Comprises U.S. GSE and government agency securities of $\$ 752$ million, nonagency securities of $\$ 5$ million and non-trading loans of $\$ 892$ million.
(c) Comprises U.S. GSE and government agency securities of $\$ 7$ million, nonagency securities of $\$ 7$ million, trading loans of $\$ 40$ million and non-trading loans of $\$ 369$ million.
(d) Comprises trading loans of $\$ 719$ million and non-trading loans of $\$ 157$ million.
(e) Long-term debt, short-term borrowings and deposits include structured notes issued by the Firm that are financial instruments that typically contain embedded derivatives. The estimation of the fair value of structured notes includes the derivative features embedded within the instrument. The significant unobservable inputs are broadly consistent with those presented for derivative receivables.
(f) Includes equity securities of $\$ 880$ million including $\$ 216$ million in Other assets, for which quoted prices are not readily available and the fair value is generally based on internal valuation techniques such as EBITDA multiples and comparable analysis. All other level 3 assets and liabilities are insignificant both individually and in aggregate.
(g) Price is a significant unobservable input for certain instruments. When quoted market prices are not readily available, reliance is generally placed on pricebased internal valuation techniques. The price input is expressed assuming a par value of $\$ 100$.
(h) Forward equity price is expressed as a percentage of the current equity price.
(i) Amounts represent weighted averages except for derivative related inputs where arithmetic averages are used.

Changes in and ranges of unobservable inputs
The following discussion provides a description of the impact on a fair value measurement of a change in each unobservable input in isolation, and the interrelationship between unobservable inputs, where relevant and significant. The impact of changes in inputs may not be independent, as a change in one unobservable input may give rise to a change in another unobservable input. Where relationships do exist between two unobservable inputs, those relationships are discussed below. Relationships may also exist between observable and unobservable inputs (for example, as observable interest rates rise, unobservable prepayment rates decline); such relationships have not been included in the discussion below. In addition, for each of the individual relationships described below, the inverse relationship would also generally apply.
The following discussion also provides a description of attributes of the underlying instruments and external market factors that affect the range of inputs used in the valuation of the Firm's positions.
Yield - The yield of an asset is the interest rate used to discount future cash flows in a discounted cash flow calculation. An increase in the yield, in isolation, would result in a decrease in a fair value measurement.

Credit spread - The credit spread is the amount of additional annualized return over the market interest rate that a market participant would demand for taking exposure to the credit risk of an instrument. The credit spread for an instrument forms part of the discount rate used in a discounted cash flow calculation. Generally, an increase in the credit spread would result in a decrease in a fair value measurement.

The yield and the credit spread of a particular mortgagebacked security primarily reflect the risk inherent in the instrument. The yield is also impacted by the absolute level of the coupon paid by the instrument (which may not correspond directly to the level of inherent risk). Therefore, the range of yield and credit spreads reflects the range of risk inherent in various instruments owned by the Firm. The risk inherent in mortgage-backed securities is driven by the subordination of the security being valued and the characteristics of the underlying mortgages within the collateralized pool, including borrower FICO scores, LTV ratios for residential mortgages and the nature of the property and/or any tenants for commercial mortgages. For corporate debt securities, obligations of U.S. states and municipalities and other similar instruments, credit spreads reflect the credit quality of the obligor and the tenor of the obligation.
Prepayment speed - The prepayment speed is a measure of the voluntary unscheduled principal repayments of a prepayable obligation in a collateralized pool. Prepayment speeds generally decline as borrower delinquencies rise. An increase in prepayment speeds, in isolation, would result in a decrease in a fair value measurement of assets valued at a premium to par and an increase in a fair value measurement of assets valued at a discount to par.

Prepayment speeds may vary from collateral pool to collateral pool, and are driven by the type and location of the underlying borrower, and the remaining tenor of the obligation as well as the level and type (e.g., fixed or floating) of interest rate being paid by the borrower. Typically collateral pools with higher borrower credit quality have a higher prepayment rate than those with lower borrower credit quality, all other factors being equal.

Conditional default rate - The conditional default rate is a measure of the reduction in the outstanding collateral balance underlying a collateralized obligation as a result of defaults. While there is typically no direct relationship between conditional default rates and prepayment speeds, collateralized obligations for which the underlying collateral has high prepayment speeds will tend to have lower conditional default rates. An increase in conditional default rates would generally be accompanied by an increase in loss severity and an increase in credit spreads. An increase in the conditional default rate, in isolation, would result in a decrease in a fair value measurement. Conditional default rates reflect the quality of the collateral underlying a securitization and the structure of the securitization itself. Based on the types of securities owned in the Firm's marketmaking portfolios, conditional default rates are most typically at the lower end of the range presented.
Loss severity - The loss severity (the inverse concept is the recovery rate) is the expected amount of future realized losses resulting from the ultimate liquidation of a particular loan, expressed as the net amount of loss relative to the outstanding loan balance. An increase in loss severity is generally accompanied by an increase in conditional default rates. An increase in the loss severity, in isolation, would result in a decrease in a fair value measurement.

The loss severity applied in valuing a mortgage-backed security investment depends on factors relating to the underlying mortgages, including the LTV ratio, the nature of the lender's lien on the property and other instrumentspecific factors.

## Notes to consolidated financial statements

Correlation - Correlation is a measure of the relationship between the movements of two variables. Correlation is a pricing input for a derivative product where the payoff is driven by one or more underlying risks. Correlation inputs are related to the type of derivative (e.g., interest rate, credit, equity, foreign exchange and commodity) due to the nature of the underlying risks. When parameters are positively correlated, an increase in one parameter will result in an increase in the other parameter. When parameters are negatively correlated, an increase in one parameter will result in a decrease in the other parameter. An increase in correlation can result in an increase or a decrease in a fair value measurement. Given a short correlation position, an increase in correlation, in isolation, would generally result in a decrease in a fair value measurement.

The level of correlation used in the valuation of derivatives with multiple underlying risks depends on a number of factors including the nature of those risks. For example, the correlation between two credit risk exposures would be different than that between two interest rate risk exposures. Similarly, the tenor of the transaction may also impact the correlation input, as the relationship between the underlying risks may be different over different time periods.
Furthermore, correlation levels are very much dependent on market conditions and could have a relatively wide range of levels within or across asset classes over time, particularly in volatile market conditions.

Volatility - Volatility is a measure of the variability in possible returns for an instrument, parameter or market index given how much the particular instrument, parameter or index changes in value over time. Volatility is a pricing input for options, including equity options, commodity options, and interest rate options. Generally, the higher the volatility of the underlying, the riskier the instrument. Given a long position in an option, an increase in volatility, in isolation, would generally result in an increase in a fair value measurement.

The level of volatility used in the valuation of a particular option-based derivative depends on a number of factors, including the nature of the risk underlying the option (e.g., the volatility of a particular equity security may be significantly different from that of a particular commodity index), the tenor of the derivative as well as the strike price of the option.

Bermudan switch value - The switch value is the difference between the overall value of a Bermudan swaption, which can be exercised at multiple points in time, and its most expensive European swaption and reflects the additional value that the multiple exercise dates provide the holder. Switch values are dependent on market conditions and can vary greatly depending on a number of factors, such as the tenor of the underlying swap as well as the strike price of the option. An increase in switch value, in isolation, would generally result in an increase in a fair value measurement.

Interest rate curve - represents the relationship of interest rates over differing tenors. The interest rate curve is used to set interest rate and foreign exchange derivative cash flows and is also a pricing input used in the discounting of any derivative cash flow.
Forward price - Forward price is the price at which the buyer agrees to purchase the asset underlying a forward contract on the predetermined future delivery date, and is such that the value of the contract is zero at inception.
The forward price is used as an input in the valuation of certain derivatives and depends on a number of factors including interest rates, the current price of the underlying asset, and the expected income to be received and costs to be incurred by the seller as a result of holding that asset until the delivery date. An increase in the forward can result in an increase or a decrease in a fair value measurement.

Changes in level 3 recurring fair value measurements The following tables include a rollforward of the Consolidated balance sheets amounts (including changes in fair value) for financial instruments classified by the Firm within level 3 of the fair value hierarchy for the years ended December 31, 2022, 2021 and 2020. When a determination is made to classify a financial instrument within level 3 , the determination is based on the significance of the unobservable inputs to the overall fair value measurement. However, level 3 financial instruments typically include, in addition to the unobservable or level 3 components, observable components (that is, components that are actively quoted and can be validated to external sources); accordingly, the gains and losses in the table below include changes in fair value due in part to observable factors that are part of the valuation methodology. Also, the Firm riskmanages the observable components of level 3 financial instruments using securities and derivative positions that are classified within level 1 or 2 of the fair value hierarchy; as these level 1 and level 2 risk management instruments are not included below, the gains or losses in the following tables do not reflect the effect of the Firm's risk management activities related to such level 3 instruments.


Notes to consolidated financial statements

| Year ended December 31, 2021 (in millions) | Fair value measurements using significant unobservable inputs |  |  |  |  |  |  |  |  | Change in unrealized gains/(losses) related to financial instruments held at Dec. 31, 2021 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Fair value at January 1, 2021 | Total realized/ unrealized gains/ (losses) | Purchases ${ }^{(8)}$ | Sales |  | Settlements ${ }^{(\mathrm{h})}$ | Transfers into level 3 | Transfers (out of) level 3 | Fair value at Dec. 31, 2021 |  |
| Assets: ${ }^{(a)}$ |  |  |  |  |  |  |  |  |  |  |
| Federal funds sold and securities purchased under resale agreements | \$ - | \$ - | \$ | \$ - |  | \$ | - | \$ | \$ - | \$ - |
| Trading assets: |  |  |  |  |  |  |  |  |  |  |
| Debt instruments: |  |  |  |  |  |  |  |  |  |  |
| Mortgage-backed securities: |  |  |  |  |  |  |  |  |  |  |
| U.S. GSEs and government agencies | 449 | (28) | 21 | (67) |  | (110) | 1 | (1) | 265 | (31) |
| Residential - nonagency | 28 | - | 26 | (24) |  | (5) | 4 | (1) | 28 | (3) |
| Commercial - nonagency | 3 | 5 | 12 | (7) |  | (17) | 14 | - | 10 | (2) |
| Total mortgage-backed securities | 480 | (23) | 59 | (98) |  | (132) | 19 | (2) | 303 | (36) |
| Obligations of U.S. states and municipalities | 8 | - | - | - |  | (1) | - | - | 7 | - |
| Non-U.S. government debt securities | 182 | (14) | 359 | (332) |  | (7) | - | (107) | 81 | (10) |
| Corporate debt securities | 507 | (23) | 404 | (489) |  | (4) | 162 | (225) | 332 | (16) |
| Loans | 893 | 2 | 994 | (669) |  | (287) | 648 | (873) | 708 | (20) |
| Asset-backed securities | 28 | 28 | 76 | (99) |  | (2) | 2 | (7) | 26 | (2) |
| Total debt instruments | 2,098 | (30) | 1,892 | $(1,687)$ |  | (433) | 831 | $(1,214)$ | 1,457 | (84) |
| Equity securities | 476 | (77) | 378 | (168) |  | - | 164 | (111) | 662 | (335) |
| Physical commodities | - | - | - | - |  | - | - | - | - | - |
| Other | 49 | 74 | 233 | - |  | (98) | 5 | (103) | 160 | 31 |
| Total trading assets - debt and equity instruments | 2,623 | $(33){ }^{(c)}$ | 2,503 | $(1,855)$ |  | (531) | 1,000 | $(1,428)$ | 2,279 | (388) ${ }^{(c)}$ |
| Net derivative receivables: ${ }^{(b)}$ |  |  |  |  |  |  |  |  |  |  |
| Interest rate | 258 | 1,789 | 116 | (192) |  | $(2,011)$ | 112 | (88) | (16) | 282 |
| Credit | (224) | 130 | 6 | (12) |  | 146 | 34 | (6) | 74 | 141 |
| Foreign exchange | (434) | (209) | 110 | (110) |  | 222 | (12) | 14 | (419) | 13 |
| Equity | $(3,862)$ | (480) | 1,285 | $(2,813)$ |  | 1,758 | 315 | 171 | $(3,626)$ | (155) |
| Commodity | (731) | (728) | 145 | (493) |  | 916 | (4) | (12) | (907) | (426) |
| Total net derivative receivables | $(4,993)$ | $502{ }^{\text {(c) }}$ | 1,662 | $(3,620)$ |  | 1,031 | 445 | 79 | $(4,894)$ | (145) ${ }^{(c)}$ |
| Available-for-sale securities: |  |  |  |  |  |  |  |  |  |  |
| Mortgage-backed securities | - | - | - | - |  | - | - | - | - | - |
| Corporate debt securities | - | (1) | 162 | - |  | - | - | - | 161 | (1) |
| Total available-for-sale securities | - | (1) ${ }^{(d)}$ | 162 | - |  | - | - | - | 161 | (1) ${ }^{(d)}$ |
| Loans | 2,305 | (87) ${ }^{(c)}$ | 612 | (439) |  | (965) | 1,301 | (794) | 1,933 | (59) ${ }^{(c)}$ |
| Mortgage servicing rights | 3,276 | $98^{(\mathrm{e})}$ | 3,022 | (114) |  | (788) | - | - | 5,494 | $98^{(\mathrm{e})}$ |
| Other assets | 538 | $16^{(c)}$ | 9 | (17) |  | (239) | - | (1) | 306 | $11{ }^{\text {(c) }}$ |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | Fair value me | asurements | s using sign | ificant unobserv | able inputs |  |  |  |
| Year ended December 31, 2021 (in millions) | Fair value at January $1,2021$ | $\begin{gathered} \text { Total } \\ \text { realized/ } \\ \text { unrealized } \\ \text { (gains)/losses } \\ \hline \end{gathered}$ | Purchases | Sales | Issuances | Settlements ${ }^{(\mathrm{h})}$ | Transfers into level 3 | Transfers (out of) level 3 | Fair value at Dec. 31, 2021 | Change in unrealized (gains)/losses related to financial instruments held at Dec. 31, 2021 |
| Liabilities: ${ }^{()^{\text {a }}}$ |  |  |  |  |  |  |  |  |  |  |
| Deposits | \$ 2,913 | \$ (80) ${ }^{(c)(f)}$ | \$ - | \$ - | \$ 431 | \$ (467) | \$ 2 | \$ (482) | \$ 2,317 | \$ (77) ${ }^{(c)(f)}$ |
| Short-term borrowings | 2,420 | $(1,391)^{(c)(f)}$ | - | - | 6,823 | $(5,308)$ | 9 | (72) | 2,481 | $(83){ }^{(c)(f)}$ |
| Trading liabilities - debt and equity instruments | 51 | (8) ${ }^{(c)}$ | (101) | 38 | - | - | 64 | (14) | 30 | (157) ${ }^{(c)}$ |
| Accounts payable and other liabilities | 68 | $8{ }^{\text {(c) }}$ | - | 1 | - | - | - | (8) | 69 | $8{ }^{\text {(c) }}$ |
| $\underline{\text { Long-term debt }}$ | 23,397 | $369{ }^{\text {(c)(f) }}$ | - | - | 13,505 | $(12,191)$ | 103 | (809) | 24,374 | $87^{(c)(f)}$ |



## Notes to consolidated financial statements

(a) Level 3 assets at fair value as a percentage of total Firm assets at fair value (including assets measured at fair value on a nonrecurring basis) were $2 \%$ at both December 31, 2022 and December 31, 2021 and $1 \%$ at December 31, 2020. Level 3 liabilities at fair value as a percentage of total Firm liabilities at fair value (including liabilities measured at fair value on a nonrecurring basis) were $8 \%, 10 \%$ and $9 \%$ at December 31, 2022, 2021 and 2020 , respectively.
(b) All level 3 derivatives are presented on a net basis, irrespective of the underlying counterparty.
(c) Predominantly reported in principal transactions revenue, except for changes in fair value for CCB mortgage loans and lending-related commitments originated with the intent to sell, and mortgage loan purchase commitments, which are reported in mortgage fees and related income.
(d) Realized gains/(losses) on AFS securities are reported in investment securities gains/(losses). Unrealized gains/(losses) are reported in OCI. Realized and unrealized gains/(losses) recorded on AFS securities were not material for the years ended December 31, 2022, 2021 and 2020.
(e) Changes in fair value for MSRs are reported in mortgage fees and related income.
(f) Realized (gains)/losses due to DVA for fair value option elected liabilities are reported in principal transactions revenue, and were not material for the years ended December 31, 2022, 2021 and 2020. Unrealized (gains)/losses are reported in OCI, and they were $\$(529$ ) million, $\$ 258$ million and $\$ 221$ million for the years ended December 31, 2022, 2021 and 2020, respectively.
(g) Loan originations are included in purchases.
(h) Includes financial assets and liabilities that have matured, been partially or fully repaid, impacts of modifications, deconsolidations associated with beneficial interests in VIEs and other items.

## Level 3 analysis

## Consolidated balance sheets changes

The following describes significant changes to level 3 assets since December 31, 2021, for those items measured at fair value on a recurring basis. Refer to Assets and liabilities measured at fair value on a nonrecurring basis on page 185 for further information on changes impacting items measured at fair value on a nonrecurring basis.

For the year ended December 31, 2022
Level 3 assets were $\$ 23.6$ billion at December 31, 2022, reflecting an increase of $\$ 6.1$ billion from December 31, 2021.

The increase for the year ended December 31, 2022 was predominantly driven by:

- $\$ 3.4$ billion increase in gross derivative receivables due to gains and purchases partially offset by settlements.
- $\$ 2.5$ billion increase in MSRs.

Refer to Note 15 for information on MSRs.
Refer to the sections below for additional information.
Transfers between levels for instruments carried at fair value on a recurring basis
During the year ended December 31, 2022, significant transfers from level 2 into level 3 included the following:

- \$2.4 billion of total debt and equity instruments, predominantly due to equity securities of $\$ 1.1$ billion driven by a decrease in observability predominantly as a result of restricted access to certain markets and trading loans of $\$ 925$ million driven by a decrease in observability.
- $\$ 1.6$ billion of gross interest rate derivative receivables and $\$ 878$ million of gross interest rate derivative payables as a result of a decrease in observability and an increase in the significance of unobservable inputs.
- $\$ 1.6$ billion of gross equity derivative receivables and $\$ 2.3$ billion of gross equity derivative payables as a result of a decrease in observability and an increase in the significance of unobservable inputs.
- \$1.1 billion of non-trading loans driven by a decrease in observability.
- \$793 million of long-term debt driven by a decrease in observability and an increase in the significance of unobservable inputs for structured notes.

During the year ended December 31, 2022, significant transfers from level 3 into level 2 included the following:

- $\$ 1.2$ billion of total debt and equity instruments, largely due to trading loans, driven by an increase in observability.
- $\$ 1.2$ billion of gross interest rate derivative receivables and $\$ 807$ million of gross interest rate derivative payables as a result of an increase in observability and a decrease in the significance of unobservable inputs.
- $\$ 2.2$ billion of gross equity derivative receivables and $\$ 2.3$ billion of gross equity derivative payables as a result of an increase in observability and a decrease in the significance of unobservable inputs.
- \$831 million of non-trading loans driven by an increase in observability.
- $\$ 1.0$ billion of long-term debt driven by an increase in observability and a decrease in the significance of unobservable inputs for structured notes.
During the year ended December 31, 2021, significant transfers from level 2 into level 3 included the following:
- \$1.0 billion of total debt and equity instruments, largely due to trading loans, driven by a decrease in observability.
- \$1.5 billion of gross equity derivative receivables and $\$ 1.2$ billion of gross equity derivative payables as a result of a decrease in observability and an increase in the significance of unobservable inputs.
- $\$ 1.3$ billion of non-trading loans driven by a decrease in observability.

During the year ended December 31, 2021, significant transfers from level 3 into level 2 included the following:

- \$1.4 billion of total debt and equity instruments, largely due to trading loans, driven by an increase in observability.
- $\$ 1.9$ billion of gross equity derivative receivables and $\$ 2.1$ billion of gross equity derivative payables as a result of an increase in observability and a decrease in the significance of unobservable inputs.
- \$794 million of non-trading loans driven by an increase in observability.
- $\$ 809$ million of long-term debt driven by an increase in observability and a decrease in the significance of unobservable inputs for structured notes.

During the year ended December 31, 2020, significant transfers from level 2 into level 3 included the following:

- $\$ 1.8$ billion of total debt and equity instruments, predominantly equity securities and trading loans, driven by a decrease in observability.
- $\$ 2.6$ billion of gross equity derivative receivables and $\$ 3.5$ billion of gross equity derivative payables as a result of a decrease in observability and an increase in the significance of unobservable inputs.
- $\$ 880$ million of gross interest rate derivative payables as a result of a decrease in observability and an increase in the significance of unobservable inputs.
- \$2.6 billion of non-trading loans driven by a decrease in observability.
- $\$ 1.2$ billion of long-term debt driven by a decrease in observability and an increase in the significance of unobservable inputs for structured notes.
During the year ended December 31, 2020, significant transfers from level 3 into level 2 included the following:
- $\$ 2.0$ billion of total debt and equity instruments, predominantly due to corporate debt and trading loans, driven by an increase in observability
- \$2.4 billion of gross equity derivative receivables and $\$ 2.4$ billion of gross equity derivative payables as a result of an increase in observability and a decrease in the significance of unobservable inputs.
- \$943 million of deposits as a result of an increase in observability and a decrease in the significance of unobservable inputs.
- $\$ 1.3$ billion of long-term debt driven by an increase in observability and a decrease in the significance of unobservable inputs for structured notes.
All transfers are based on changes in the observability and/or significance of the valuation inputs and are assumed to occur at the beginning of the quarterly reporting period in which they occur.


## Gains and losses

The following describes significant components of total realized/unrealized gains/(losses) for instruments measured at fair value on a recurring basis for the years ended December 31, 2022, 2021 and 2020. These amounts exclude any effects of the Firm's risk management activities where the financial instruments are classified as level 1 and 2 of the fair value hierarchy. Refer to Changes in level 3 recurring fair value measurements rollforward tables on pages 178-182 for further information on these instruments.

## 2022

- $\$ 7.7$ billion of net gains on assets, predominantly driven by gains in net equity derivative receivables due to market movements and gains in MSRs reflecting lower prepayment speeds on higher rates.
- $\$ 4.6$ billion of net gains on liabilities, predominantly driven by a decline in the fair value of long-term debt due to market movements.


## 2021

- $\$ 495$ million of net gains on assets, driven by gains in net interest rate derivative receivables due to market movements, partially offset by losses in net equity derivative receivables and net commodity derivative receivables due to market movements.
- \$1.1 billion of net gains on liabilities, driven by gains in short-term borrowings due to market movements.


## 2020

- $\$ 10$ million of net gains on assets driven by gains in net interest rate derivative receivables due to market movements largely offset by losses in MSRs reflecting faster prepayment speeds on lower rates.
- \$102 million of net gains on liabilities driven by market movements in short-term borrowings.
Refer to Note 15 for information on MSRs.


## Notes to consolidated financial statements

Credit and funding adjustments - derivatives
Derivatives are generally valued using models that use as their basis observable market parameters. These market parameters generally do not consider factors such as counterparty nonperformance risk, the Firm's own credit quality, and funding costs. Therefore, it is generally necessary to make adjustments to the base estimate of fair value to reflect these factors.

CVA represents the adjustment, relative to the relevant benchmark interest rate, necessary to reflect counterparty nonperformance risk. The Firm estimates CVA using a scenario analysis to estimate the expected positive credit exposure across all of the Firm's existing positions with each counterparty, and then estimates losses based on the probability of default and estimated recovery rate as a result of a counterparty credit event considering contractual factors designed to mitigate the Firm's credit exposure, such as collateral and legal rights of offset. The key inputs to this methodology are (i) the probability of a default event occurring for each counterparty, as derived from observed or estimated CDS spreads; and (ii) estimated recovery rates implied by CDS spreads, adjusted to consider the differences in recovery rates as a derivative creditor relative to those reflected in CDS spreads, which generally reflect senior unsecured creditor risk.
FVA represents the adjustment to reflect the impact of funding and is recognized where there is evidence that a market participant in the principal market would incorporate it in a transfer of the instrument. The Firm's FVA framework, applied to uncollateralized (including partially collateralized) over-the-counter ("OTC") derivatives incorporates key inputs such as: (i) the expected funding requirements arising from the Firm's positions with
each counterparty and collateral arrangements; and (ii) the estimated market funding cost in the principal market which, for derivative liabilities, considers the Firm's credit risk (DVA). For collateralized derivatives, the fair value is estimated by discounting expected future cash flows at the relevant overnight indexed swap rate given the underlying collateral agreement with the counterparty, and therefore a separate FVA is not necessary.

The following table provides the impact of credit and funding adjustments on principal transactions revenue in the respective periods, excluding the effect of any associated hedging activities. The FVA presented below includes the impact of the Firm's own credit quality on the inception value of liabilities as well as the impact of changes in the Firm's own credit quality over time.

| Year ended December 31, <br> (in millions) | $\mathbf{2 0 2 2}$ | 2021 | 2020 |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Credit and funding adjustments: |  |  |  |  |  |
| Derivatives CVA | $\$$ | 22 | $\$$ | 362 | $\$$ |
| (337) |  |  |  |  |  |
| Derivatives FVA |  | 42 |  | 47 | $(64)$ |

Valuation adjustments on fair value option elected liabilities
The valuation of the Firm's liabilities for which the fair value option has been elected requires consideration of the Firm's own credit risk. DVA on fair value option elected liabilities reflects changes (subsequent to the issuance of the liability) in the Firm's probability of default and LGD, which are estimated based on changes in the Firm's credit spread observed in the bond market. Realized (gains)/losses due to DVA for fair value option elected liabilities are reported in principal transactions revenue. Unrealized (gains)/Iosses are reported in OCI. Refer to page 182 in this Note and Note 24 for further information.

## Assets and liabilities measured at fair value on a nonrecurring basis

The following tables present the assets and liabilities held as of December 31, 2022 and 2021, for which nonrecurring fair value adjustments were recorded during the years ended December 31, 2022 and 2021, by major product category and fair value hierarchy.

| December 31, 2022 (in millions) | Fair value hierarchy |  |  |  |  |  |  | Total fair value |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Level 1 |  | Level 2 |  | Level 3 |  |  |  |  |
| Loans | \$ | - | \$ | 643 | \$ | 627 | (b) | \$ | 1,270 |
| Other assets ${ }^{(a)}$ |  | - |  | 36 |  | 1,352 |  |  | 1,388 |
| Total assets measured at fair value on a nonrecurring basis | \$ | - | \$ | 679 | \$ | 1,979 |  | \$ | 2,658 |
| Accounts payable and other liabilities |  | - |  | - |  | 84 |  |  | 84 |
| Total liabilities measured at fair value on a nonrecurring basis | \$ | - | \$ | - | \$ | 84 |  | \$ | 84 |
|  |  |  | air | hierarch |  |  |  |  |  |
| (in millions) |  | Level 1 |  | Level 2 |  | Level 3 |  |  | r value |
| Loans | \$ | - | \$ | 1,006 | \$ | 856 |  | \$ | 1,862 |
| Other assets |  | - |  | 4 |  | 1,612 |  |  | 1,616 |
| Total assets measured at fair value on a nonrecurring basis | \$ | - | \$ | 1,010 | \$ | 2,468 |  | \$ | 3,478 |
| Accounts payable and other liabilities |  | - |  | - |  | 3 |  |  | 3 |
| Total liabilities measured at fair value on a nonrecurring basis | \$ | - | \$ | - | \$ | 3 |  | \$ | 3 |

(a) Primarily includes equity securities without readily determinable fair values that were adjusted based on observable price changes in orderly transactions from an identical or similar investment of the same issuer (measurement alternative). Of the $\$ 1.4$ billion in level 3 assets measured at fair value on a nonrecurring basis as of December 31, 2022, $\$ 1.2$ billion related to equity securities adjusted based on the measurement alternative. These equity securities are classified as level 3 due to the infrequency of the observable prices and/or the restrictions on the shares.
(b) Of the $\$ 627$ million in level 3 assets measured at fair value on a nonrecurring basis as of December 31, 2022, \$83 million related to residential real estate loans carried at the net realizable value of the underlying collateral (e.g., collateral-dependent loans). These amounts are classified as level 3 as they are valued using information from broker's price opinions, appraisals and automated valuation models and discounted based upon the Firm's experience with actual liquidation values. These discounts ranged from $9 \%$ to $56 \%$ with a weighted average of $23 \%$.

## Nonrecurring fair value changes

The following table presents the total change in value of assets and liabilities for which fair value adjustments have been recognized for the years ended December 31, 2022, 2021 and 2020, related to assets and liabilities held at those dates.

| December 31, (in millions) | 2022 | 2021 | 2020 |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Loans | $\$$ | $(55)$ | $\$$ | $(72)$ | $\$$ |
| Other assets ${ }^{(\text {a) }}$ |  |  |  |  |  |

(a) Included $\$(338)$ million, $\$ 379$ million and $\$(134)$ million for the years ended December 31, 2022, 2021 and 2020, respectively, of net gains/(losses) as a result of the measurement alternative.

Refer to Note 12 for further information about the measurement of collateral-dependent loans.

## Notes to consolidated financial statements

## Equity securities without readily determinable fair values

The Firm measures certain equity securities without readily determinable fair values at cost less impairment (if any), plus or minus observable price changes from an identical or similar investment of the same issuer (i.e., measurement alternative), with such changes recognized in other income.
In its determination of the new carrying values upon observable price changes, the Firm may adjust the prices if deemed necessary to arrive at the Firm's estimated fair values. Such adjustments may include adjustments to reflect the different rights and obligations of similar securities, and other adjustments that are consistent with the Firm's valuation techniques for private equity direct investments.
The following table presents the carrying value of equity securities without readily determinable fair values held as of December 31, 2022 and 2021, that are measured under the measurement alternative and the related adjustments recorded during the periods presented for those securities with observable price changes. These securities are included in the nonrecurring fair value tables when applicable price changes are observable.

| As of or for the year ended December 31, <br> (in millions) | $\mathbf{2 0 2 2}$ | 2021 |  |
| :--- | ---: | ---: | ---: |
| Other assets | $\$$ | $\mathbf{4 , 0 9 6}$ | $\$$ |
| Carrying value $^{(\text {a) }}$ | $\mathbf{4 8 8}$ | 3,642 |  |
| Upward carrying value changes ${ }^{(b)}$ | $\mathbf{( 8 2 6 )}$ | 432 |  |
| Downward carrying value changes/impairment ${ }^{(\mathrm{C})}$ |  | $(53)$ |  |

(a) The period-end carrying values reflect cumulative purchases and sales in addition to upward and downward carrying value changes.
(b) The cumulative upward carrying value changes between January 1, 2018 and December 31, 2022 were $\$ 1.4$ billion.
(c) The cumulative downward carrying value changes/impairment between January 1, 2018 and December 31, 2022 were $\$(918)$ million.

Included in other assets above is the Firm's interest in Visa Class B common shares ("Visa B shares") recorded at a nominal carrying value. In November 2022, the Firm sold approximately 3 million Visa B shares, resulting in a net pretax gain of \$914 million recorded in other income. Visa B shares are subject to certain transfer restrictions and are convertible into Visa Class A common shares ("Visa A shares") at a specified conversion rate upon final resolution of certain litigation matters involving Visa. In connection with the sale, and consistent with the Firm's sale of 20 million Visa B shares in 2013, the Firm entered into a derivative instrument with the purchaser of the shares, under which the Firm retains the risk associated with changes in the conversion rate.
Under the terms of the derivative instrument, the Firm will (a) make or receive payments based on subsequent changes in the conversion rate and (b) make periodic interest payments to the purchaser of the Visa B shares. The payments under the derivative continue as long as the Visa B shares remain subject to transfer restrictions. The derivative is accounted for at fair value using a discounted cash flow methodology based upon the Firm's estimate of the timing and magnitude of final resolution of the litigation matters. The derivative is recorded in trading liabilities and changes in fair value are recognized in other income. As of December 31, 2022, the Firm held derivative instruments associated with the 23 million Visa B shares that it has sold, which are all subject to similar terms and conditions.
As of December 31, 2022, the Firm's remaining interest in Visa B shares was approximately 37 million shares. On January 5, 2023, Visa filed a Current Report on Form 8-K with the SEC indicating that the conversion rate of Visa B shares to Visa A shares decreased from 1.6059 to 1.5991 effective December 29, 2022. The conversion rate may be further adjusted by Visa depending on developments related to the litigation matters. The outcome of those litigation matters, and the effect that the resolution of those matters may have on the conversion rate, is unknown, and accordingly, as of December 31, 2022, there is significant uncertainty regarding the date of the termination of transfer restrictions and the value of the final conversion rate. As a result of this, as well as differences in voting rights, Visa B shares are not considered to be similar to Visa A shares, and they continue to be held at their nominal carrying value.

Additional disclosures about the fair value of financial instruments that are not carried on the Consolidated balance sheets at fair value
U.S. GAAP requires disclosure of the estimated fair value of certain financial instruments, which are included in the following table. However, this table does not include other items, such as nonfinancial assets, intangible assets, certain financial instruments, and customer relationships. In the opinion of management, these items, in the aggregate, add significant value to JPMorgan Chase, but their fair value is not disclosed in this table.

Financial instruments for which carrying value approximates fair value
Certain financial instruments that are not carried at fair value on the Consolidated balance sheets are carried at amounts that approximate fair value, due to their shortterm nature and generally negligible credit risk. These instruments include cash and due from banks, deposits with banks, federal funds sold, securities purchased under resale agreements and securities borrowed, short-term receivables and accrued interest receivable, short-term borrowings, federal funds purchased, securities loaned and sold under repurchase agreements, accounts payable, and
accrued liabilities. In addition, U.S. GAAP requires that the fair value of deposit liabilities with no stated maturity (i.e., demand, savings and certain money market deposits) be
equal to their carrying value; recognition of the inherent funding value of these instruments is not permitted.

The following table presents, by fair value hierarchy classification, the carrying values and estimated fair values at December 31, 2022 and 2021, of financial assets and liabilities, excluding financial instruments that are carried at fair value on a recurring basis, and their classification within the fair value hierarchy.

(a) Fair value is typically estimated using a discounted cash flow model that incorporates the characteristics of the underlying loans (including principal, contractual interest rate and contractual fees) and other key inputs, including expected lifetime credit losses, interest rates, prepayment rates, and primary origination or secondary market spreads. For certain loans, the fair value is measured based on the value of the underlying collateral. Carrying value of the loan takes into account the loan's allowance for loan losses, which represents the loan's expected credit losses over its remaining expected life. The difference between the estimated fair value and carrying value of a loan is generally attributable to changes in market interest rates, including credit spreads, market liquidity premiums and other factors that affect the fair value of a loan but do not affect its carrying value.
(b) Prior-period amounts have been revised to conform with the current presentation.

The majority of the Firm's lending-related commitments are not carried at fair value on a recurring basis on the Consolidated balance sheets. The carrying value and the estimated fair value of these wholesale lending-related commitments were as follows for the periods indicated.

| (in billions) | December 31, 2022 |  |  |  |  |  |  |  |  | December 31, 2021 |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Estimated fair value hierarchy |  |  |  |  |  |  |  |  | Estimated fair value hierarchy |  |  |  |  |  |  |  |  |  |
|  | Carrying value ${ }^{(\mathrm{a})(\mathrm{b})}$ | Level 1 |  | Level 2 |  | Level 3 |  | Total estimated fair value |  | Carrying value ${ }^{(\mathrm{a})(\mathrm{b})}$ |  | Level 1 |  | Level 2 |  | Level 3 |  | Total estimated fair value |  |
| Wholesale lendingrelated commitments | \$ 2.3 | \$ | - \$ | \$ | - | \$ | 3.2 | \$ | 3.2 | \$ | 2.1 | \$ | - | \$ | - | \$ | 2.9 | \$ | 2.9 |

(a) Excludes the current carrying values of the guarantee liability and the offsetting asset, each of which is recognized at fair value at the inception of the guarantees.
(b) Includes the wholesale allowance for lending-related commitments.

The Firm does not estimate the fair value of consumer off-balance sheet lending-related commitments. In many cases, the Firm can reduce or cancel these commitments by providing the borrower notice or, in some cases as permitted by law, without notice. Refer to page 169 of this Note for a further discussion of the valuation of lending-related commitments.

## Note 3 - Fair value option

The fair value option provides an option to elect fair value for selected financial assets, financial liabilities, unrecognized firm commitments, and written loan commitments.
The Firm has elected to measure certain instruments at fair value for several reasons including to mitigate income statement volatility caused by the differences between the measurement basis of elected instruments (e.g., certain instruments that otherwise would be accounted for on an accrual basis) and the associated risk management arrangements that are accounted for on a fair value basis, as well as to better reflect those instruments that are managed on a fair value basis.

The Firm's election of fair value includes the following instruments:

- Loans purchased or originated as part of securitization warehousing activity, subject to bifurcation accounting, or managed on a fair value basis, including lendingrelated commitments
- Certain securities financing agreements
- Owned beneficial interests in securitized financial assets that contain embedded credit derivatives, which would otherwise be required to be separately accounted for as a derivative instrument
- Structured notes and other hybrid instruments, which are predominantly financial instruments that contain embedded derivatives, that are issued or transacted as part of client-driven activities
- Certain long-term beneficial interests issued by CIB’s consolidated securitization trusts where the underlying assets are carried at fair value

Changes in fair value under the fair value option election
The following table presents the changes in fair value included in the Consolidated statements of income for the years ended December 31, 2022, 2021 and 2020, for items for which the fair value option was elected. The profit and loss information presented below only includes the financial instruments that were elected to be measured at fair value; related risk management instruments, which are required to be measured at fair value, are not included in the table.

| December 31, (in millions) | 2022 |  |  | 2021 |  |  | 2020 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Principal transactions | All other income | Total changes in fair value recorded ${ }^{(\mathrm{e})}$ | Principal transactions | All other income | Total changes in fair value recorded ${ }^{(\mathrm{e})}$ | Principal transactions | All other income | Total changes in fair value recorded ${ }^{(\text {e }}$ |
| Federal funds sold and securities purchased under resale agreements | \$ (384) \$ | - | \$ (384) | \$ (112) | \$ - | \$ (112) | \$ 12 | \$ - | \$ 12 |
| Securities borrowed | (499) | - | (499) | (200) | - | (200) | 143 | - | 143 |
| Trading assets: Debt and equity instruments, excluding loans | $(1,703)$ | - | $(1,703)$ | $(2,171)$ | $(1)^{(c)}$ | $(2,172)$ | 2,587 | $(1)^{(c)}$ | 2,586 |
| Loans reported as trading assets: |  |  |  |  |  |  |  |  |  |
| Changes in instrumentspecific credit risk | (136) | - | (136) | 353 | - | 353 | 135 | - | 135 |
| Other changes in fair value | (59) | - | (59) | (8) | - | (8) | (19) | - | (19) |
| Loans: |  |  |  |  |  |  |  |  |  |
| Changes in instrumentspecific credit risk | (242) | 21 (c) | (221) | 589 | (7) ${ }^{(c)}$ | 582 | 190 | 7 (c) | 197 |
| Other changes in fair value | $(1,421)$ | (794) ${ }^{(c)}$ | $(2,215)$ | (139) | 2,056 ${ }^{\text {(c) }}$ | 1,917 | 470 | 3,239 (c) | 3,709 |
| Other assets | 39 | (6) ${ }^{\text {(d) }}$ | 33 | 12 | $(26){ }^{\text {(d) }}$ | (14) | 103 | (65) ${ }^{(d)}$ | 38 |
| Deposits ${ }^{(a)}$ | 901 | - | 901 | (183) | - | (183) | (726) | - | (726) |
| Federal funds purchased and securities loaned or sold under repurchase agreements | 181 | - | 181 | 69 | - | 69 | (6) | - | (6) |
| Short-term borrowings ${ }^{(a)}$ | 473 | - | 473 | (366) | - | (366) | 294 | - | 294 |
| Trading liabilities | 43 | - | 43 | 7 | - | 7 | 2 | - | 2 |
| Beneficial interests issued by consolidated VIEs | (1) | - | (1) | - | - | - | - | - | - |
| Other liabilities | (11) | - | (11) | (17) | - | (17) | (94) | - | (94) |
| Long-term debt ${ }^{(\mathrm{a})(\mathrm{b})}$ | 8,990 | $98^{\text {(c)(d) }}$ | 9,088 | (980) | $4{ }^{\text {(c)(d) }}$ | (976) | $(2,120)$ | (1) ${ }^{(c)}$ | $(2,121)$ |

(a) Unrealized gains/(losses) due to instrument-specific credit risk (DVA) for liabilities for which the fair value option has been elected are recorded in OCI, while realized gains/(losses) are recorded in principal transactions revenue. Realized gains/(losses) due to instrument-specific credit risk recorded in principal transactions revenue were not material for the years ended December 31, 2022, 2021 and 2020.
(b) Long-term debt measured at fair value predominantly relates to structured notes. Although the risk associated with the structured notes is actively managed, the gains/(losses) reported in this table do not include the income statement impact of the risk management instruments used to manage such risk.
(c) Reported in mortgage fees and related income.
(d) Reported in other income.
(e) Changes in fair value exclude contractual interest, which is included in interest income and interest expense for all instruments other than certain hybrid financial instruments in CIB. Refer to Note 7 for further information regarding interest income and interest expense.

Determination of instrument-specific credit risk for items for which the fair value option was elected
The following describes how the gains and losses that are attributable to changes in instrument-specific credit risk, were determined.

- Loans and lending-related commitments: For floatingrate instruments, all changes in value are attributed to instrument-specific credit risk. For fixed-rate instruments, an allocation of the changes in value for the period is made between those changes in value that are interest rate-related and changes in value that are credit-related. Allocations are generally based on an analysis of borrower-specific credit spread and recovery
information, where available, or benchmarking to similar entities or industries.
- Long-term debt: Changes in value attributable to instrument-specific credit risk were derived principally from observable changes in the Firm's credit spread as observed in the bond market.
- Securities financing agreements: Generally, for these types of agreements, there is a requirement that collateral be maintained with a market value equal to or in excess of the principal amount loaned; as a result, there would be no adjustment or an immaterial adjustment for instrument-specific credit risk related to these agreements.


## Notes to consolidated financial statements

Difference between aggregate fair value and aggregate remaining contractual principal balance outstanding The following table reflects the difference between the aggregate fair value and the aggregate remaining contractual principal balance outstanding as of December 31, 2022 and 2021, for loans, long-term debt and long-term beneficial interests for which the fair value option has been elected.

|  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

(a) These balances are excluded from nonaccrual loans as the loans are insured and/or guaranteed by U.S. government agencies.
(b) There were no performing loans that were ninety days or more past due as of December 31, 2022 and 2021.
(c) Remaining contractual principal is not applicable to nonprincipal-protected structured notes and long-term beneficial interests. Unlike principal-protected structured notes and long-term beneficial interests, for which the Firm is obligated to return a stated amount of principal at maturity, nonprincipalprotected structured notes and long-term beneficial interests do not obligate the Firm to return a stated amount of principal at maturity, but for structured notes to return an amount based on the performance of an underlying variable or derivative feature embedded in the note. However, investors are exposed to the credit risk of the Firm as issuer for both nonprincipal-protected and principal-protected notes.
(d) Where the Firm issues principal-protected zero-coupon or discount notes, the balance reflects the contractual principal payment at maturity or, if applicable, the contractual principal payment at the Firm's next call date.
(e) Prior-period amounts have been revised to conform with the current presentation.

At December 31, 2022 and 2021, the contractual amount of lending-related commitments for which the fair value option was elected was $\$ 7.6$ billion and $\$ 11.9$ billion, respectively, with a corresponding fair value of $\$ 24$ million and $\$ 10$ million, respectively. Refer to Note 28 for further information regarding off-balance sheet lending-related financial instruments.

Structured note products by balance sheet classification and risk component
The following table presents the fair value of structured notes, by balance sheet classification and the primary risk type.

|  | December 31, 2022 |  |  |  |  |  |  |  |  | December 31, 2021 |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (in millions) | Long-term debt |  | Short-term borrowings |  | Deposits |  | Total |  |  | Long-term debt |  | Short-term borrowings |  | Deposits |  |  | Total |  |
| Risk exposure |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Interest rate | \$ | 31,973 | \$ | 260 | \$ | 24,655 |  | \$ | 56,888 | \$ | 34,127 | \$ | 1 | \$ | 4,860 |  | \$ | 38,988 |
| Credit |  | 4,105 |  | 170 |  | - |  |  | 4,275 |  | 6,352 |  | 858 |  | - |  |  | 7,210 |
| Foreign exchange |  | 2,674 |  | 788 |  | 50 |  |  | 3,512 |  | 3,386 |  | 315 |  | 1,066 |  |  | 4,767 |
| Equity |  | 30,864 |  | 4,272 |  | 3,545 |  |  | 38,681 |  | 29,317 |  | 6,827 |  | 5,125 |  |  | 41,269 |
| Commodity |  | 1,655 |  | 16 |  | 2 | (a) |  | 1,673 |  | 405 |  | - |  | 3 | (a) |  | 408 |
| Total structured notes | \$ | 71,271 | \$ | 5,506 | \$ | 28,252 |  |  | 105,029 | \$ | 73,587 | \$ | 8,001 | \$ | 11,054 |  | \$ | 92,642 |

(a) Excludes deposits linked to precious metals for which the fair value option has not been elected of $\$ 602$ million and $\$ 692$ million for the years ended December 31, 2022 and 2021, respectively.

## Notes to consolidated financial statements

## Note 4 - Credit risk concentrations

Concentrations of credit risk arise when a number of clients, counterparties or customers are engaged in similar business activities or activities in the same geographic region, or when they have similar economic features that would cause their ability to meet contractual obligations to be similarly affected by changes in economic conditions.

JPMorgan Chase regularly monitors various segments of its credit portfolios to assess potential credit risk concentrations and to obtain additional collateral when deemed necessary and permitted under the Firm's agreements. Senior management is significantly involved in the credit approval and review process, and risk levels are adjusted as needed to reflect the Firm's risk appetite.

In the Firm's consumer portfolio, concentrations are managed primarily by product and by U.S. geographic region, with a key focus on trends and concentrations at the portfolio level, where potential credit risk concentrations can be remedied through changes in underwriting policies and portfolio guidelines. Refer to Note 12 for additional information on the geographic composition of the Firm's consumer loan portfolios. In the wholesale portfolio, credit risk concentrations are evaluated primarily by industry and monitored regularly on both an aggregate portfolio level and on an individual client or counterparty basis.

The Firm's wholesale exposure is managed through loan syndications and participations, loan sales, securitizations, credit derivatives, master netting agreements, collateral and other risk-reduction techniques. Refer to Note 12 for additional information on loans.
The Firm does not believe that its exposure to any particular loan product or industry segment results in a significant concentration of credit risk.

Terms of loan products and collateral coverage are included in the Firm's assessment when extending credit and establishing its allowance for loan losses.

The table below presents both on-balance sheet and off-balance sheet consumer and wholesale credit exposure by the Firm's three credit portfolio segments as of December 31, 2022 and 2021. The wholesale industry of risk category is generally based on the client or counterparty's primary business activity.

| December 31, (in millions) | 2022 |  |  |  |  | 2021 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \begin{array}{c} \text { Credit } \\ \text { exposure } \end{array} \\ \hline(\mathrm{h}) \end{gathered}$ | On-balance sheet |  |  | Off-balance sheet ${ }^{(j)}$ | $\begin{gathered} \text { Credit }^{(h)} \\ \text { exposure }^{\text {a }} \end{gathered}$ | On-balance sheet |  |  |  | Off-balance sheet |
|  |  | Loans |  | Derivatives |  |  | Loans |  |  | rivatives |  |
| Consumer, excluding credit card | \$ 344,893 | \$ 311,375 | ${ }^{(i)}$ | \$ | \$ 33,518 | \$ 368,640 | \$ 323,306 | (i) | \$ | - | \$ 45,334 |
| Credit card ${ }^{(a)}$ | 1,006,459 | 185,175 |  | - | 821,284 | 884,830 | 154,296 |  |  | - | 730,534 |
| Total consumer ${ }^{\text {(a) }}$ | 1,351,352 | 496,550 |  | - | 854,802 | 1,253,470 | 477,602 |  |  | - | 775,868 |
| Wholesale ${ }^{\text {(b) }}$ |  |  |  |  |  |  |  |  |  |  |  |
| Real Estate | 170,857 | 131,681 |  | 249 | 38,927 | 155,069 | 119,753 |  |  | 1,113 | 34,203 |
| Individuals and Individual Entities ${ }^{(c)}$ | 130,815 | 120,424 |  | 434 | 9,957 | 141,973 | 130,576 |  |  | 1,317 | 10,080 |
| Consumer \& Retail | 120,555 | 45,867 |  | 1,650 | 73,038 | 122,789 | 39,588 |  |  | 2,669 | 80,532 |
| Asset Managers | 95,656 | 40,511 |  | 16,397 | 38,748 | 81,228 | 41,031 |  |  | 9,351 | 30,846 |
| Industrials | 72,483 | 26,960 |  | 1,770 | 43,753 | 66,974 | 21,652 |  |  | 1,224 | 44,098 |
| Technology, Media \& Telecommunications | 72,286 | 21,622 |  | 2,950 | 47,714 | 84,070 | 17,815 |  |  | 2,640 | 63,615 |
| Healthcare | 62,613 | 22,970 |  | 1,683 | 37,960 | 59,014 | 18,587 |  |  | 2,575 | 37,852 |
| Banks \& Finance Cos | 51,816 | 32,172 |  | 3,246 | 16,398 | 54,684 | 34,217 |  |  | 4,418 | 16,049 |
| Oil \& Gas | 38,668 | 9,632 |  | 5,121 | 23,915 | 42,606 | 11,039 |  |  | 6,034 | 25,533 |
| Utilities | 36,218 | 9,107 |  | 3,269 | 23,842 | 33,203 | 5,969 |  |  | 3,736 | 23,498 |
| State \& Municipal Govt ${ }^{(d)}$ | 33,847 | 18,147 |  | 585 | 15,115 | 33,216 | 15,322 |  |  | 1,563 | 16,331 |
| Automotive | 33,287 | 14,735 |  | 529 | 18,023 | 34,573 | 11,759 |  |  | 720 | 22,094 |
| Insurance | 21,045 | 2,387 |  | 8,081 | 10,577 | 13,926 | 1,303 |  |  | 2,700 | 9,923 |
| Chemicals \& Plastics | 20,030 | 5,771 |  | 407 | 13,852 | 17,660 | 5,033 |  |  | 564 | 12,063 |
| Central Govt | 19,095 | 3,167 |  | 12,955 | 2,973 | 11,317 | 2,889 |  |  | 6,837 | 1,591 |
| Metals \& Mining | 15,915 | 5,398 |  | 475 | 10,042 | 16,696 | 5,696 |  |  | 924 | 10,076 |
| Transportation | 15,009 | 5,005 |  | 567 | 9,437 | 14,635 | 5,453 |  |  | 782 | 8,400 |
| Securities Firms | 8,066 | 556 |  | 3,387 | 4,123 | 4,180 | 469 |  |  | 1,260 | 2,451 |
| Financial Markets Infrastructure | 4,962 | 13 |  | 3,050 | 1,899 | 4,377 | 5 |  |  | 2,487 | 1,885 |
| All other ${ }^{(\text {e })}$ | 123,307 | 87,545 |  | 4,075 | 31,687 | 111,690 | 72,198 |  |  | 4,167 | 35,325 |
| Subtotal | 1,146,530 | 603,670 |  | 70,880 | 471,980 | 1,103,880 | 560,354 |  |  | 57,081 | 486,445 |
| Loans held-for-sale and loans at fair value | 35,427 | 35,427 |  | - | - | 39,758 | 39,758 |  |  | - | - |
| Receivables from customers ${ }^{(f)}$ | 49,257 | - |  | - | - | 59,645 | - |  |  |  | - |
| Total wholesale | 1,231,214 | 639,097 |  | 70,880 | 471,980 | 1,203,283 | 600,112 |  |  | 57,081 | 486,445 |
| Total exposure ${ }^{(\mathrm{g})(\mathrm{h})}$ | \$ 2,582,566 | \$1,135,647 |  | \$ 70,880 | \$1,326,782 | \$ 2,456,753 | \$1,077,714 |  | \$ | 57,081 | \$1,262,313 |

(a) Also includes commercial card lending-related commitments primarily in CB and CIB.
(b) The industry rankings presented in the table as of December 31, 2021, are based on the industry rankings of the corresponding exposures at December 31, 2022, not actual rankings of such exposures at December 31, 2021.
(c) Individuals and Individual Entities predominantly consists of Global Private Bank clients within AWM and J.P. Morgan Wealth Management within CCB, and includes exposure to personal investment companies and personal and testamentary trusts.
(d) In addition to the credit risk exposure to states and municipal governments (both U.S. and non-U.S.) at December 31, 2022 and 2021 , noted above, the Firm held: $\$ 6.6$ billion and $\$ 7.1$ billion, respectively, of trading assets; $\$ 6.8$ billion and $\$ 15.9$ billion, respectively, of AFS securities; and $\$ 19.7$ billion and $\$ 14.0$ billion, respectively, of HTM securities, issued by U.S. state and municipal governments. Refer to Note 2 and Note 10 for further information.
(e) All other includes: SPEs and Private education and civic organizations, representing approximately 95\% and 5\%, respectively, at December 31, 2022 and $94 \%$ and $6 \%$, respectively, at December 31, 2021. Refer to Note 14 for more information on exposures to SPEs.
(f) Receivables from customers reflect held-for-investment margin loans to brokerage clients in CIB, CCB and AWM that are collateralized by assets maintained in the clients' brokerage accounts (e.g., cash on deposit, liquid and readily marketable debt or equity securities). Because of this collateralization, no allowance for credit losses is generally held against these receivables. To manage its credit risk the Firm establishes margin requirements and monitors the required margin levels on an ongoing basis, and requires clients to deposit additional cash or other collateral, or to reduce positions, when appropriate. These receivables are reported within accrued interest and accounts receivable on the Firm's Consolidated balance sheets.
(g) Excludes cash placed with banks of $\$ 556.6$ billion and $\$ 729.6$ billion, at December 31, 2022 and 2021, respectively, which is predominantly placed with various central banks, primarily Federal Reserve Banks.
(h) Credit exposure is net of risk participations and excludes the benefit of credit derivatives used in credit portfolio management activities held against derivative receivables or loans and liquid securities and other cash collateral held against derivative receivables.
(i) At December 31, 2022 and 2021, included $\$ 350$ million and $\$ 5.4$ billion of loans in Business Banking under the PPP, respectively. PPP loans are guaranteed by the SBA. Other than in certain limited circumstances, the Firm typically does not recognize charge-offs, classify as nonaccrual nor record an allowance for loan losses on these loans.
(j) Represents lending-related financial instruments.

## Notes to consolidated financial statements

## Note 5 - Derivative instruments

Derivative contracts derive their value from underlying asset prices, indices, reference rates, other inputs or a combination of these factors and may expose counterparties to risks and rewards of an underlying asset or liability without having to initially invest in, own or exchange the asset or liability. JPMorgan Chase makes markets in derivatives for clients and also uses derivatives to hedge or manage its own risk exposures. Predominantly all of the Firm's derivatives are entered into for marketmaking or risk management purposes.

## Market-making derivatives

The majority of the Firm's derivatives are entered into for market-making purposes. Clients use derivatives to mitigate or modify interest rate, credit, foreign exchange, equity and commodity risks. The Firm actively manages the risks from its exposure to these derivatives by entering into other derivative contracts or by purchasing or selling other financial instruments that partially or fully offset the exposure from client derivatives.

## Risk management derivatives

The Firm manages certain market and credit risk exposures using derivative instruments, including derivatives in hedge accounting relationships and other derivatives that are used to manage risks associated with specified assets and liabilities.
The Firm generally uses interest rate derivatives to manage the risk associated with changes in interest rates. Fixed-rate assets and liabilities appreciate or depreciate in market value as interest rates change. Similarly, interest income and expense increase or decrease as a result of variablerate assets and liabilities resetting to current market rates, and as a result of the repayment and subsequent origination or issuance of fixed-rate assets and liabilities at current market rates. Gains and losses on the derivative instruments related to these assets and liabilities are expected to substantially offset this variability.
Foreign currency derivatives are used to manage the foreign exchange risk associated with certain foreign currency-denominated (i.e., non-U.S. dollar) assets and liabilities and forecasted transactions, as well as the Firm's net investments in certain non-U.S. subsidiaries or branches whose functional currencies are not the U.S. dollar. As a result of fluctuations in foreign currencies, the U.S. dollarequivalent values of the foreign currency-denominated assets and liabilities or the forecasted revenues or expenses increase or decrease. Gains or losses on the derivative instruments related to these foreign currency-denominated assets or liabilities, or forecasted transactions, are expected to substantially offset this variability.

Commodities derivatives are used to manage the price risk of certain commodities inventories. Gains or losses on these derivative instruments are expected to substantially offset the depreciation or appreciation of the related inventory.

Credit derivatives are used to manage the counterparty credit risk associated with loans and lending-related commitments. Credit derivatives compensate the purchaser when the entity referenced in the contract experiences a credit event, such as bankruptcy or a failure to pay an obligation when due. Credit derivatives primarily consist of CDS. Refer to the Credit derivatives section on pages 205-207 of this Note for a further discussion of credit derivatives.

Refer to the risk management derivatives gains and losses table on page 205 and the hedge accounting gains and losses tables on pages 202-204 of this Note for more information about risk management derivatives.
Derivative counterparties and settlement types
The Firm enters into OTC derivatives, which are negotiated and settled bilaterally with the derivative counterparty. The Firm also enters into, as principal, certain ETD such as futures and options, and OTC-cleared derivative contracts with CCPs. ETD contracts are generally standardized contracts traded on an exchange and cleared by the CCP, which is the Firm's counterparty from the inception of the transactions. OTC-cleared derivatives are traded on a bilateral basis and then novated to the CCP for clearing.

## Derivative clearing services

The Firm provides clearing services for clients in which the Firm acts as a clearing member at certain exchanges and clearing houses. The Firm does not reflect the clients' derivative contracts in its Consolidated Financial Statements. Refer to Note 28 for further information on the Firm's clearing services.

## Accounting for derivatives

All free-standing derivatives that the Firm executes for its own account are required to be recorded on the Consolidated balance sheets at fair value.
As permitted under U.S. GAAP, the Firm nets derivative assets and liabilities, and the related cash collateral receivables and payables, when a legally enforceable master netting agreement exists between the Firm and the derivative counterparty. Refer to Note 1 for further discussion of the offsetting of assets and liabilities. The accounting for changes in value of a derivative depends on whether or not the transaction has been designated and qualifies for hedge accounting. Derivatives that are not designated as hedges are reported and measured at fair value through earnings. The tabular disclosures on pages 198-205 of this Note provide additional information on the amount of, and reporting for, derivative assets, liabilities, gains and losses. Refer to Notes 2 and 3 for a further discussion of derivatives embedded in structured notes.

## Derivatives designated as hedges

The Firm applies hedge accounting to certain derivatives executed for risk management purposes - generally interest rate, foreign exchange and commodity derivatives. However, JPMorgan Chase does not seek to apply hedge accounting to all of the derivatives associated with the Firm's risk management activities. For example, the Firm does not apply hedge accounting to purchased CDS used to manage the credit risk of loans and lending-related commitments, because of the difficulties in qualifying such contracts as hedges. For the same reason, the Firm does not apply hedge accounting to certain interest rate, foreign exchange, and commodity derivatives used for risk management purposes.
To qualify for hedge accounting, a derivative must be highly effective at reducing the risk associated with the exposure being hedged. In addition, for a derivative to be designated as a hedge, the risk management objective and strategy must be documented. Hedge documentation must identify the derivative hedging instrument, the asset or liability or forecasted transaction and type of risk to be hedged, and how the effectiveness of the derivative is assessed prospectively and retrospectively. To assess effectiveness, the Firm uses statistical methods such as regression analysis, nonstatistical methods such as dollar-value comparisons of the change in the fair value of the derivative to the change in the fair value or cash flows of the hedged item, and qualitative comparisons of critical terms and the evaluation of any changes in those terms. The extent to which a derivative has been, and is expected to continue to be, highly effective at offsetting changes in the fair value or cash flows of the hedged item must be assessed and documented at least quarterly. If it is determined that a derivative is not highly effective at hedging the designated exposure, hedge accounting is discontinued.
There are three types of hedge accounting designations: fair value hedges, cash flow hedges and net investment hedges. JPMorgan Chase uses fair value hedges primarily to hedge fixed-rate long-term debt, AFS securities and certain commodities inventories. For qualifying fair value hedges, the changes in the fair value of the derivative, and in the value of the hedged item for the risk being hedged, are recognized in earnings. Certain amounts excluded from the assessment of effectiveness are recorded in OCl and recognized in earnings over the life of the derivative. If the hedge relationship is terminated, then the adjustment to the hedged item continues to be reported as part of the basis of the hedged item, and for benchmark interest rate hedges, is amortized to earnings as a yield adjustment. Derivative amounts affecting earnings are recognized consistent with the classification of the hedged item primarily net interest income and principal transactions revenue.
JPMorgan Chase uses cash flow hedges primarily to hedge the exposure to variability in forecasted cash flows from floating-rate assets and liabilities and foreign currencydenominated revenue and expense. For qualifying cash flow hedges, changes in the fair value of the derivative are
recorded in OCl and recognized in earnings as the hedged item affects earnings. Derivative amounts affecting earnings are recognized consistent with the classification of the hedged item - primarily noninterest revenue, net interest income and compensation expense. If the hedge relationship is terminated, then the change in value of the derivative recorded in AOCl is recognized in earnings when the cash flows that were hedged affect earnings. For hedge relationships that are discontinued because a forecasted transaction is expected to not occur according to the original hedge forecast, any related derivative values recorded in AOCl are immediately recognized in earnings.
JPMorgan Chase uses net investment hedges to protect the value of the Firm's net investments in certain non-U.S. subsidiaries or branches whose functional currencies are not the U.S. dollar. For qualifying net investment hedges, changes in the fair value of the derivatives due to changes in spot foreign exchange rates are recorded in OCl as translation adjustments. Amounts excluded from the assessment of effectiveness are recorded directly in earnings.

## Notes to consolidated financial statements

The following table outlines the Firm's primary uses of derivatives and the related hedge accounting designation or disclosure category.

| Type of Derivative | Use of Derivative | Designation and disclosure | Affected segment or unit | Page reference |
| :---: | :---: | :---: | :---: | :---: |
| Manage specifically identified risk exposures in qualifying hedge accounting relationships: |  |  |  |  |
| - Interest rate | Hedge fixed rate assets and liabilities | Fair value hedge | Corporate | 202-203 |
| - Interest rate | Hedge floating-rate assets and liabilities | Cash flow hedge | Corporate | 204 |
| - Foreign exchange | Hedge foreign currency-denominated assets and liabilities | Fair value hedge | Corporate | 202-203 |
| - Foreign exchange | Hedge foreign currency-denominated forecasted revenue and expense | Cash flow hedge | Corporate | 204 |
| - Foreign exchange | Hedge the value of the Firm's investments in non-U.S. dollar functional currency entities | Net investment hedge | Corporate | 204 |
| - Commodity | Hedge commodity inventory | Fair value hedge | CIB, AWM | 202-203 |
| Manage specifically identified risk exposures not designated in qualifying hedge accounting relationships: |  |  |  |  |
| - Interest rate | Manage the risk associated with mortgage commitments, warehouse loans and MSRs | Specified risk management | CCB | 205 |
| - Credit | Manage the credit risk associated with wholesale lending exposures | Specified risk management | CIB | 205 |
| - Interest rate and foreign exchange | Manage the risk associated with certain other specified assets and liabilities | Specified risk management | Corporate | 205 |
| Market-making derivatives and other activities: |  |  |  |  |
| - Various | Market-making and related risk management | Market-making and other | CIB | 205 |
| - Various | Other derivatives | Market-making and other | CIB, AWM, Corporate | 205 |

Notional amount of derivative contracts
The following table summarizes the notional amount of free-standing derivative contracts outstanding as of December 31, 2022 and 2021.

| December 31, (in billions) | Notional amounts ${ }^{(\mathrm{b})}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2022 |  | 2021 |  |
| Interest rate contracts |  |  |  |  |
| Swaps | \$ | 24,491 | \$ | 24,075 |
| Futures and forwards |  | 2,636 |  | 2,520 |
| Written options |  | 3,047 |  | 3,018 |
| Purchased options |  | 2,992 |  | 3,188 |
| Total interest rate contracts |  | 33,166 |  | 32,801 |
| Credit derivatives ${ }^{(a)}$ |  | 1,132 |  | 1,053 |
| Foreign exchange contracts |  |  |  |  |
| Cross-currency swaps |  | 4,196 |  | 4,112 |
| Spot, futures and forwards |  | 7,017 |  | 7,679 |
| Written options |  | 775 |  | 741 |
| Purchased options |  | 759 |  | 727 |
| Total foreign exchange contracts |  | 12,747 |  | 13,259 |
| Equity contracts |  |  |  |  |
| Swaps |  | 618 |  | 612 |
| Futures and forwards |  | 110 |  | 139 |
| Written options |  | 636 |  | 654 |
| Purchased options |  | 580 |  | 598 |
| Total equity contracts |  | 1,944 |  | 2,003 |
| Commodity contracts |  |  |  |  |
| Swaps |  | 136 |  | 185 |
| Spot, futures and forwards |  | 136 |  | 188 |
| Written options |  | 117 |  | 135 |
| Purchased options |  | 98 |  | 111 |
| Total commodity contracts |  | 487 |  | 619 |
| Total derivative notional amounts | \$ | 49,476 | \$ | 49,735 |

(a) Refer to the Credit derivatives discussion on pages 205-207 for more information on volumes and types of credit derivative contracts.
(b) Represents the sum of gross long and gross short third-party notional derivative contracts.

While the notional amounts disclosed above give an indication of the volume of the Firm's derivatives activity, the notional amounts significantly exceed, in the Firm's view, the possible losses that could arise from such transactions. For most derivative contracts, the notional amount is not exchanged; it is simply a reference amount used to calculate payments.

## Notes to consolidated financial statements

Impact of derivatives on the Consolidated balance sheets
The following table summarizes information on derivative receivables and payables (before and after netting adjustments) that are reflected on the Firm's Consolidated balance sheets as of December 31, 2022 and 2021, by accounting designation (e.g., whether the derivatives were designated in qualifying hedge accounting relationships or not) and contract type.

Free-standing derivative receivables and payables ${ }^{(a)}$

(a) Balances exclude structured notes for which the fair value option has been elected. Refer to Note 3 for further information.
(b) As permitted under U.S. GAAP, the Firm has elected to net derivative receivables and derivative payables and the related cash collateral receivables and payables when a legally enforceable master netting agreement exists.

Derivatives netting
The following tables present, as of December 31, 2022 and 2021, gross and net derivative receivables and payables by contract and settlement type. Derivative receivables and payables, as well as the related cash collateral from the same counterparty, have been netted on the Consolidated balance sheets where the Firm has obtained an appropriate legal opinion with respect to the master netting agreement. Where such a legal opinion has not been either sought or obtained, amounts are not eligible for netting on the Consolidated balance sheets, and those derivative receivables and payables are shown separately in the tables below.

In addition to the cash collateral received and transferred that is presented on a net basis with derivative receivables and payables, the Firm receives and transfers additional collateral (financial instruments and cash). These amounts mitigate counterparty credit risk associated with the Firm's derivative instruments, but are not eligible for net presentation:

- collateral that consists of liquid securities and other cash collateral held at third-party custodians, which are shown separately as "Collateral not nettable on the Consolidated balance sheets" in the tables below, up to the fair value exposure amount. For the purpose of this disclosure, the definition of liquid securities is consistent with the definition of high quality liquid assets as defined in the LCR rule;
- the amount of collateral held or transferred that exceeds the fair value exposure at the individual counterparty level, as of the date presented, which is excluded from the tables below; and
- collateral held or transferred that relates to derivative receivables or payables where an appropriate legal opinion has not been either sought or obtained with respect to the master netting agreement, which is excluded from the tables below.

| December 31, (in millions) | 2022 |  |  |  |  | 2021 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Gross derivative receivables | Amounts netted on the Consolidated balance sheets | Net derivative receivables |  |  | Gross derivative receivables |  | Amounts netted on the Consolidated balance sheets | Net derivative receivables |
| U.S. GAAP nettable derivative receivables |  |  |  |  |  |  |  |  |  |
| Interest rate contracts: |  |  |  |  |  |  |  |  |  |
| OTC | \$ 203,922 | \$ $(178,261)$ | \$ | 25,661 |  | \$ | 251,953 | \$ $(234,283)$ | \$ 17,670 |
| OTC-cleared | 93,800 | $(93,424)$ |  | 376 |  |  | 14,144 | $(13,839)$ | 305 |
| Exchange-traded ${ }^{(\mathrm{a})}$ | 559 | (311) |  | 248 |  |  | 498 | (489) | 9 |
| Total interest rate contracts | 298,281 | $(271,996)$ |  | 26,285 |  |  | 266,595 | $(248,611)$ | 17,984 |
| Credit contracts: |  |  |  |  |  |  |  |  |  |
| OTC | 8,474 | $(7,535)$ |  | 939 |  |  | 8,035 | $(7,177)$ | 858 |
| OTC-cleared | 1,746 | $(1,704)$ |  | 42 |  |  | 1,671 | $(1,631)$ | 40 |
| Total credit contracts | 10,220 | $(9,239)$ |  | 981 |  |  | 9,706 | $(8,808)$ | 898 |
| Foreign exchange contracts: |  |  |  |  |  |  |  |  |  |
| OTC | 237,941 | $(216,796)$ |  | 21,145 |  |  | 166,185 | $(156,251)$ | 9,934 |
| OTC-cleared | 1,461 | $(1,417)$ |  | 44 |  |  | 789 | (703) | 86 |
| Exchange-traded ${ }^{(\mathrm{a})}$ | 15 | (1) |  | 14 |  |  | 6 | - | 6 |
| Total foreign exchange contracts | 239,417 | $(218,214)$ |  | 21,203 |  |  | 166,980 | $(156,954)$ | 10,026 |
| Equity contracts: |  |  |  |  |  |  |  |  |  |
| OTC | 30,323 | $(25,665)$ |  | 4,658 |  |  | 25,704 | $(23,977)$ | 1,727 |
| Exchange-traded ${ }^{(\mathrm{a})}$ | 28,467 | $(27,109)$ |  | 1,358 |  |  | 36,095 | $(34,673)$ | 1,422 |
| Total equity contracts | 58,790 | $(52,774)$ |  | 6,016 |  |  | 61,799 | $(58,650)$ | 3,149 |
| Commodity contracts: |  |  |  |  |  |  |  |  |  |
| OTC | 14,430 | $(7,633)$ |  | 6,797 |  |  | 15,063 | $(6,868)$ | 8,195 |
| OTC-cleared | 120 | (112) |  | 8 |  |  | 49 | (49) | - |
| Exchange-traded ${ }^{(\mathrm{a})}$ | 9,103 | $(8,745)$ |  | 358 |  |  | 8,279 | $(8,266)$ | 13 |
| Total commodity contracts | 23,653 | $(16,490)$ |  | 7,163 |  |  | 23,391 | $(15,183)$ | 8,208 |
| Derivative receivables with appropriate legal opinion | 630,361 | $(568,713)$ |  | 61,648 | (d) |  | 528,471 | $(488,206)$ | 40,265 ${ }^{\text {(d) }}$ |
| Derivative receivables where an appropriate legal opinion has not been either sought or obtained | 9,232 |  |  | 9,232 |  |  | 16,816 |  | 16,816 |
| Total derivative receivables recognized on the Consolidated balance sheets | \$ 639,593 |  | \$ | 70,880 |  | \$ | 545,287 |  | \$ 57,081 |
| Collateral not nettable on the Consolidated balance sheets ${ }^{(b)(C)}$ |  |  |  | $(23,014)$ |  |  |  |  | $(10,102)$ |
| Net amounts |  |  | \$ | 47,866 |  |  |  |  | \$ 46,979 |

## Notes to consolidated financial statements

|  | 2022 |  |  | 2021 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| December 31, (in millions) | Gross derivative payables | Amounts netted on the Consolidated balance sheets | Net derivative payables | Gross derivative payables | Amounts netted on the Consolidated balance sheets | Net derivative payables |


| U.S. GAAP nettable derivative payables |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Interest rate contracts: |  |  |  |  |  |  |  |  |  |  |  |  |
| OTC | \$ | 190,108 | \$ $(176,890)$ | \$ | 13,218 | \$ | \$ | 223,576 | \$ $(216,757)$ |  | 6,819 |  |
| OTC-cleared |  | 97,417 | $(97,126)$ |  | 291 |  |  | 15,695 | $(15,492)$ |  | 203 |  |
| Exchange-traded ${ }^{(\mathrm{a})}$ |  | 327 | (305) |  | 22 |  |  | 292 | (288) |  | 4 |  |
| Total interest rate contracts |  | 287,852 | $(274,321)$ |  | 13,531 |  |  | 239,563 | $(232,537)$ |  | 7,026 |  |
| Credit contracts: |  |  |  |  |  |  |  |  |  |  |  |  |
| OTC |  | 8,054 | $(7,572)$ |  | 482 |  |  | 9,021 | $(8,421)$ |  | 600 |  |
| OTC-cleared |  | 1,674 | $(1,645)$ |  | 29 |  |  | 1,679 | $(1,611)$ |  | 68 |  |
| Total credit contracts |  | 9,728 | $(9,217)$ |  | 511 |  |  | 10,700 | $(10,032)$ |  | 668 |  |
| Foreign exchange contracts: |  |  |  |  |  |  |  |  |  |  |  |  |
| OTC |  | 246,457 | $(231,248)$ |  | 15,209 |  |  | 171,610 | $(160,946)$ |  | 10,664 |  |
| OTC-cleared |  | 1,488 | $(1,417)$ |  | 71 |  |  | 706 | (703) |  | 3 |  |
| Exchange-traded ${ }^{(\mathrm{a})}$ |  | 20 | - |  | 20 |  |  | 7 | - |  | 7 |  |
| Total foreign exchange contracts |  | 247,965 | $(232,665)$ |  | 15,300 |  |  | 172,323 | $(161,649)$ |  | 10,674 |  |
| Equity contracts: |  |  |  |  |  |  |  |  |  |  |  |  |
| OTC |  | 29,833 | $(26,554)$ |  | 3,279 |  |  | 31,379 | $(27,830)$ |  | 3,549 |  |
| Exchange-traded ${ }^{(\mathrm{a})}$ |  | 28,291 | $(27,103)$ |  | 1,188 |  |  | 40,621 | $(34,664)$ |  | 5,957 |  |
| Total equity contracts |  | 58,124 | $(53,657)$ |  | 4,467 |  |  | 72,000 | $(62,494)$ |  | 9,506 |  |
| Commodity contracts: |  |  |  |  |  |  |  |  |  |  |  |  |
| OTC |  | 11,954 | $(7,642)$ |  | 4,312 |  |  | 14,874 | $(9,667)$ |  | 5,207 |  |
| OTC-cleared |  | 112 | (112) |  | - |  |  | 73 | (73) |  | - |  |
| Exchange-traded ${ }^{(\mathrm{a})}$ |  | 9,021 | $(8,758)$ |  | 263 |  |  | 8,954 | $(8,476)$ |  | 478 |  |
| Total commodity contracts |  | 21,087 | $(16,512)$ |  | 4,575 |  |  | 23,901 | $(18,216)$ |  | 5,685 |  |
| Derivative payables with appropriate legal opinion |  | 624,756 | $(586,372)$ |  | 38,384 | (d) |  | 518,487 | $(484,928)$ |  | 33,559 | (d) |
| Derivative payables where an appropriate legal opinion has not been either sought or obtained |  | 12,757 |  |  | 12,757 |  |  | 16,557 |  |  | 16,557 |  |
| Total derivative payables recognized on the Consolidated balance sheets | \$ | 637,513 |  | \$ | 51,141 | \$ | \$ | 535,044 |  |  | 50,116 |  |
| Collateral not nettable on the Consolidated balance sheets ${ }^{(b)(c)}$ |  |  |  |  | $(3,318)$ |  |  |  |  |  | $(5,872)$ |  |
| Net amounts |  |  |  | \$ | 47,823 |  |  |  |  |  | 44,244 |  |

(a) Exchange-traded derivative balances that relate to futures contracts are settled daily.
(b) Includes liquid securities and other cash collateral held at third-party custodians related to derivative instruments where an appropriate legal opinion has been obtained. For some counterparties, the collateral amounts of financial instruments may exceed the derivative receivables and derivative payables balances. Where this is the case, the total amount reported is limited to the net derivative receivables and net derivative payables balances with that counterparty.
(c) Derivative collateral relates only to OTC and OTC-cleared derivative instruments.
(d) Net derivatives receivable included cash collateral netted of $\$ 51.5$ billion and $\$ 67.6$ billion at December 31, 2022 and 2021, respectively. Net derivatives payable included cash collateral netted of $\$ 69.2$ billion and $\$ 64.3$ billion at December 31, 2022 and 2021, respectively. Derivative cash collateral relates to OTC and OTC-cleared derivative instruments.

## Liquidity risk and credit-related contingent features

In addition to the specific market risks introduced by each derivative contract type, derivatives expose JPMorgan Chase to credit risk - the risk that derivative counterparties may fail to meet their payment obligations under the derivative contracts and the collateral, if any, held by the Firm proves to be of insufficient value to cover the payment obligation. It is the policy of JPMorgan Chase to actively pursue, where possible, the use of legally enforceable master netting arrangements and collateral agreements to mitigate derivative counterparty credit risk inherent in derivative receivables.

While derivative receivables expose the Firm to credit risk, derivative payables expose the Firm to liquidity risk, as the derivative contracts typically require the Firm to post cash or securities collateral with counterparties as the fair value of the contracts moves in the counterparties' favor or upon specified downgrades in the Firm's and its subsidiaries' respective credit ratings. Certain derivative contracts also provide for termination of the contract, generally upon a downgrade of either the Firm or the counterparty, at the fair value of the derivative contracts. The following table shows the aggregate fair value of net derivative payables related to OTC and OTC-cleared derivatives that contain contingent collateral or termination features that may be triggered upon a ratings downgrade, and the associated collateral the Firm has posted in the normal course of business, at December 31, 2022 and 2021.

OTC and OTC-cleared derivative payables containing downgrade triggers

| (in millions) | December 31,2022 | December 31, 2021 |  |
| :--- | :---: | :---: | :---: |
| Aggregate fair value of net derivative payables | $\$$ | $\mathbf{1 6 , 0 2 3}$ | $\$$ |
| Collateral posted | $\mathbf{1 5 , 5 0 5}$ | 20,114 |  |

The following table shows the impact of a single-notch and two-notch downgrade of the long-term issuer ratings of JPMorgan Chase \& Co. and its subsidiaries, predominantly JPMorgan Chase Bank, N.A., at December 31, 2022 and 2021, related to OTC and OTC-cleared derivative contracts with contingent collateral or termination features that may be triggered upon a ratings downgrade. Derivatives contracts generally require additional collateral to be posted or terminations to be triggered when the predefined rating threshold is breached. A downgrade by a single rating agency that does not result in a rating lower than a preexisting corresponding rating provided by another major rating agency will generally not result in additional collateral (except in certain instances in which additional initial margin may be required upon a ratings downgrade), nor in termination payment requirements. The liquidity impact in the table is calculated based upon a downgrade below the lowest current rating of the rating agencies referred to in the derivative contract.

## Liquidity impact of downgrade triggers on OTC and OTC-cleared derivatives

| (in millions) | December 31, 2022 |  |  |  | December 31, 2021 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Single-notch downgrade |  | Two-notch downgrade |  | Single-notch downgrade |  | Two-notch downgrade |  |
| Amount of additional collateral to be posted upon downgrade ${ }^{(\mathrm{a})}$ | \$ | 128 | \$ | 1,293 | \$ | 219 | \$ | 1,577 |
| Amount required to settle contracts with termination triggers upon downgrade ${ }^{(\text {b) }}$ |  | 88 |  | 925 |  | 98 |  | 787 |

(a) Includes the additional collateral to be posted for initial margin.
(b) Amounts represent fair values of derivative payables, and do not reflect collateral posted.

## Derivatives executed in contemplation of a sale of the underlying financial asset

In certain instances the Firm enters into transactions in which it transfers financial assets but maintains the economic exposure to the transferred assets by entering into a derivative with the same counterparty in contemplation of the initial transfer. The Firm generally accounts for such transfers as collateralized financing transactions as described in Note 11, but in limited circumstances they may qualify to be accounted for as a sale and a derivative under U.S. GAAP. The amount of such transfers accounted for as a sale where the associated derivative was outstanding was not material at both December 31, 2022 and 2021.

## Notes to consolidated financial statements

Impact of derivatives on the Consolidated statements of income
The following tables provide information related to gains and losses recorded on derivatives based on their hedge accounting designation or purpose.

## Fair value hedge gains and losses

The following tables present derivative instruments, by contract type, used in fair value hedge accounting relationships, as well as pre-tax gains/(losses) recorded on such derivatives and the related hedged items for the years ended December 31, 2022, 2021 and 2020, respectively. The Firm includes gains/(losses) on the hedging derivative in the same line item in the Consolidated statements of income as the related hedged item.

(a) Primarily consists of hedges of the benchmark (e.g., Secured Overnight Financing Rate ("SOFR"), London Interbank Offered Rate ("LIBOR")) interest rate risk of fixed-rate long-term debt and AFS securities. Gains and losses were recorded in net interest income.
(b) Effective January 1, 2022, the Firm updated its presentation in the tables above to include the amortization of income/expense associated with the inception hedge accounting adjustment applied to the hedged item; prior-period amounts have been revised to conform with the current presentation. Excludes the accrual of interest on interest rate swaps and the related hedged items.
(c) Primarily consists of hedges of the foreign currency risk of long-term debt and AFS securities for changes in spot foreign currency rates. Gains and losses related to the derivatives and the hedged items due to changes in foreign currency rates and the income statement impact of excluded components were recorded primarily in principal transactions revenue and net interest income.
(d) Consists of overall fair value hedges of physical commodities inventories that are generally carried at the lower of cost or net realizable value (net realizable value approximates fair value). Gains and losses were recorded in principal transactions revenue.
(e) The assessment of hedge effectiveness excludes certain components of the changes in fair values of the derivatives and hedged items such as forward points on foreign exchange forward contracts, time values and cross-currency basis spreads. Excluded components may impact earnings either through amortization of the initial amount over the life of the derivative or through fair value changes recognized in the current period.
(f) Represents the change in value of amounts excluded from the assessment of effectiveness under the amortization approach, predominantly crosscurrency basis spreads. The amount excluded at inception of the hedge is recognized in earnings over the life of the derivative.

As of December 31, 2022 and 2021, the following amounts were recorded on the Consolidated balance sheets related to certain cumulative fair value hedge basis adjustments that are expected to reverse through the income statement in future periods as an adjustment to yield.

| December 31, 2022 (in millions) | Carrying amount of the hedged items ${ }^{(\mathrm{a})(\mathrm{b})}$ |  | Cumulative amount of fair value hedging adjustments included in the carrying amount of hedged items: |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Active hedging relationships |  | Discontinued hedging relationships ${ }^{(d)(e)}$ |  | Total |  |
| Assets |  |  |  |  |  |  |  |  |  |
| Investment securities - AFS | \$ | 84,073 | (c) | \$ | $(4,149)$ | \$ | $(1,542)$ \$ | \$ | $(5,691)$ |
| Liabilities |  |  |  |  |  |  |  |  |  |
| Long-term debt | \$ | 175,257 |  | \$ | $(11,879)$ | \$ | $(3,313) \$$ | \$ | $(15,192)$ |
| Beneficial interests issued by consolidated VIEs |  | - |  |  | - |  | - |  | - |
| December 31, 2021 (in millions) | Carrying amount of the hedged items ${ }^{(\mathrm{a})(\text { () }}$ |  | Cumulative amount of fair value hedging adjustments included in the carrying amount of hedged items: |  |  |  |  |  |  |
|  |  |  |  |  | hedging nships |  | $\begin{aligned} & \text { hedging } \\ & \text { os }{ }^{(d)} \text { (e) } \end{aligned}$ |  | tal |
| Assets |  |  |  |  |  |  |  |  |  |
| Investment securities - AFS | \$ | 65,746 | (c) | \$ | 417 | \$ | 661 \$ | \$ | 1,078 |
| Liabilities |  |  |  |  |  |  |  |  |  |
| Long-term debt | \$ | 195,642 |  | \$ | $(1,999)$ | \$ | 8,834 \$ | \$ | 6,835 |
| Beneficial interests issued by consolidated VIEs |  | 749 |  |  | - |  | (1) |  | (1) |

(a) Excludes physical commodities with a carrying value of $\$ 26.0$ billion and $\$ 25.7$ billion at December 31, 2022 and 2021, respectively, to which the Firm applies fair value hedge accounting. As a result of the application of hedge accounting, these inventories are carried at fair value, thus recognizing unrealized gains and losses in current periods. Since the Firm exits these positions at fair value, there is no incremental impact to net income in future periods.
(b) Excludes hedged items where only foreign currency risk is the designated hedged risk, as basis adjustments related to foreign currency hedges will not reverse through the income statement in future periods. At December 31, 2022 and 2021, the carrying amount excluded for AFS securities is $\$ 20.3$ billion and $\$ 14.0$ billion, respectively, and for long-term debt is $\$ 221$ million and $\$ 9.7$ billion, respectively. Prior-period amount has been revised to conform with the current presentation.
(c) Carrying amount represents the amortized cost, net of allowance if applicable. Refer to Note 10 for additional information.
(d) Positive (negative) amounts related to assets represent cumulative fair value hedge basis adjustments that will reduce (increase) net interest income in future periods. Positive (negative) amounts related to liabilities represent cumulative fair value hedge basis adjustments that will increase (reduce) net interest income in future periods.
(e) Represents basis adjustments existing on the balance sheet date associated with hedged items that have been de-designated from qualifying fair value hedging relationships.

## Notes to consolidated financial statements

## Cash flow hedge gains and losses

The following tables present derivative instruments, by contract type, used in cash flow hedge accounting relationships, and the pre-tax gains/(losses) recorded on such derivatives, for the years ended December 31, 2022, 2021 and 2020, respectively. The Firm includes the gains/(losses) on the hedging derivative in the same line item in the Consolidated statements of income as the change in cash flows on the related hedged item.

(a) Primarily consists of hedges of SOFR-indexed and LIBOR-indexed floating-rate assets. Gains and losses were recorded in net interest income.
(b) Primarily consists of hedges of the foreign currency risk of non-U.S. dollar-denominated revenue and expense. The income statement classification of gains and losses follows the hedged item - primarily noninterest revenue and compensation expense.
The Firm did not experience any forecasted transactions that failed to occur for the years ended 2022, 2021 and 2020.
Over the next 12 months, the Firm expects that approximately $\$(1.5)$ billion (after-tax) of net losses recorded in AOCI at December 31,2022 , related to cash flow hedges will be recognized in income. For cash flow hedges that have been terminated, the maximum length of time over which the derivative results recorded in AOCI will be recognized in earnings is approximately seven years, corresponding to the timing of the originally hedged forecasted cash flows. For open cash flow hedges, the maximum length of time over which forecasted transactions are hedged is approximately seven years. The Firm's longer-dated forecasted transactions relate to core lending and borrowing activities.

## Net investment hedge gains and losses

The following table presents hedging instruments, by contract type, that were used in net investment hedge accounting relationships, and the pre-tax gains/(losses) recorded on such instruments for the years ended December 31, 2022, 2021 and 2020.

| Year ended December 31, (in millions) | 2022 |  | 2021 |  | 2020 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Amounts recorded in income ${ }^{(a)(b)}$ | Amounts recorded in OCl | Amounts recorded in income ${ }^{(a)(b)}$ | Amounts recorded in OCI | Amounts recorded in income ${ }^{\text {(a)(b) }}$ | Amounts recorded in OCI |
| Foreign exchange derivatives | \$(123) | \$3,591 | \$(228) | \$2,452 | \$(122) | \$ $(1,408)$ |

(a) Certain components of hedging derivatives are permitted to be excluded from the assessment of hedge effectiveness, such as forward points on foreign exchange forward contracts. The Firm elects to record changes in fair value of these amounts directly in other income.
(b) Excludes amounts reclassified from AOCI to income on the sale or liquidation of hedged entities. The Firm reclassified net pre-tax gains of $\$ 38$ million and $\$ 3$ million to other income/expense related to the liquidation of certain legal entities during the years ended December 31, 2022 and 2020, respectively. The amount reclassified for the year ended December 31, 2021 was not material. Refer to Note 24 for further information.

## Gains and losses on derivatives used for specified risk

 management purposesThe following table presents pre-tax gains/(losses) recorded on a limited number of derivatives, not designated in hedge accounting relationships, that are used to manage risks associated with certain specified assets and liabilities, including certain risks arising from mortgage commitments, warehouse loans, MSRs, wholesale lending exposures, and foreign currency denominated assets and liabilities.

| Year ended December 31, (in millions) | Derivatives gains/(losses) recorded in income |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2022 |  | 2021 |  | 2020 |  |
| Contract type |  |  |  |  |  |  |
| Interest rate ${ }^{\text {(a) }}$ | \$ | (827) | \$ | 1,078 | \$ | 2,994 |
| Credit ${ }^{(b)}$ |  | 51 |  | (94) |  | (176) |
| Foreign exchange ${ }^{(c)}$ |  | (48) |  | 94 |  | 43 |
| Total | \$ | (824) | \$ | 1,078 | \$ | 2,861 |

(a) Primarily represents interest rate derivatives used to hedge the interest rate risk inherent in mortgage commitments, warehouse loans and MSRs, as well as written commitments to originate warehouse loans. Gains and losses were recorded predominantly in mortgage fees and related income.
(b) Relates to credit derivatives used to mitigate credit risk associated with lending exposures in the Firm's wholesale businesses. These derivatives do not include credit derivatives used to mitigate counterparty credit risk arising from derivative receivables, which is included in gains and losses on derivatives related to market-making activities and other derivatives. Gains and losses were recorded in principal transactions revenue.
(c) Primarily relates to derivatives used to mitigate foreign exchange risk of specified foreign currency-denominated assets and liabilities. Gains and losses were recorded in principal transactions revenue.

Gains and losses on derivatives related to market-making activities and other derivatives
The Firm makes markets in derivatives in order to meet the needs of customers and uses derivatives to manage certain risks associated with net open risk positions from its market-making activities, including the counterparty credit risk arising from derivative receivables. All derivatives not included in the hedge accounting or specified risk management categories above are included in this category. Gains and losses on these derivatives are primarily recorded in principal transactions revenue. Refer to Note 6 for information on principal transactions revenue.

## Credit derivatives

Credit derivatives are financial instruments whose value is derived from the credit risk associated with the debt of a third-party issuer (the reference entity) and which allow one party (the protection purchaser) to transfer that risk to another party (the protection seller). Credit derivatives expose the protection purchaser to the creditworthiness of the protection seller, as the protection seller is required to make payments under the contract when the reference entity experiences a credit event, such as a bankruptcy, a failure to pay its obligation or a restructuring. The seller of credit protection receives a premium for providing protection but has the risk that the underlying instrument referenced in the contract will be subject to a credit event.
The Firm is both a purchaser and seller of protection in the credit derivatives market and uses these derivatives for two primary purposes. First, in its capacity as a market-maker, the Firm actively manages a portfolio of credit derivatives by purchasing and selling credit protection, predominantly on corporate debt obligations, to meet the needs of customers. Second, as an end-user, the Firm uses credit derivatives to manage credit risk associated with lending exposures (loans and unfunded commitments) in its wholesale and consumer businesses and derivatives counterparty exposures in its wholesale businesses, and to manage the credit risk arising from certain financial instruments in the Firm's market-making businesses. Following is a summary of various types of credit derivatives.

## Notes to consolidated financial statements

## Credit default swaps

Credit derivatives may reference the credit of either a single reference entity ("single-name"), broad-based index or portfolio. The Firm purchases and sells protection on both single- name and index-reference obligations. Single-name CDS and index CDS contracts are either OTC or OTC-cleared derivative contracts. Single-name CDS are used to manage the default risk of a single reference entity, while index CDS contracts are used to manage the credit risk associated with the broader credit markets or credit market segments. Like the S\&P 500 and other market indices, a CDS index consists of a portfolio of CDS across many reference entities. New series of CDS indices are periodically established with a new underlying portfolio of reference entities to reflect changes in the credit markets. If one of the reference entities in the index experiences a credit event, then the reference entity that defaulted is removed from the index. CDS can also be referenced against specific portfolios of reference names or against customized exposure levels based on specific client demands: for example, to provide protection against the first $\$ 1$ million of realized credit losses in a $\$ 10$ million portfolio of exposure. Such structures are commonly known as tranche CDS.

For both single-name CDS contracts and index CDS contracts, upon the occurrence of a credit event, under the terms of a CDS contract neither party to the CDS contract has recourse to the reference entity. The protection purchaser has recourse to the protection seller for the difference between the face value of the CDS contract and the fair value of the reference obligation at settlement of the credit derivative contract, also known as the recovery value. The protection purchaser does not need to hold the debt instrument of the underlying reference entity in order to receive amounts due under the CDS contract when a credit event occurs.

## Credit-related notes

A credit-related note is a funded derivative with a credit risk component where the issuer of the credit-related note purchases from the note investor credit protection on a reference entity or an index. Under the contract, the investor pays the issuer the par value of the note at the inception of the transaction, and in return, the issuer pays periodic payments to the investor, based on the credit risk of the referenced entity. The issuer also repays the investor the par value of the note at maturity unless the reference entity (or one of the entities that makes up a reference index) experiences a specified credit event. If a credit event occurs, the issuer is not obligated to repay the par value of the note, but rather, the issuer pays the investor the difference between the par value of the note and the fair value of the defaulted reference obligation at the time of settlement. Neither party to the credit-related note has recourse to the defaulting reference entity.
The following tables present a summary of the notional amounts of credit derivatives and credit-related notes the Firm sold and purchased as of December 31, 2022 and 2021. Upon a credit event, the Firm as a seller of protection would typically pay out only a percentage of the full notional amount of net protection sold, as the amount actually required to be paid on the contracts takes into account the recovery value of the reference obligation at the time of settlement. The Firm manages the credit risk on contracts to sell protection by purchasing protection with identical or similar underlying reference entities. Other purchased protection referenced in the following tables includes credit derivatives bought on related, but not identical, reference positions (including indices, portfolio coverage and other reference points) as well as protection purchased by CIB through credit-related notes primarily in its market-making businesses. In addition, the Firm obtains credit protection against certain loans in the retained consumer portfolio through the issuance of credit-related notes. Since these credit-related notes are not part of the market-making businesses they are not included in the table below.

The Firm does not use notional amounts of credit derivatives as the primary measure of risk management for such derivatives, because the notional amount does not take into account the probability of the occurrence of a credit event, the recovery value of the reference obligation, or related cash instruments and economic hedges, each of which reduces, in the Firm's view, the risks associated with such derivatives.
Total credit derivatives and credit-related notes

| December 31, 2022 (in millions) | Maximum payout/Notional amount |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Protection sold |  | Protection purchased with identical underlyings ${ }^{\text {(c) }}$ |  | Net protection (sold)/ purchased ${ }^{(d)}$ |  | Other protection purchased ${ }^{(\text {e) }}$ |  |
| Credit derivatives |  |  |  |  |  |  |  |  |
| Credit default swaps | \$ | $(495,557)$ | \$ | 509,846 | \$ | 14,289 | \$ | 2,917 |
| Other credit derivatives ${ }^{\left({ }^{(a)}\right.}$ |  | $(47,165)$ |  | 65,029 |  | 17,864 |  | 11,746 |
| Total credit derivatives |  | $(542,722)$ |  | 574,875 |  | 32,153 |  | 14,663 |
| Credit-related notes ${ }^{(b)}$ |  | - |  | - |  | - |  | 7,863 |
| Total | \$ | $(542,722)$ | \$ | 574,875 | \$ | 32,153 | \$ | 22,526 |
|  |  |  |  |  |  |  |  |  |
|  | Maximum payout/Notional amount |  |  |  |  |  |  |  |
| December 31, 2021 (in millions) | Protection sold |  | Protection purchased with identical underlyings ${ }^{(\mathrm{c}}$ |  | Net protection (sold)/ purchased ${ }^{(d)}$ |  | Other protection purchased ${ }^{(\text {e) }}$ |  |
| Credit derivatives |  |  |  |  |  |  |  |  |
| Credit default swaps | \$ | $(443,481)$ | \$ | 458,180 | \$ | 14,699 | \$ | 2,269 |
| Other credit derivatives ${ }^{\left({ }^{(2)}\right.}$ |  | $(56,130)$ |  | 79,586 |  | 23,456 |  | 13,435 |
| Total credit derivatives |  | $(499,611)$ |  | 537,766 |  | 38,155 |  | 15,704 |
| Credit-related notes ${ }^{(b)}$ |  | - |  | - |  | - |  | 9,437 |
| Total | \$ | $(499,611)$ | \$ | 537,766 | \$ | 38,155 | \$ | 25,141 |

(a) Other credit derivatives predominantly consist of credit swap options and total return swaps.
(b) Represents Other protection purchased by CIB, primarily in its market-making businesses.
(c) Represents the total notional amount of protection purchased where the underlying reference instrument is identical to the reference instrument on protection sold; the notional amount of protection purchased for each individual identical underlying reference instrument may be greater or lower than the notional amount of protection sold.
(d) Does not take into account the fair value of the reference obligation at the time of settlement, which would generally reduce the amount the seller of protection pays to the buyer of protection in determining settlement value.
(e) Represents protection purchased by the Firm on referenced instruments (single-name, portfolio or index) where the Firm has not sold any protection on the identical reference instrument.

The following tables summarize the notional amounts by the ratings, maturity profile, and total fair value, of credit derivatives as of December 31, 2022 and 2021, where JPMorgan Chase is the seller of protection. The maturity profile is based on the remaining contractual maturity of the credit derivative contracts. The ratings profile is based on the rating of the reference entity on which the credit derivative contract is based. The ratings and maturity profile of credit derivatives where JPMorgan Chase is the purchaser of protection are comparable to the profile reflected below.
Protection sold - credit derivatives ratings ${ }^{(a)} /$ maturity profile

| December 31, 2022 (in millions) | <1 year |  | 1-5 years |  | $>5$ years |  | tal notional amount | Fair value of receivables ${ }^{(b)}$ |  | Fair value of payables ${ }^{(0)}$ |  | Net fair value |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Risk rating of reference entity |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Investment-grade | \$ $(90,484)$ | \$ | $(294,791)$ | \$ | $(30,822)$ | \$ | $(416,097)$ | \$ | 2,324 | \$ | $(1,495)$ |  | \$ 829 |
| Noninvestment-grade | $(33,244)$ |  | $(87,011)$ |  | $(6,370)$ |  | $(126,625)$ |  | 1,267 |  | $(3,209)$ |  | $(1,942)$ |
| Total | \$ $(123,728)$ | \$ | $(381,802)$ | \$ | $(37,192)$ | \$ | $(542,722)$ | \$ | 3,591 | \$ | $(4,704)$ |  | \$ $(1,113)$ |
| $\text { December 31, } 2021$ (in millions) | $<1$ year |  | 1-5 years |  | >5 years |  | tal notional amount |  | $\begin{aligned} & \text { alue of } \\ & a^{\text {bles }} \end{aligned}$ |  | value of ables ${ }^{(b)}$ |  | Net fair value |
| Risk rating of reference entity |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Investment-grade | \$ $(91,155)$ | \$ | $(255,106)$ | \$ | $(29,035)$ | \$ | $(375,296)$ | \$ | 3,645 | \$ | (623) |  | 3,022 |
| Noninvestment-grade | $(32,175)$ |  | $(84,851)$ |  | $(7,289)$ |  | $(124,315)$ |  | 2,630 |  | $(2,003)$ |  | 627 |
| Total | \$ $(123,330)$ | \$ | $(339,957)$ | \$ | $(36,324)$ |  | $(499,611)$ | \$ | 6,275 | \$ | $(2,626)$ |  | \$ 3,649 |

(a) The ratings scale is primarily based on external credit ratings defined by S\&P and Moody's.
(b) Amounts are shown on a gross basis, before the benefit of legally enforceable master netting agreements including cash collateral netting.

## Notes to consolidated financial statements

## Note 6 - Noninterest revenue and noninterest expense

## Noninterest revenue

The Firm records noninterest revenue from certain contracts with customers in investment banking fees, deposit-related fees, asset management, administration, and commissions, and components of card income. The related contracts are often terminable on demand and the Firm has no remaining obligation to deliver future services. For arrangements with a fixed term, the Firm may commit to deliver services in the future. Revenue associated with these remaining performance obligations typically depends on the occurrence of future events or underlying asset values, and is not recognized until the outcome of those events or values are known.

## Investment banking fees

This revenue category includes debt and equity underwriting and advisory fees. As an underwriter, the Firm helps clients raise capital via public offering and private placement of various types of debt and equity instruments. Underwriting fees are primarily based on the issuance price and quantity of the underlying instruments, and are recognized as revenue typically upon execution of the client's transaction. The Firm also manages and syndicates Ioan arrangements. Credit arrangement and syndication fees, included within debt underwriting fees, are recorded as revenue after satisfying certain retention, timing and yield criteria.
The Firm also provides advisory services, by assisting its clients with mergers and acquisitions, divestitures, restructuring and other complex transactions. Advisory fees are recognized as revenue typically upon execution of the client's transaction.
The following table presents the components of investment banking fees.

| Year ended December 31, <br> (in millions) | $\mathbf{2 0 2 2}$ | 2021 | 2020 |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Underwriting | $\mathbf{\$}$ | $\mathbf{9 7 5}$ | $\$$ | 3,969 | $\$$ |
| Equity | $\mathbf{2 , 7 3 2}$ | 4,853 | 4,362 |  |  |
| Debt | $\mathbf{3 , 7 0 7}$ | 8,822 | 7,121 |  |  |
| Total underwriting | $\mathbf{2 , 9 7 9}$ | 4,394 | 2,365 |  |  |
| Advisory | $\mathbf{6}$ | $\mathbf{6 , 6 8 6}$ | $\$ 13,216$ | $\$$ | 9,486 |

Investment banking fees are earned primarily by CIB. Refer to Note 32 for segment results.

## Principal transactions

Principal transactions revenue is driven by many factors, including:

- the bid-offer spread, which is the difference between the price at which a market participant is willing and able to sell an instrument to the Firm and the price at which another market participant is willing and able to buy it from the Firm, and vice versa; and
- realized and unrealized gains and losses on financial instruments and commodities transactions, including those accounted for under the fair value option, primarily used in client-driven market-making activities, and on private equity investments.
- Realized gains and losses result from the sale of instruments, closing out or termination of transactions, or interim cash payments.
- Unrealized gains and losses result from changes in valuation.
In connection with its client-driven market-making activities, the Firm transacts in debt and equity instruments, derivatives and commodities, including physical commodities inventories and financial instruments that reference commodities.
Principal transactions revenue also includes realized and unrealized gains and losses related to:
- derivatives designated in qualifying hedge accounting relationships, primarily fair value hedges of commodity and foreign exchange risk;
- derivatives used for specific risk management purposes, primarily to mitigate credit, foreign exchange and interest rate risks.
Refer to Note 5 for further information on the income statement classification of gains and losses from derivatives activities.
In the financial commodity markets, the Firm transacts in OTC derivatives (e.g., swaps, forwards, options) and ETD that reference a wide range of underlying commodities. In the physical commodity markets, the Firm primarily purchases and sells precious and base metals and may hold other commodities inventories under financing and other arrangements with clients.
The following table presents all realized and unrealized gains and losses recorded in principal transactions revenue. This table excludes interest income and interest expense on trading assets and liabilities, which are an integral part of the overall performance of the Firm's client-driven marketmaking activities in CIB and fund deployment activities in Treasury and CIO. Refer to Note 7 for further information on interest income and interest expense.
Trading revenue is presented primarily by instrument type. The Firm's client-driven market-making businesses generally utilize a variety of instrument types in connection with their market-making and related risk-management activities; accordingly, the trading revenue presented in the table below is not representative of the total revenue of any individual LOB.

| Year ended December 31, (in millions) | 2022 |  | 2021 |  | 2020 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Trading revenue by instrument type |  |  |  |  |  |
| Interest rate ${ }^{(\mathrm{a})}$ | \$ 3,010 | \$ | \$ 1,646 | \$ | 2,575 |
| Credit ${ }^{(b)}$ | 1,412 | (c) | 2,691 |  | 2,753 |
| Foreign exchange | 5,119 |  | 2,787 |  | 4,253 |
| Equity | 8,068 |  | 7,773 |  | 6,171 |
| Commodity | 2,348 |  | 1,428 |  | 2,088 |
| Total trading revenue | 19,957 |  | 16,325 |  | 17,840 |
| Private equity gains/(losses) | (45) |  | (21) |  | 181 |
| Principal transactions | \$ 19,912 |  | \$ 16,304 | \$ | 18,021 |

(a) Includes the impact of changes in funding valuation adjustments on derivatives.
(b) Includes the impact of changes in credit valuation adjustments on derivatives, net of the associated hedging activities.
(c) Includes net markdowns on held-for-sale positions, primarily unfunded commitments, in the bridge financing portfolio.

Principal transactions revenue is earned primarily by CIB. Refer to Note 32 for segment results.

Lending- and deposit-related fees
Lending-related fees include fees earned from loan commitments, standby letters of credit, financial guarantees, and other loan-servicing activities. Depositrelated fees include fees earned from providing overdraft and other deposit account services, and from performing cash management activities. Lending- and deposit-related fees in this revenue category are recognized over the period in which the related service is provided.
The following table presents the components of lendingand deposit-related fees.

| Year ended December 31, (in millions) | $\mathbf{2 0 2 2}$ | 2021 | 2020 |
| :--- | ---: | ---: | ---: |
| Lending-related fees | $\mathbf{\$ 1 , 4 6 8}$ | $\$ 1,472$ | $\$ 1,271$ |
| Deposit-related fees | $\mathbf{5 , 6 3 0}$ | 5,560 | 5,240 |
| Total lending- and deposit-related fees | $\mathbf{\$ 7 , 0 9 8}$ | $\$ 7,032$ | $\$ 6,511$ |

Lending- and deposit-related fees are earned by CCB, CIB, CB, and AWM. Refer to Note 32 for segment results.

## Asset management, administration and commissions

 This revenue category includes fees from investment management and related services, custody, brokerage services and other products. The Firm manages assets on behalf of its clients, including investors in Firm-sponsored funds and owners of separately managed investment accounts. Management fees are typically based on the value of assets under management and are collected and recognized at the end of each period over which the management services are provided and the value of the managed assets is known. The Firm also receives performance-based management fees, which are earned based on exceeding certain benchmarks or other performance targets and are accrued and recognized when the probability of reversal is remote, typically at the end of the related billing period. The Firm has contractual arrangements with third parties to provide distribution and other services in connection with its asset management activities. Amounts paid to these third-party serviceproviders are generally recorded in professional and outside services expense.
The following table presents the components of Firmwide asset management, administration and commissions.

| Year ended December 31, (in millions) | 2022 | 2021 | 2020 |
| :---: | :---: | :---: | :---: |
| Asset management fees |  |  |  |
| Investment management fees ${ }^{(\mathrm{a})}$ | \$ 13,765 | \$ 14,027 | \$ 11,694 |
| All other asset management fees ${ }^{(\text {b }}$ | 331 | 378 | 338 |
| Total asset management fees | 14,096 | 14,405 | 12,032 |
| Total administration fees ${ }^{(c)}$ | 2,348 | 2,554 | 2,249 |
| Commissions and other fees |  |  |  |
| Brokerage commissions ${ }^{(\mathrm{d})}$ | 2,831 | 3,046 | 2,959 |
| All other commissions and fees ${ }^{(\mathrm{e})}$ | 1,402 | 1,024 | 937 |
| Total commissions and fees | 4,233 | 4,070 | 3,896 |

## Total asset management,

administration and commissions \$ 20,677 \$ 21,029 \$ 18,177
(a) Represents fees earned from managing assets on behalf of the Firm's clients, including investors in Firm-sponsored funds and owners of separately managed investment accounts.
(b) Represents fees for services that are ancillary to investment management services, such as commissions earned on the sales or distribution of mutual funds to clients. These fees are recorded as revenue at the time the service is rendered or, in the case of certain distribution fees based on the underlying fund's asset value and/or investor redemption, recorded over time as the investor remains in the fund or upon investor redemption.
(c) Predominantly includes fees for custody, securities lending, funds services and securities clearance. These fees are recorded as revenue over the period in which the related service is provided.
(d) Represents commissions earned when the Firm acts as a broker, by facilitating its clients' purchases and sales of securities and other financial instruments. Brokerage commissions are collected and recognized as revenue upon occurrence of the client transaction. The Firm reports certain costs paid to third-party clearing houses and exchanges net against commission revenue.
(e) Includes travel-related and annuity sales commissions, depositary receipt-related service fees, as well as other service fees, which are recognized as revenue when the services are rendered.
Asset management, administration and commissions are earned primarily by AWM, CIB and CCB. Refer to Note 32 for segment results.

## Mortgage fees and related income

This revenue category reflects CCB's Home Lending production and net mortgage servicing revenue.
Production revenue includes fees and income recognized as earned on mortgage loans originated with the intent to sell, and the impact of risk management activities associated with the mortgage pipeline and warehouse loans. Production revenue also includes gains and losses on sales and lower of cost or fair value adjustments on mortgage loans held-for-sale (excluding certain repurchased loans insured by U.S. government agencies), and changes in the fair value of financial instruments measured under the fair value option. Net mortgage servicing revenue includes operating revenue earned from servicing third-party mortgage loans, which is recognized over the period in which the service is provided; changes in the fair value of MSRs; the impact of risk management activities associated

## Notes to consolidated financial statements

with MSRs; and gains and losses on securitization of excess mortgage servicing. Net mortgage servicing revenue also includes gains and losses on sales and lower of cost or fair value adjustments of certain repurchased loans insured by U.S. government agencies.

Refer to Note 15 for further information on risk management activities and MSRs.
Net interest income from mortgage loans is recorded in interest income.

## Card income

This revenue category includes interchange and other income from credit and debit card transactions; and fees earned from processing card transactions for merchants, both of which are recognized when purchases are made by a cardholder and presented net of certain transactionrelated costs. Card income also includes account origination costs and annual fees, which are deferred and recognized on a straight-line basis over a 12-month period.

Certain credit card products offer the cardholder the ability to earn points based on account activity, which the cardholder can choose to redeem for cash and non-cash rewards. The cost to the Firm related to these proprietary rewards programs varies based on multiple factors including the terms and conditions of the rewards programs, cardholder activity, cardholder reward redemption rates and cardholder reward selections. The Firm maintains a liability for its obligations under its rewards programs and reports the current-period cost as a reduction of card income.

## Credit card revenue sharing agreements

The Firm has contractual agreements with numerous cobrand partners that grant the Firm exclusive rights to issue co-branded credit card products and market them to the customers of such partners. These partners endorse the cobrand credit card programs and provide their customer or member lists to the Firm. The partners may also conduct marketing activities and provide rewards redeemable under their own loyalty programs that the Firm will grant to cobrand credit cardholders based on account activity. The terms of these agreements generally range from five to ten years.

The Firm typically makes payments to the co-brand credit card partners based on the cost of partners' marketing activities and loyalty program rewards provided to credit cardholders, new account originations and sales volumes. Payments to partners based on marketing efforts undertaken by the partners are expensed by the Firm as incurred and reported as marketing expense. Payments for partner loyalty program rewards are reported as a reduction of card income when incurred. Payments to partners based on new credit card account originations are accounted for as direct loan origination costs and are deferred and recognized as a reduction of card income on a straight-line basis over a 12-month period. Payments to partners based on sales volumes are reported as a reduction of card income when the related interchange
income is earned.
The following table presents the components of card income:

| Year ended December 31, (in millions) |  | 2022 |  | 2021 |  | 2020 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Interchange and merchant processing income | \$ | 28,085 | \$ | 23,592 | \$ | 18,563 |
| Reward costs and partner payments |  | $(22,162)$ |  | $(17,868)$ |  | $(13,637)$ |
| Other card income ${ }^{(\mathrm{a})}$ |  | $(1,503)$ |  | (622) |  | (491) |
| Total card income | \$ | 4,420 | \$ | 5,102 | \$ | 4,435 |

(a) Predominantly represents the amortization of account origination costs and annual fees, which are deferred and recognized on a straight-line basis over a 12-month period.

Card income is earned primarily by CCB, CIB and CB. Refer to Note 32 for segment results.

Other income
This revenue category includes operating lease income, as well as losses associated with the Firm's tax-oriented investments, predominantly alternative energy equitymethod investments in CIB.
The following table presents certain components of other income:

| Year ended December 31, <br> (in millions) | $\mathbf{2 0 2 2}$ | 2021 | 2020 |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Operating lease income | $\$$ | $\mathbf{3 , 6 5 4}$ | $\$$ | 4,914 | $\$$ |
| 5,539 |  |  |  |  |  |
| Losses on tax-oriented <br> investments | $\mathbf{( 1 , 4 9 1 )}$ | $(1,570)$ | $(1,280)$ |  |  |
| Gain on sale of Visa B shares | $\mathbf{9 1 4}$ | - | - |  |  |

(a) The losses associated with these tax-oriented investments are more than offset by lower income tax expense from the associated tax credits.

Refer to Note 2 and 18 for additional information on Visa B shares and operating leases, respectively.

## Noninterest expense

Other expense
Other expense on the Firm's Consolidated statements of income included:

| Year ended December 31, <br> (in millions) |  | 2022 |  | 2021 | 2020 |  |
| :--- | ---: | ---: | ---: | ---: | ---: | :---: |
| Legal expense | $\$$ | $\mathbf{2 6 6}$ | $\$$ | 426 | $\$$ | 1,115 |

## Note 7 - Interest income and Interest expense

Interest income and interest expense are recorded in the Consolidated statements of income and classified based on the nature of the underlying asset or liability.
The following table presents the components of interest income and interest expense:

| Year ended December 31, (in millions) |  | 2022 |  | 2021 |  | 2020 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Interest income |  |  |  |  |  |  |
| Loans ${ }^{\text {(a) }}$ | \$ | 52,736 | \$ | 41,537 | \$ | 43,758 |
| Taxable securities |  | 10,372 |  | 6,460 |  | 7,843 |
| Non-taxable securities ${ }^{(b)}$ |  | 975 |  | 1,063 |  | 1,184 |
| Total investment securities ${ }^{(\mathrm{a})}$ |  | 11,347 |  | 7,523 |  | 9,027 |
| Trading assets - debt instruments |  | 9,053 |  | 6,825 |  | 7,832 |
| Federal funds sold and securities <br> purchased under resale <br> agreements $4,632$ <br> 958 <br> 2,436 |  |  |  |  |  |  |
| Securities borrowed ${ }^{(c)}$ |  | 2,237 |  | (385) |  | (302) |
| Deposits with banks |  | 9,039 |  | 512 |  | 749 |
| All other interest-earning assets ${ }^{(d)}$ |  | 3,763 |  | 894 |  | 1,023 |
| Total interest income | \$ | 92,807 | \$ | 57,864 | \$ | 64,523 |
| Interest expense |  |  |  |  |  |  |
| Interest bearing deposits | \$ | 10,082 | \$ | 531 | \$ | 2,357 |
| Federal funds purchased and securities loaned or sold under <br> repurchase agreements $\begin{array}{lll} 3.721 & 274 & 1.058 \end{array}$ |  |  |  |  |  |  |
| Short-term borrowings ${ }^{(\text {e })}$ |  | 747 |  | 126 |  | 372 |
| Trading liabilities - debt and all other interest-bearing liabilities ${ }^{(f)}$ |  | 3,246 |  | 257 |  | 195 |
| Long-term debt |  | 8,075 |  | 4,282 |  | 5,764 |
| Beneficial interest issued by consolidated VIEs |  | 226 |  | 83 |  | 214 |
| Total interest expense | \$ | 26,097 | \$ | 5,553 | \$ | 9,960 |
| Net interest income | \$ | 66,710 | \$ | 52,311 | \$ | 54,563 |
| Provision for credit losses |  | 6,389 |  | $(9,256)$ |  | 17,480 |
| Net interest income after provision for credit losses | \$ | 60,321 | \$ | 61,567 | \$ | 37,083 |

(a) Includes the amortization/accretion of unearned income (e.g., purchase premiums/discounts and net deferred fees/costs).
(b) Represents securities that are tax-exempt for U.S. federal income tax purposes.
(c) Negative interest and rates reflect the net impact of interest earned offset by fees paid on client-driven prime brokerage securities borrowed transactions.
(d) Includes interest earned on brokerage-related held-for-investment customer receivables, which are classified in accrued interest and accounts receivable, and all other interest-earning assets, which are classified in other assets on the Consolidated balance sheets.
(e) Includes commercial paper.
(f) All other interest-bearing liabilities includes interest expense on brokerage-related customer payables.

Interest income and interest expense includes the currentperiod interest accruals for financial instruments measured at fair value, except for derivatives and financial instruments containing embedded derivatives that would be separately accounted for in accordance with U.S. GAAP, absent the fair value option election; for those instruments, all changes in fair value including any interest elements, are primarily reported in principal transactions revenue. For financial instruments that are not measured at fair value, the related interest is included within interest income or interest expense, as applicable. Refer to Notes 12, 10, 11 and 20 for further information on accounting for interest income and interest expense related to loans, investment securities, securities financing activities (i.e., securities purchased or sold under resale or repurchase agreements; securities borrowed; and securities loaned) and long-term debt, respectively.

## Notes to consolidated financial statements

## Note 8 - Pension and other postretirement employee benefit plans

The Firm has various defined benefit pension plans and OPEB plans that provide benefits to its employees in the U.S. and certain non-U.S. locations. Substantially all the defined benefit pension plans are closed to new participants. The principal defined benefit pension plan in the U.S., which covered substantially all U.S. employees, was closed to new participants and frozen for existing participants on January 1, 2020, (and January 1, 2019 for new hires on or after December 2, 2017). Interest credits continue to accrue to participants' accounts based on their accumulated balances.

The Firm maintains funded and unfunded postretirement benefit plans that provide medical and life insurance for certain eligible employees and retirees as well as their
dependents covered under these programs. None of these plans have a material impact on the Firm's Consolidated Financial Statements.
The Firm also provides a qualified defined contribution plan in the U.S. and maintains other similar arrangements in certain non-U.S. locations. The most significant of these plans is the JPMorgan Chase 401(k) Savings Plan ("the 401(k) Savings Plan"), which covers substantially all U.S. employees. Employees can contribute to the 401(k) Savings Plan on a pretax and/or Roth 401(k) after-tax basis. The Firm makes an annual matching contribution as well as an annual profit-sharing contribution to the 401(k) Savings Plan on behalf of eligible participants.

The following table presents the pretax benefit obligations, plan assets, the net funded status, and the amounts recorded in AOCI on the Consolidated balance sheets for the Firm's significant defined benefit pension and OPEB plans.

| As of or for the year ended December 31, (in millions) | Defined benefit pension and OPEB plans |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2022 |  | 2021 |  |
| Projected benefit obligations | \$ | $(13,545)$ | \$ | $(18,046)$ |
| Fair value of plan assets |  | 19,890 |  | 25,692 |
| Net funded status |  | 6,345 |  | 7,646 |
| Accumulated other comprehensive income/(loss) |  | $(1,916)$ |  | (453) |

The weighted-average discount rate used to value the benefit obligations as of December 31, 2022 and 2021, was $5.14 \%$ and $2.54 \%$, respectively.

Gains and losses
Gains or losses resulting from changes in the benefit obligation and the fair value of plan assets are recorded in OCI. Amortization of net gains or losses are recognized as part of the net periodic benefit cost over subsequent periods, if, as of the beginning of the year, the net gain or loss exceeds $10 \%$ of the greater of the projected benefit obligation or the fair value of the plan assets. Amortization is generally over the average expected remaining lifetime of plan participants, given the frozen status of most plans. During the year ended December 31, 2022, a remeasurement of the Firm's U.S. principal defined benefit plan in the third quarter, was required as a result of a
pension settlement. The remeasurement resulted in a reduction in the fair value of the Firm's U.S. principal defined benefit plan assets, reflecting market conditions at the time of remeasurement, and a reduction in the plan's projected benefit obligation totaling $\$ 4.0$ billion and $\$ 2.6$ billion, respectively, resulting in a net decrease of $\$ 1.4$ billion in pre-tax AOCI. For the year ended December 31, 2021, the net gain was predominantly attributable to market-driven increases in the fair value of plan assets and the discount rate.

The following table presents the net periodic benefit costs reported in the Consolidated statements of income for the Firm's defined benefit pension, defined contribution and OPEB plans, and in other comprehensive income for the defined benefit pension and OPEB plans.

|  | Pension and OPEB plans |  |  |
| :--- | :---: | :---: | :---: |
| Year ended December 31, (in millions) | $\mathbf{2 0 2 2}$ | 2021 |  |
| Total net periodic defined benefit plan cost/(credit) ${ }^{(\mathrm{a})}$ | $\mathbf{2 0 2 0}$ |  |  |
| Total defined contribution plans | $\mathbf{( 1 9 2 )}$ | $\$$ | $(201) \$$ |
| Total pension and OPEB cost included in noninterest expense | $\mathbf{1 , 4 0 8}$ | 1,333 |  |
| Total recognized in other comprehensive (income)/loss | $\mathbf{1 , 3 3 2}$ |  |  |

[^137]The following table presents the weighted-average actuarial assumptions used to determine the net periodic benefit costs for the defined benefit pension and OPEB plans.

|  | Defined benefit pension and OPEB plans |  |
| :--- | :---: | :---: |
| Year ended December 31, | 2022 | 2021 |
| Discount rate | $2.54 \%$ | $2.17 \%$ |
| Expected long-term rate of return on plan assets | $\mathbf{2 . 9 3} \%$ |  |

## Plan assumptions

The Firm's expected long-term rate of return is a blended weighted average, by asset allocation of the projected longterm returns for the various asset classes, taking into consideration local market conditions and the specific allocation of plan assets. Returns on asset classes are developed using a forward-looking approach and are not strictly based on historical returns, with consideration given to current market conditions and the portfolio mix of each plan.

The discount rates used in determining the benefit obligations are generally provided by the Firm's actuaries, with the Firm's principal defined benefit pension plan using a rate that was selected by reference to the yields on portfolios of bonds with maturity dates and coupons that closely match each of the plan's projected cash flows.

## Investment strategy and asset allocation

The assets of the Firm's defined benefit pension plans are held in various trusts and are invested in well-diversified portfolios of equity and fixed income securities, cash and cash equivalents, and alternative investments. The Firm regularly reviews the asset allocations and asset managers, as well as other factors that could impact the portfolios, which are rebalanced when deemed necessary. The approved asset allocation ranges by asset class for the Firm's principal defined benefit plan are 42-100\% debt securities, 0-40\% equity securities, 0-3\% real estate, and $0-12 \%$ alternatives as of December 31, 2022.

As of December 31, 2022, assets held by the Firm's defined benefit pension and OPEB plans do not include securities issued by JPMorgan Chase or its affiliates, except through indirect exposures through investments in exchange traded funds, mutual funds and collective investment funds managed by third-parties. The defined benefit pension and OPEB plans hold investments that are sponsored or managed by affiliates of JPMorgan Chase in the amount of $\$ 1.7$ billion and $\$ 2.5$ billion, as of December 31, 2022 and 2021, respectively.

Fair value measurement of the plans' assets and liabilities
Refer to Note 2 for information on fair value measurements, including descriptions of level 1,2 , and 3 of the fair value hierarchy and the valuation methods employed by the Firm.

Pension plan assets and liabilities measured at fair value

| December 31, (in millions) | Defined benefit pension and OPEB plans |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2022 |  |  |  |  |  |  | 2021 |  |  |  |  |  |  |  |
|  | Level $1^{(a)}$ | Level ${ }^{(b)}$ |  | Level $3^{(c)}$ |  | Total fair value |  | Level ${ }^{(\mathrm{a})}$ |  | Level $2^{\text {(b) }}$ |  | Level $3^{(c)}$ |  | Total fair value |  |
| Assets measured at fair value classified in fair value hierarchy | \$ 5,308 | \$ | 9,617 | \$ | 2,613 | \$ | 17,538 | \$ | 6,541 | \$ | 12,315 | \$ | 3,172 | \$ | 22,028 |
| Assets measured at fair value using NAV as practical expedient not classified in fair value hierarchy |  |  |  |  |  |  | 2,593 |  |  |  |  |  |  |  | 3,960 |
| Net defined benefit pension plan payables not classified in fair value hierarchy |  |  |  |  |  |  | (241) |  |  |  |  |  |  |  | (296) |
| Total fair value of plan assets |  |  |  |  |  | \$ | 19,890 |  |  |  |  |  |  | \$ | 25,692 |

[^138]Changes in level 3 fair value measurements using significant unobservable inputs Investments classified in level 3 of the fair value hierarchy decreased in 2022 to $\$ 2.6$ billion, due to $\$ 501$ million in unrealized losses and $\$ 54$ million in settlements, and increased in 2021 to $\$ 3.2$ billion, predominantly due to $\$ 332$ million in unrealized gains, partially offset by $\$ 94$ million in settlements.

Estimated future benefit payments
The following table presents benefit payments expected to be paid for the defined benefit pension and OPEB plans for the years indicated.

| Year ended December 31, <br> (in millions) | Defined benefit <br> pension and OPEB <br> plans |  |
| :--- | ---: | ---: |
| 2023 | $\$$ | 1,022 |
| 2024 | 1,016 |  |
| 2025 | 1,007 |  |
| 2026 | 980 |  |
| 2027 | 977 |  |
| Years 2028-2032 | 4,720 |  |

## Note 9 - Employee share-based incentives

## Employee share-based awards

In 2022, 2021 and 2020, JPMorgan Chase granted longterm share-based awards to certain employees under its LTIP, as amended and restated effective May 15, 2018, and subsequently amended effective May 18, 2021. Under the terms of the LTIP, as of December 31, 2022, 69 million shares of common stock were available for issuance through May 2025. The LTIP is the only active plan under which the Firm is currently granting share-based incentive awards. In the following discussion, the LTIP, plus prior Firm plans and plans assumed as the result of acquisitions, are referred to collectively as the "LTI Plans," and such plans constitute the Firm's share-based incentive plans.
RSUs are awarded at no cost to the recipient upon their grant. Generally, RSUs are granted annually and vest at a rate of $50 \%$ after two years and $50 \%$ after three years and are converted into shares of common stock as of the vesting date. In addition, RSUs typically include full-career eligibility provisions, which allow employees to continue to vest upon voluntary termination based on age and/or service-related requirements, subject to post-employment and other restrictions. All RSU awards are subject to forfeiture until vested and contain clawback provisions that may result in cancellation under certain specified circumstances. Predominantly all RSUs entitle the recipient to receive cash payments equivalent to any dividends paid on the underlying common stock during the period the RSUs are outstanding.
Performance share units ("PSUs") are granted annually, and approved by the Firm's Board of Directors, to members of the Firm's Operating Committee under the variable compensation program. PSUs are subject to the Firm's achievement of specified performance criteria over a threeyear period. The number of awards that vest can range from zero to $150 \%$ of the grant amount. In addition, dividends that accrue during the vesting period are reinvested in dividend equivalent share units. PSUs and the related dividend equivalent share units are converted into shares of common stock after vesting.

Once the PSUs and dividend equivalent share units have vested, the shares of common stock that are delivered, after applicable tax withholding, must be retained for an additional holding period, for a total combined vesting and holding period of approximately five to eight years from the grant date depending on regulations in certain countries.
Under the LTI Plans, stock appreciation rights ("SARs") and stock options have generally been granted with an exercise price equal to the fair value of JPMorgan Chase's common stock on the grant date. SARs and stock options generally expire ten years after the grant date. In 2021, the Firm awarded its Chairman and CEO and its President and Chief Operating Officer 1.5 million and 750,000 SARs, respectively. There were no grants of SARs or stock options in 2022 and grants in 2020 were not material.

The Firm separately recognizes compensation expense for each tranche of each award, net of estimated forfeitures, as if it were a separate award with its own vesting date. Generally, for each tranche granted, compensation expense is recognized on a straight-line basis from the grant date until the vesting date of the respective tranche, provided that the employees will not become full-career eligible during the vesting period. For awards with full-career eligibility provisions and awards granted with no future substantive service requirement, the Firm accrues the estimated value of awards expected to be awarded to employees as of the grant date without giving consideration to the impact of post-employment restrictions. For each tranche granted to employees who will become full-career eligible during the vesting period, compensation expense is recognized on a straight-line basis from the grant date until the earlier of the employee's full-career eligibility date or the vesting date of the respective tranche.
The Firm's policy for issuing shares upon settlement of employee share-based incentive awards is to issue either new shares of common stock or treasury shares. During 2022, 2021 and 2020, the Firm settled all of its employee share-based awards by issuing treasury shares.
Refer to Note 23 for further information on the classification of share-based awards for purposes of calculating earnings per share.

## Notes to consolidated financial statements

RSUs, PSUs, SARs and stock options activity
Generally, compensation expense for RSUs and PSUs is measured based on the number of units granted multiplied by the stock price at the grant date, and for SARs and stock options, is measured at the grant date using the Black-Scholes valuation model. Compensation expense for these awards is recognized in net income as described previously. The following table summarizes JPMorgan Chase's RSUs, PSUs, SARs and stock options activity for 2022.

| Year ended December 31, 2022 <br> (in thousands, except weighted-average data, and where otherwise stated) | RSUs/PSUs |  |  | SARs/Options |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number of units | Weightedaverage grant date fair value |  | Number of awards |  | eighted- <br> verage <br> xercise <br> price | Weighted-average remaining contractual life (in years) |  | gregate ntrinsic value |
| Outstanding, January 1 | 45,405 | \$ | 126.32 | 3,369 | \$ | 116.62 |  |  |  |
| Granted | 23,729 |  | 147.17 | - |  | - |  |  |  |
| Exercised or vested | $(19,517)$ |  | 117.06 | (858) |  | 44.70 |  |  |  |
| Forfeited | $(1,891)$ |  | 141.74 | - |  | - |  |  |  |
| Canceled | NA |  | NA | - |  | - |  |  |  |
| Outstanding, December 31 | 47,726 | \$ | 139.90 | 2,511 | \$ | 141.19 | 7.8 | \$ | 22,695 |
| Exercisable, December 31 | NA |  | NA | 261 |  | 46.58 | 0.1 |  | 22,695 |

The total fair value of RSUs that vested during the years ended December 31, 2022, 2021 and 2020, was $\$ 3.2$ billion, $\$ 2.9$ billion and $\$ 2.8$ billion, respectively. The total intrinsic value of options exercised during the years ended December 31, 2022, 2021 and 2020, was $\$ 75$ million, $\$ 232$ million and $\$ 182$ million, respectively.

## Compensation expense

The Firm recognized the following noncash compensation expense related to its various employee share-based incentive plans in its Consolidated statements of income.

| Year ended December 31, (in millions) | 2022 | 2021 | 2020 |
| :--- | :---: | :---: | :---: | :---: |
| Cost of prior grants of RSUs, PSUs, SARs <br> and stock options that are amortized <br> over their applicable vesting periods | $\$ 1,253$ | $\$ 1,161$ | $\$ 1,101$ |
| Accrual of estimated costs of share- <br> based awards to be granted in future <br> periods, predominantly those to full- <br> career eligible employees | $\mathbf{1 , 5 4 1}$ | 1,768 | 1,350 |
| Total noncash compensation expense <br> related to employee share-based <br> incentive plans | $\$ 2,794$ | $\$ 2,929$ | $\$ 2,451$ |

At December 31, 2022, approximately $\$ 1.0$ billion (pretax) of compensation expense related to unvested awards had not yet been charged to net income. That cost is expected to be amortized into compensation expense over a weighted-average period of 1.8 years. The Firm does not capitalize any compensation expense related to sharebased compensation awards to employees.

## Tax benefits

Income tax benefits (including tax benefits from dividends or dividend equivalents) related to share-based incentive arrangements recognized in the Firm's Consolidated statements of income for the years ended December 31, 2022, 2021 and 2020, were $\$ 901$ million, $\$ 957$ million and $\$ 837$ million, respectively.

## Note 10 - Investment securities

Investment securities consist of debt securities that are classified as AFS or HTM. Debt securities classified as trading assets are discussed in Note 2. Predominantly all of the Firm's AFS and HTM securities are held by Treasury and CIO in connection with its asset-liability management activities.

AFS securities are carried at fair value on the Consolidated balance sheets. Unrealized gains and losses, after any applicable hedge accounting adjustments or allowance for credit losses, are reported in AOCI. The specific identification method is used to determine realized gains and losses on AFS securities, which are included in investment securities gains/(losses) on the Consolidated statements of income. HTM securities, which the Firm has the intent and ability to hold until maturity, are carried at amortized cost, net of allowance for credit losses, on the Consolidated balance sheets.

For both AFS and HTM securities, purchase discounts or premiums are generally amortized into interest income on a level-yield basis over the contractual life of the security. However, premiums on certain callable debt securities are amortized to the earliest call date.

During 2022 and 2021, the Firm transferred $\$ 78.3$ billion and $\$ 104.5$ billion of investment securities, respectively, from AFS to HTM for capital management purposes. AOCI included pretax unrealized gains/(losses) of \$(4.8) billion and $\$ 425$ million, respectively, on the securities at the dates of transfer.

Unrealized gains or losses at the date of transfer of these securities continue to be reported in AOCI and are amortized into interest income on a level-yield basis over the remaining life of the securities. This amortization will offset the effect on interest income of the amortization of the premium or discount resulting from the transfer recorded at fair value.
Transfers of securities from AFS to HTM are non-cash transactions and are recorded at fair value.

## Notes to consolidated financial statements

The amortized costs and estimated fair values of the investment securities portfolio were as follows for the dates indicated.

| December 31, (in millions) | 2022 |  |  |  |  | 2021 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { Amortized } \\ \text { cost }^{(b)(c)} \end{gathered}$ | Gross unrealized gains | $\begin{gathered} \text { Gross } \\ \text { unrealized } \\ \text { losses } \\ \hline \end{gathered}$ |  | Fair value | Amortized $\operatorname{cost}^{(b)(c)}$ |  | Gross unrealized gains |  | Gross <br> unrealized losses |  | Fair value |
| Available-for-sale securities |  |  |  |  |  |  |  |  |  |  |  |  |
| Mortgage-backed securities: |  |  |  |  |  |  |  |  |  |  |  |  |
| U.S. GSEs and government agencies | \$ 77,194 | \$ 479 | \$ 6,170 | \$ | 71,503 | \$ 72,800 | \$ | 736 | \$ | 993 | \$ | 72,543 |
| Residential: |  |  |  |  |  |  |  |  |  |  |  |  |
| U.S. | 1,576 | 1 | 111 |  | 1,466 | 2,128 |  | 38 |  | 2 |  | 2,164 |
| Non-U.S. | 3,176 | 5 | 27 |  | 3,154 | 3,882 |  | 25 |  | 1 |  | 3,906 |
| Commercial | 2,113 | - | 155 |  | 1,958 | 4,944 |  | 22 |  | 17 |  | 4,949 |
| Total mortgage-backed securities | 84,059 | 485 | 6,463 |  | 78,081 | 83,754 |  | 821 |  | 1,013 |  | 83,562 |
| U.S. Treasury and government agencies | 95,217 | 302 | 3,459 |  | 92,060 | 178,038 |  | 668 |  | 1,243 |  | 177,463 |
| Obligations of U.S. states and municipalities | 7,103 | 86 | 403 |  | 6,786 | 14,890 |  | 972 |  | 2 |  | 15,860 |
| Non-U.S. government debt securities | 20,360 | 14 | 678 |  | 19,696 | 16,163 |  | 92 |  | 46 |  | 16,209 |
| Corporate debt securities | 381 | - | 24 |  | 357 | 332 |  | 8 |  | 19 |  | 321 |
| Asset-backed securities: |  |  |  |  |  |  |  |  |  |  |  |  |
| Collateralized Ioan obligations | 5,916 | 1 | 125 |  | 5,792 | 9,674 |  | 6 |  | 18 |  | 9,662 |
| Other | 3,152 | 2 | 69 |  | 3,085 | 5,403 |  | 47 |  | 2 |  | 5,448 |
| Total available-for-sale securities | 216,188 | 890 | 11,221 |  | 205,857 | 308,254 |  | 2,614 |  | 2,343 |  | 308,525 |
| Held-to-maturity securities ${ }^{(a)}$ |  |  |  |  |  |  |  |  |  |  |  |  |
| Mortgage-backed securities: |  |  |  |  |  |  |  |  |  |  |  |  |
| U.S. GSEs and government agencies | 113,492 | 35 | 13,709 |  | 99,818 | 102,556 |  | 1,400 |  | 853 |  | 103,103 |
| U.S. Residential | 10,503 | 3 | 1,244 |  | 9,262 | 7,316 |  | 1 |  | 106 |  | 7,211 |
| Commercial | 10,361 | 10 | 734 |  | 9,637 | 3,730 |  | 11 |  | 54 |  | 3,687 |
| Total mortgage-backed securities | 134,356 | 48 | 15,687 |  | 118,717 | 113,602 |  | 1,412 |  | 1,013 |  | 114,001 |
| U.S. Treasury and government agencies | 207,463 | - | 18,363 |  | 189,100 | 185,204 |  | 169 |  | 2,103 |  | 183,270 |
| Obligations of U.S. states and municipalities | 19,747 | 53 | 1,080 |  | 18,720 | 13,985 |  | 453 |  | 44 |  | 14,394 |
| Asset-backed securities: |  |  |  |  |  |  |  |  |  |  |  |  |
| Collateralized Ioan obligations | 61,414 | 4 | 1,522 |  | 59,896 | 48,869 |  | 75 |  | 22 |  | 48,922 |
| Other | 2,325 | - | 110 |  | 2,215 | 2,047 |  | 1 |  | 7 |  | 2,041 |
| Total held-to-maturity securities | 425,305 | 105 | 36,762 |  | 388,648 | 363,707 |  | 2,110 |  | 3,189 |  | 362,628 |
| Total investment securities, net of allowance for credit losses | \$ 641,493 | \$ 995 | \$ 47,983 | \$ | 594,505 | \$ 671,961 | \$ | 4,724 | \$ | 5,532 | \$ | 671,153 |

(a) The Firm purchased $\$ 33.7$ billion, $\$ 111.8$ billion and $\$ 12.4$ billion of HTM securities for the years ended December 31, 2022, 2021 and 2020, respectively.
(b) The amortized cost of investment securities is reported net of allowance for credit losses of $\$ 96$ million and $\$ 42$ million at December 31 , 2022 and 2021 , respectively.
(c) Excludes $\$ 2.5$ billion and $\$ 1.9$ billion of accrued interest receivable at December 31, 2022 and 2021, respectively, included in accrued interest and accounts receivable on the Consolidated balance sheets. The Firm generally does not recognize an allowance for credit losses on accrued interest receivable, consistent with its policy to write them off no later than 90 days past due by reversing interest income. The Firm did not reverse through interest income any accrued interest receivable for the years ended December 31, 2022 and 2021.

At December 31, 2022, the investment securities portfolio consisted of debt securities with an average credit rating of AA+ (based upon external ratings where available, and where not available, based primarily upon internal risk ratings). Risk ratings are used to identify the credit quality of securities and differentiate risk within the portfolio. The Firm's internal risk ratings generally align with the qualitative characteristics (e.g., borrower capacity to meet financial commitments and vulnerability to changes in the economic environment) defined by S\&P and Moody's,
however the quantitative characteristics (e.g., probability of default ("PD") and loss given default ("LGD")) may differ as they reflect internal historical experiences and assumptions. Risk ratings are assigned at acquisition, reviewed on a regular and ongoing basis by Credit Risk Management and adjusted as necessary over the life of the investment for updated information affecting the issuer's ability to fulfill its obligations.

AFS securities impairment
The following tables present the fair value and gross unrealized losses by aging category for AFS securities at December 31, 2022 and 2021. The tables exclude U.S. Treasury and government agency securities and U.S. GSE and government agency MBS with unrealized losses of $\$ 9.6$ billion and $\$ 2.2$ billion, at December 31, 2022 and 2021, respectively; changes in the value of these securities are generally driven by changes in interest rates rather than changes in their credit profile given the explicit or implicit guarantees provided by the U.S. government.

|  | Available-for-sale securities with gross unrealized losses |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Less t | 12 months | 12 m | hs or more |  |  |
| December 31, 2022 (in millions) | Fair value | Gross unrealized losses | Fair value | Gross unrealized losses | Total fair value | Total gross unrealized losses |

Available-for-sale securities
Mortgage-backed securities:


Available-for-sale securities
Mortgage-backed securities:

| Residential: |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| U.S. | \$ | 303 | \$ | 1 | \$ | 45 | \$ | 1 | \$ | 348 | \$ | 2 |
| Non-U.S. |  | 133 |  | 1 |  | - |  | - |  | 133 |  | 1 |
| Commercial |  | 2,557 |  | 5 |  | 349 |  | 12 |  | 2,906 |  | 17 |
| Total mortgage-backed securities |  | 2,993 |  | 7 |  | 394 |  | 13 |  | 3,387 |  | 20 |
| Obligations of U.S. states and municipalities |  | 120 |  | 2 |  | - |  | - |  | 120 |  | 2 |
| Non-U.S. government debt securities |  | 5,060 |  | 37 |  | 510 |  | 9 |  | 5,570 |  | 46 |
| Corporate debt securities |  | 166 |  | 1 |  | 46 |  | 18 |  | 212 |  | 19 |
| Asset-backed securities: |  |  |  |  |  |  |  |  |  |  |  |  |
| Collateralized loan obligations |  | 8,110 |  | 18 |  | 208 |  | - |  | 8,318 |  | 18 |
| Other |  | 89 |  | - |  | 178 |  | 2 |  | 267 |  | 2 |
| Total available-for-sale securities with gross unrealized losses | \$ | 16,538 | \$ | 65 | \$ | 1,336 | \$ | 42 | \$ | 17,874 | \$ | 107 |

## Notes to consolidated financial statements

AFS securities are considered impaired if the fair value is less than the amortized cost.

The Firm recognizes impairment losses in earnings if the Firm has the intent to sell the debt security, or if it is more likely than not that the Firm will be required to sell the debt security before recovery of its amortized cost. In these circumstances the impairment loss is recognized in investment securities gains/(losses) in the Consolidated Statements of Income and is equal to the full difference between the amortized cost (net of allowance if applicable) and the fair value of the security.

For impaired debt securities that the Firm has the intent and ability to hold, the securities are evaluated to determine if a credit loss exists. If it is determined that a credit loss exists, that loss is recognized as an allowance for credit losses through the provision for credit losses in the Consolidated Statements of Income, limited by the amount of impairment. Any impairment on debt securities that the Firm has the intent and ability to hold not due to credit losses is recorded in OCI.

Factors considered in evaluating credit losses include adverse conditions specifically related to the industry, geographic area or financial condition of the issuer or underlying collateral of a security; and payment structure of the security.

When assessing securities issued in a securitization for credit losses, the Firm estimates cash flows considering relevant market and economic data, underlying loan-level data, and structural features of the securitization, such as subordination, excess spread, overcollateralization or other forms of credit enhancement, and compares the losses projected for the underlying collateral ("pool losses") against the level of credit enhancement in the securitization structure to determine whether these features are sufficient to absorb the pool losses, or whether a credit loss exists.

For beneficial interests in securitizations that are rated below "AA" at their acquisition, or that can be contractually prepaid or otherwise settled in such a way that the Firm would not recover substantially all of its recorded investment, the Firm evaluates impairment for credit losses when there is an adverse change in expected cash flows.

## HTM securities - credit risk

## Allowance for credit losses

The allowance for credit losses represents expected credit losses over the remaining expected life of HTM securities.

The allowance for credit losses on HTM obligations of U.S. states and municipalities and commercial mortgage-backed securities is calculated by applying statistical credit loss factors (estimated PD and LGD) to the amortized cost. The credit loss factors are derived using a weighted average of five internally developed eight-quarter macroeconomic scenarios, followed by a single year straight-line interpolation to revert to long run historical information for periods beyond the forecast period. Refer to Note 13 for further information on the eight-quarter macroeconomic forecast.

The allowance for credit losses on HTM collateralized loan obligations and U.S. residential mortgage-backed securities is calculated as the difference between the amortized cost and the present value of the cash flows expected to be collected, discounted at the security's effective interest rate. These cash flow estimates are developed based on expectations of underlying collateral performance derived using the eight-quarter macroeconomic forecast and the single year straight-line interpolation, as well as considering the structural features of the security.

The application of different inputs and assumptions into the calculation of the allowance for credit losses is subject to significant management judgment, and emphasizing one input or assumption over another, or considering other inputs or assumptions, could affect the estimate of the allowance for credit losses on HTM securities.

## Credit quality indicator

The primary credit quality indicator for HTM securities is the risk rating assigned to each security. At both December 31, 2022 and 2021, all HTM securities were rated investment grade and were current and accruing, with approximately 98\% rated at least AA+.

Allowance for credit losses on investment securities The allowance for credit losses on investment securities was $\$ 96$ million, $\$ 42$ million and $\$ 78$ million as of December 31, 2022, 2021 and 2020, respectively.

Selected impacts of investment securities on the Consolidated statements of income

| Year ended December 31, <br> (in millions) | $\mathbf{2 0 2 2}$ | 2021 | 2020 |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Realized gains | $\$ 198$ <br> $(2,578)$ | $\$$ | 595 |
| $(940)$ |  |  |  | | $\$ 3,080$ |
| :---: |
| $(2,278)$ |
| Realized losses |

Contractual maturities and yields
The following table presents the amortized cost and estimated fair value at December 31, 2022, of JPMorgan Chase's investment securities portfolio by contractual maturity.

| By remaining maturity December 31, 2022 (in millions) |  | Due in one year or less |  | Due after one year through five years |  | Due after five years through 10 years |  | Due after <br> 10 years ${ }^{(b)}$ |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Available-for-sale securities |  |  |  |  |  |  |  |  |  |  |
| Mortgage-backed securities |  |  |  |  |  |  |  |  |  |  |
| Amortized cost | \$ | 14 | \$ | 3,634 | \$ | 4,534 | \$ | 75,877 | \$ | 84,059 |
| Fair value |  | 14 |  | 3,459 |  | 4,573 |  | 70,035 |  | 78,081 |
| Average yield ${ }^{(a)}$ |  | 2.21 \% |  | 3.58 \% |  | 5.25 \% |  | 3.62 \% |  | 3.71 \% |
| U.S. Treasury and government agencies |  |  |  |  |  |  |  |  |  |  |
| Amortized cost | \$ | 16,335 | \$ | 54,936 | \$ | 17,749 | \$ | 6,197 | \$ | 95,217 |
| Fair value |  | 16,011 |  | 52,703 |  | 17,167 |  | 6,179 |  | 92,060 |
| Average yield ${ }^{(a)}$ |  | 1.27 \% |  | 3.00 \% |  | 3.99 \% |  | 6.01 \% |  | 3.08 \% |
| Obligations of U.S. states and municipalities |  |  |  |  |  |  |  |  |  |  |
| Amortized cost | \$ | 18 | \$ | 47 | \$ | 215 | \$ | 6,823 | \$ | 7,103 |
| Fair value |  | 18 |  | 46 |  | 216 |  | 6,506 |  | 6,786 |
| Average yield ${ }^{(a)}$ |  | 5.03 \% |  | 3.96 \% |  | 5.24 \% |  | 5.85 \% |  | 5.81 \% |
| Non-U.S. government debt securities |  |  |  |  |  |  |  |  |  |  |
| Amortized cost | \$ | 12,803 | \$ | 3,228 | \$ | 4,329 | \$ | - | \$ | 20,360 |
| Fair value |  | 12,795 |  | 3,107 |  | 3,794 |  | - |  | 19,696 |
| Average yield ${ }^{(a)}$ |  | 3.54 \% |  | 2.59 \% |  | 1.37 \% |  | - \% |  | 2.93 \% |
| Corporate debt securities |  |  |  |  |  |  |  |  |  |  |
| Amortized cost | \$ | 125 | \$ | 272 | \$ | 13 | \$ | - | \$ | 410 |
| Fair value |  | 76 |  | 268 |  | 13 |  | - |  | 357 |
| Average yield ${ }^{(\mathrm{a})}$ |  | 16.22 \% |  | 12.07 \% |  | 5.78 \% |  | - \% |  | 13.14 \% |
| Asset-backed securities |  |  |  |  |  |  |  |  |  |  |
| Amortized cost | \$ | 99 | \$ | 1,517 | \$ | 3,665 | \$ | 3,787 | \$ | 9,068 |
| Fair value |  | 95 |  | 1,487 |  | 3,605 |  | 3,690 |  | 8,877 |
| Average yield ${ }^{(\mathrm{a})}$ |  | 5.11 \% |  | 3.11 \% |  | 4.98 \% |  | 5.19 \% |  | 4.76 \% |
| Total available-for-sale securities |  |  |  |  |  |  |  |  |  |  |
| Amortized cost | \$ | 29,394 | \$ | 63,634 | \$ | 30,505 | \$ | 92,684 | \$ | 216,217 |
| Fair value |  | 29,009 |  | 61,070 |  | 29,368 |  | 86,410 |  | 205,857 |
| Average yield ${ }^{(a)}$ |  | 2.34 \% |  | 3.05 \% |  | 3.94 \% |  | 4.01 \% |  | 3.49 \% |
| Held-to-maturity securities |  |  |  |  |  |  |  |  |  |  |
| Mortgage-backed securities |  |  |  |  |  |  |  |  |  |  |
| Amortized cost | \$ | 98 | \$ | 1,718 | \$ | 12,350 | \$ | 120,206 | \$ | 134,372 |
| Fair value |  | 96 |  | 1,584 |  | 10,909 |  | 106,128 |  | 118,717 |
| Average yield ${ }^{(a)}$ |  | 5.54 \% |  | 2.23 \% |  | 2.56 \% |  | 2.93 \% |  | 2.89 \% |
| U.S. Treasury and government agencies |  |  |  |  |  |  |  |  |  |  |
| Amortized cost | \$ | 34,157 | \$ | 106,325 | \$ | 66,981 | \$ | - | \$ | 207,463 |
| Fair value |  | 33,433 |  | 99,345 |  | 56,322 |  | - |  | 189,100 |
| Average yield ${ }^{(\mathrm{a})}$ |  | 0.57 \% |  | 0.71 \% |  | 1.27 \% |  | - \% |  | 0.87 \% |
| Obligations of U.S. states and municipalities |  |  |  |  |  |  |  |  |  |  |
| Amortized cost | \$ | - | \$ | 106 | \$ | 2,741 | \$ | 16,951 | \$ | 19,798 |
| Fair value |  | - |  | 100 |  | 2,710 |  | 15,910 |  | 18,720 |
| Average yield ${ }^{(\mathrm{a})}$ |  | - \% |  | 3.39 \% |  | 4.03 \% |  | 4.24 \% |  | 4.21 \% |
| Asset-backed securities |  |  |  |  |  |  |  |  |  |  |
| Amortized cost | \$ | - | \$ | 30 | \$ | 19,398 | \$ | 44,311 | \$ | 63,739 |
| Fair value |  | - |  | 29 |  | 19,085 |  | 42,997 |  | 62,111 |
| Average yield ${ }^{(\mathrm{a})}$ |  | - \% |  | 5.69 \% |  | 4.80 \% |  | 4.74 \% |  | 4.76 \% |
| Total held-to-maturity securities |  |  |  |  |  |  |  |  |  |  |
| Amortized cost | \$ | 34,255 | \$ | 108,179 | \$ | 101,470 | \$ | 181,468 | \$ | 425,372 |
| Fair value |  | 33,529 |  | 101,058 |  | 89,026 |  | 165,035 |  | 388,648 |
| Average yield ${ }^{(\mathrm{a})}$ |  | 0.58 \% |  | 0.74 \% |  | 2.18 \% |  | 3.50 \% |  | 2.25 \% |

(a) Average yield is computed using the effective yield of each security owned at the end of the period, weighted based on the amortized cost of each security. The effective yield considers the contractual coupon, amortization of premiums and accretion of discounts, and the effect of related hedging derivatives. Taxable-equivalent amounts are used where applicable. The effective yield excludes unscheduled principal prepayments; and accordingly, actual maturities of securities may differ from their contractual or expected maturities as certain securities may be prepaid. However, for certain callable debt securities, the average yield is calculated to the earliest call date.
(b) Substantially all of the Firm's U.S. residential MBS and collateralized mortgage obligations are due in 10 years or more, based on contractual maturity. The estimated weighted-average life, which reflects anticipated future prepayments, is approximately eight years for agency residential MBS, and six years for both agency residential collateralized mortgage obligations and nonagency residential collateralized mortgage obligations.

## Notes to consolidated financial statements

## Note 11 - Securities financing activities

JPMorgan Chase enters into resale, repurchase, securities borrowed and securities loaned agreements (collectively, "securities financing agreements") primarily to finance the Firm's inventory positions, acquire securities to cover short sales, accommodate customers' financing needs, settle other securities obligations and to deploy the Firm's excess cash.

Securities financing agreements are treated as collateralized financings on the Firm's Consolidated balance sheets. Where appropriate under applicable accounting guidance, securities financing agreements with the same counterparty are reported on a net basis. Refer to Note 1 for further discussion of the offsetting of assets and liabilities. Fees received and paid in connection with securities financing agreements are recorded over the life of the agreement in interest income and interest expense on the Consolidated statements of income.

The Firm has elected the fair value option for certain securities financing agreements. Refer to Note 3 for further information regarding the fair value option. The securities financing agreements for which the fair value option has been elected are reported within securities purchased under resale agreements, securities loaned or sold under repurchase agreements, and securities borrowed on the Consolidated balance sheets. Generally, for agreements carried at fair value, current-period interest accruals are recorded within interest income and interest expense, with changes in fair value reported in principal transactions revenue. However, for financial instruments containing embedded derivatives that would be separately accounted for in accordance with accounting guidance for hybrid instruments, all changes in fair value, including any interest elements, are reported in principal transactions revenue.
Securities financing agreements not elected under the fair value option are measured at amortized cost. As a result of the Firm's credit risk mitigation practices described below, the Firm did not hold any allowance for credit losses with respect to resale and securities borrowed arrangements as of December 31, 2022 and 2021.

Credit risk mitigation practices
Securities financing agreements expose the Firm primarily to credit and liquidity risk. To manage these risks, the Firm monitors the value of the underlying securities (predominantly high-quality securities collateral, including government-issued debt and U.S. GSEs and government agencies MBS) that it has received from or provided to its counterparties compared to the value of cash proceeds and exchanged collateral, and either requests additional collateral or returns securities or collateral when appropriate. Margin levels are initially established based upon the counterparty, the type of underlying securities, and the permissible collateral, and are monitored on an ongoing basis.
In resale and securities borrowed agreements, the Firm is exposed to credit risk to the extent that the value of the securities received is less than initial cash principal advanced and any collateral amounts exchanged. In repurchase and securities loaned agreements, credit risk exposure arises to the extent that the value of underlying securities advanced exceeds the value of the initial cash principal received, and any collateral amounts exchanged.
Additionally, the Firm typically enters into master netting agreements and other similar arrangements with its counterparties, which provide for the right to liquidate the underlying securities and any collateral amounts exchanged in the event of a counterparty default. It is also the Firm's policy to take possession, where possible, of the securities underlying resale and securities borrowed agreements. Refer to Note 29 for further information regarding assets pledged and collateral received in securities financing agreements.

The table below summarizes the gross and net amounts of the Firm's securities financing agreements, as of December 31, 2022 and 2021. When the Firm has obtained an appropriate legal opinion with respect to a master netting agreement with a counterparty and where other relevant netting criteria under U.S. GAAP are met, the Firm nets, on the Consolidated balance sheets, the balances outstanding under its securities financing agreements with the same counterparty. In addition, the Firm exchanges securities and/or cash collateral with its counterparty to reduce the economic exposure with the counterparty, but such collateral is not eligible for net Consolidated balance sheet presentation. Where the Firm has obtained an appropriate legal opinion with respect to the counterparty master netting agreement, such collateral, along with
securities financing balances that do not meet all these relevant netting criteria under U.S. GAAP, is presented in the table below as "Amounts not nettable on the Consolidated balance sheets," and reduces the "Net amounts" presented. Where a legal opinion has not been either sought or obtained, the securities financing balances are presented gross in the "Net amounts" below. In transactions where the Firm is acting as the lender in a securities-for-securities lending agreement and receives securities that can be pledged or sold as collateral, the Firm recognizes the securities received at fair value within other assets and the obligation to return those securities within accounts payable and other liabilities on the Consolidated balance sheets.

| (in millions) | December 31, 2022 |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Gross amounts |  | Amounts netted on the Consolidated balance sheets |  | Amounts presented on the Consolidated balance sheets |  | Amounts not nettable on the Consolidated balance sheets ${ }^{(b)}$ |  | Net amounts ${ }^{(c)}$ |  |
| Assets |  |  |  |  |  |  |  |  |  |  |
| Securities purchased under resale agreements | \$ | 597,912 | \$ | $(282,411)$ | \$ | 315,501 | \$ | $(304,120)$ | \$ | 11,381 |
| Securities borrowed |  | 228,279 |  | $(42,910)$ |  | 185,369 |  | $(131,578)$ |  | 53,791 |
| Liabilities |  |  |  |  |  |  |  |  |  |  |
| Securities sold under repurchase agreements | \$ | 480,793 | \$ | $(282,411)$ | \$ | 198,382 | \$ | $(167,427)$ | \$ | 30,955 |
| Securities loaned and other ${ }^{(a)}$ |  | 52,443 |  | $(42,910)$ |  | 9,533 |  | $(9,527)$ |  | 6 |
|  |  |  |  |  |  | 31, 202 |  |  |  |  |
| (in millions) |  | amounts |  | nts netted n the solidated ce sheets |  | ounts ed on the lidated e sheets |  | Amounts not ettable on the Consolidated alance sheets ${ }^{(b)}$ |  | mounts ${ }^{(c)}$ |
| Assets |  |  |  |  |  |  |  |  |  |  |
| Securities purchased under resale agreements | \$ | 604,724 | \$ | $(343,093)$ | \$ | 261,631 | \$ | $(245,588)$ | \$ | 16,043 |
| Securities borrowed |  | 250,333 |  | $(44,262)$ |  | 206,071 |  | $(154,599)$ |  | 51,472 |
| Liabilities |  |  |  |  |  |  |  |  |  |  |
| Securities sold under repurchase agreements | \$ | 532,899 | \$ | $(343,093)$ | \$ | 189,806 | \$ | $(166,456)$ | \$ | 23,350 |
| Securities loaned and other ${ }^{(a)}$ |  | 52,610 |  | $(44,262)$ |  | 8,348 |  | $(8,133)$ |  | 215 |

(a) Includes securities-for-securities lending agreements of $\$ 7.0$ billion and $\$ 5.6$ billion at December 31, 2022 and 2021, respectively, accounted for at fair value, where the Firm is acting as lender.
(b) In some cases, collateral exchanged with a counterparty exceeds the net asset or liability balance with that counterparty. In such cases, the amounts reported in this column are limited to the related net asset or liability with that counterparty.
(c) Includes securities financing agreements that provide collateral rights, but where an appropriate legal opinion with respect to the master netting agreement has not been either sought or obtained. At December 31, 2022 and 2021, included $\$ 6.0$ billion and $\$ 13.9$ billion, respectively, of securities purchased under resale agreements; $\$ 49.0$ billion and $\$ 46.4$ billion, respectively, of securities borrowed; $\$ 29.1$ billion and $\$ 21.6$ billion, respectively, of securities sold under repurchase agreements. At December 31, 2021 included $\$ 198$ million of securities loaned and other, and the amount was not material at December 31, 2022.

## Notes to consolidated financial statements

The tables below present as of December 31, 2022 and 2021 the types of financial assets pledged in securities financing agreements and the remaining contractual maturity of the securities financing agreements.

|  |  |  | Gross liability balance |
| :--- | :--- | :--- | :--- | :--- |

## Transfers not qualifying for sale accounting

At December 31, 2022 and 2021, the Firm held $\$ 692$ million and $\$ 440$ million, respectively, of financial assets for which the rights have been transferred to third parties; however, the transfers did not qualify as a sale in accordance with U.S. GAAP. These transfers have been recognized as collateralized financing transactions. The transferred assets are recorded in trading assets and loans, and the corresponding liabilities are recorded predominantly in short-term borrowings on the Consolidated balance sheets.

## Note 12 - Loans

Loan accounting framework
The accounting for a loan depends on management's strategy for the loan. The Firm accounts for loans based on the following categories:

- Originated or purchased loans held-for-investment (i.e., "retained")
- Loans held-for-sale
- Loans at fair value

The following provides a detailed accounting discussion of the Firm's loans by category:

## Loans held-for-investment

Originated or purchased loans held-for-investment, including PCD, are recorded at amortized cost, reflecting the principal amount outstanding, net of the following: unamortized deferred loan fees, costs, premiums or discounts; charge-offs; collection of cash; and foreign exchange. Credit card loans also include billed finance charges and fees.

## Interest income

Interest income on performing loans held-for-investment is accrued and recognized as interest income at the contractual rate of interest. Purchase price discounts or premiums, as well as net deferred loan fees or costs, are amortized into interest income over the contractual life of the loan as an adjustment of yield.
The Firm classifies accrued interest on loans, including accrued but unbilled interest on credit card loans, in accrued interest and accounts receivables on the Consolidated balance sheets. For credit card loans, accrued interest once billed is then recognized in the loan balances, with the related allowance recorded in the allowance for credit losses. Changes in the allowance for credit losses on accrued interest on credit card loans are recognized in the provision for credit losses and charge-offs are recognized by reversing interest income. For other loans, the Firm generally does not recognize an allowance for credit losses on accrued interest receivables, consistent with its policy to write them off no later than 90 days past due by reversing interest income.

## Nonaccrual loans

Nonaccrual loans are those on which the accrual of interest has been suspended. Loans (other than credit card loans and certain consumer loans insured by U.S. government agencies) are placed on nonaccrual status and considered nonperforming when full payment of principal and interest is not expected, regardless of delinquency status, or when principal and interest has been in default for a period of 90 days or more, unless the loan is both well-secured and in the process of collection. A loan is determined to be past due when the minimum payment is not received from the borrower by the contractually specified due date or for certain loans (e.g., residential real estate loans), when a monthly payment is due and unpaid for 30 days or more.

Finally, collateral-dependent loans are typically maintained on nonaccrual status.
On the date a loan is placed on nonaccrual status, all interest accrued but not collected is reversed against interest income. In addition, the amortization of deferred amounts is suspended. Interest income on nonaccrual loans may be recognized as cash interest payments are received (i.e., on a cash basis) if the recorded loan balance is deemed fully collectible; however, if there is doubt regarding the ultimate collectibility of the recorded loan balance, all interest cash receipts are applied to reduce the carrying value of the loan (the cost recovery method). For consumer loans, application of this policy typically results in the Firm recognizing interest income on nonaccrual consumer loans on a cash basis.

A loan may be returned to accrual status when repayment is reasonably assured and there has been demonstrated performance under the terms of the loan or, if applicable, the terms of the restructured loan.
As permitted by regulatory guidance, credit card loans are generally exempt from being placed on nonaccrual status; accordingly, interest and fees related to credit card loans continue to accrue until the loan is charged off or paid in full.

## Allowance for loan losses

The allowance for loan losses represents the estimated expected credit losses in the held-for-investment loan portfolio at the balance sheet date and is recognized on the balance sheet as a contra asset, which brings the amortized cost to the net carrying value. Changes in the allowance for Ioan losses are recorded in the provision for credit losses on the Firm's Consolidated statements of income. Refer to Note 13 for further information on the Firm's accounting policies for the allowance for loan losses.

## Charge-offs

Consumer loans are generally charged off or charged down to the lower of the amortized cost or the net realizable value of the underlying collateral (i.e., fair value less estimated costs to sell), with an offset to the allowance for Ioan losses, upon reaching specified stages of delinquency in accordance with standards established by the FFIEC. Residential real estate loans, unmodified credit card loans and scored business banking loans are generally charged off no later than 180 days past due. Scored auto and modified credit card loans are charged off no later than 120 days past due.
Certain consumer loans are charged off or charged down to their net realizable value earlier than the FFIEC charge-off standards in the following circumstances:

- Loans modified in a TDR that are determined to be collateral-dependent.
- Loans to borrowers who have experienced an event that suggests a loss is either known or highly certain are subject to accelerated charge-off standards (e.g.,


## Notes to consolidated financial statements

residential real estate and auto loans are charged off or charged down within 60 days of receiving notification of a bankruptcy filing).

- Auto loans upon repossession of the automobile.

Other than in certain limited circumstances, the Firm typically does not recognize charge-offs on the governmentguaranteed portion of loans.

Wholesale loans are charged off when it is highly certain that a loss has been realized. The determination of whether to recognize a charge-off includes many factors, including the prioritization of the Firm's claim in bankruptcy, expectations of the workout/restructuring of the Ioan and valuation of the borrower's equity or the loan collateral.

When a loan is charged down to the lower of its amortized cost or the estimated net realizable value of the underlying collateral, the determination of the fair value of the collateral depends on the type of collateral (e.g., securities, real estate). In cases where the collateral is in the form of liquid securities, the fair value is based on quoted market prices or broker quotes. For illiquid securities or other financial assets, the fair value of the collateral is generally estimated using a discounted cash flow model.

For residential real estate loans, collateral values are based upon external valuation sources. When it becomes likely that a borrower is either unable or unwilling to pay, the Firm utilizes a broker's price opinion, appraisal and/or an automated valuation model of the home based on an exterior-only valuation ("exterior opinions"), which is then updated at least every 12 months, or more frequently depending on various market factors. As soon as practicable after the Firm receives the property in satisfaction of a debt (e.g., by taking legal title or physical possession), the Firm generally obtains an appraisal based on an inspection that includes the interior of the home ("interior appraisals"). Exterior opinions and interior appraisals are discounted based upon the Firm's experience with actual liquidation values as compared with the estimated values provided by exterior opinions and interior appraisals, considering statespecific factors.
For commercial real estate loans, collateral values are generally based on appraisals from internal and external valuation sources. Collateral values are typically updated every six to twelve months, either by obtaining a new appraisal or by performing an internal analysis, in accordance with the Firm's policies. The Firm also considers both borrower- and market-specific factors, which may result in obtaining appraisal updates or broker price opinions at more frequent intervals.

## Loans held-for-sale

Loans held-for-sale are measured at the lower of cost or fair value, with valuation changes recorded in noninterest revenue. For consumer loans, the valuation is performed on a portfolio basis. For wholesale loans, the valuation is performed on an individual loan basis.
Interest income on loans held-for-sale is accrued and recognized based on the contractual rate of interest.

Loan origination fees or costs and purchase price discounts or premiums are deferred in a contra loan account until the related loan is sold. The deferred fees or costs and discounts or premiums are an adjustment to the basis of the loan and therefore are included in the periodic determination of the lower of cost or fair value adjustments and/or the gain or loss recognized at the time of sale.

Because these loans are recognized at the lower of cost or fair value, the Firm's allowance for loan losses and chargeoff policies do not apply to these loans. However, loans held-for-sale are subject to the nonaccrual policies described above.

## Loans at fair value

Loans for which the fair value option has been elected are measured at fair value, with changes in fair value recorded in noninterest revenue.

Interest income on these loans is accrued and recognized based on the contractual rate of interest. Changes in fair value are recognized in noninterest revenue. Loan origination fees are recognized upfront in noninterest revenue. Loan origination costs are recognized in the associated expense category as incurred.

Because these loans are recognized at fair value, the Firm's allowance for loan losses and charge-off policies do not apply to these loans. However, loans at fair value are subject to the nonaccrual policies described above.
Refer to Note 3 for further information on the Firm's elections of fair value accounting under the fair value option. Refer to Note 2 and Note 3 for further information on loans carried at fair value and classified as trading assets.

Loan classification changes
Loans in the held-for-investment portfolio that management decides to sell are transferred to the held-forsale portfolio at the lower of cost or fair value on the date of transfer. Credit-related losses are charged against the allowance for loan losses; non-credit related losses such as those due to changes in interest rates or foreign currency exchange rates are recognized in noninterest revenue.

In the event that management decides to retain a Ioan in the held-for-sale portfolio, the loan is transferred to the held-for-investment portfolio at amortized cost on the date of transfer. These loans are subsequently assessed for impairment based on the Firm's allowance methodology. Refer to Note 13 for a further discussion of the methodologies used in establishing the Firm's allowance for Ioan losses.

Loan modifications
The Firm seeks to modify certain loans in conjunction with its loss mitigation activities. Through the modification, JPMorgan Chase grants one or more concessions to a borrower who is experiencing financial difficulty in order to minimize the Firm's economic loss and avoid foreclosure or repossession of the collateral, and to ultimately maximize payments received by the Firm from the borrower. The concessions granted vary by program and by borrowerspecific characteristics, and may include interest rate reductions, term extensions, payment delays, principal forgiveness, or the acceptance of equity or other assets in lieu of payments. Such modifications are accounted for and reported as TDRs. Loans with short-term and other insignificant modifications that are not considered concessions are not TDRs.

Loans, except for credit card loans, modified in a TDR are generally placed on nonaccrual status, although in many cases such loans were already on nonaccrual status prior to modification. These loans may be returned to performing status (the accrual of interest is resumed) if the following criteria are met: (i) the borrower has performed under the modified terms for a minimum of six months and/or six payments, and (ii) the Firm has an expectation that repayment of the modified Ioan is reasonably assured based on, for example, the borrower's debt capacity and level of future earnings, collateral values, LTV ratios, and other current market considerations. In certain limited and welldefined circumstances in which the loan is current at the modification date, such loans are not placed on nonaccrual status at the time of modification.

Loans modified in TDRs are generally measured for impairment using the Firm's established asset-specific allowance methodology, which considers the expected redefault rates for the modified loans. A loan modified in a TDR generally remains subject to the asset-specific component of the allowance throughout its remaining life, regardless of whether the loan is performing and has been returned to accrual status. Refer to Note 13 for further discussion of the methodology used to estimate the Firm's asset-specific allowance.

## Foreclosed property

The Firm acquires property from borrowers through loan restructurings, workouts, and foreclosures. Property acquired may include real property (e.g., residential real estate, land, and buildings) and commercial and personal property (e.g., automobiles, aircraft, railcars, and ships).

The Firm recognizes foreclosed property upon receiving assets in satisfaction of a loan (e.g., by taking legal title or physical possession). For loans collateralized by real property, the Firm generally recognizes the asset received at foreclosure sale or upon the execution of a deed in lieu of foreclosure transaction with the borrower. Foreclosed assets are reported in other assets on the Consolidated balance sheets and initially recognized at fair value less estimated costs to sell. Each quarter the fair value of the acquired property is reviewed and adjusted, if necessary, to the lower of cost or fair value. Subsequent adjustments to fair value are charged/credited to noninterest revenue. Operating expense, such as real estate taxes and maintenance, are charged to other expense.

## Notes to consolidated financial statements

## Loan portfolio

The Firm's loan portfolio is divided into three portfolio segments, which are the same segments used by the Firm to determine the allowance for Ioan losses: Consumer, excluding credit card; Credit card; and Wholesale. Within each portfolio segment the Firm monitors and assesses the credit risk in the following classes of loans, based on the risk characteristics of each loan class.

| Consumer, excluding <br> credit card |
| :---: |
| - Residential real estate ${ }^{(\mathrm{a})}$ |
| - Auto and other ${ }^{(b)}$ |


| Credit card |
| :---: |
| • Credit card loans |
|  |


| Wholesale |
| :--- |
| (c)(d) |
| - Secured by real estate |
| - Commercial and industrial |
| - Other ${ }^{(e)}$ |

(a) Includes scored mortgage and home equity loans held in CCB and AWM, and scored mortgage loans held in CIB and Corporate.
(b) Includes scored auto and business banking loans and overdrafts.
(c) Includes loans held in CIB, CB, AWM, Corporate, as well as risk-rated BWM and auto dealer loans held in CCB, for which the wholesale methodology is applied when determining the allowance for loan losses.
(d) The wholesale portfolio segment's classes align with loan classifications as defined by the bank regulatory agencies, based on the loan's collateral, purpose, and type of borrower.
(e) Includes loans to financial institutions, states and political subdivisions, SPEs, nonprofits, personal investment companies and trusts, as well as loans to individuals and individual entities (predominantly Global Private Bank clients within AWM and J.P. Morgan Wealth Management within CCB). Refer to Note 14 for more information on SPEs.

The following tables summarize the Firm's loan balances by portfolio segment.

| December 31, 2022 (in millions) | Consumer, excluding credit card |  | Credit card |  | Wholesale |  | Total ${ }^{(\mathrm{a})(\mathrm{b})}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Retained | \$ | 300,753 | \$ | 185,175 | \$ | 603,670 | \$ 1,089,598 |
| Held-for-sale |  | 618 |  | - |  | 3,352 | 3,970 |
| At fair value |  | 10,004 |  | - |  | 32,075 | 42,079 |
| Total | \$ | 311,375 | \$ | 185,175 | \$ | 639,097 | \$ 1,135,647 |
| December 31, 2021 (in millions) | Consumer, excluding credit card |  | Credit card |  | Wholesale |  | Total ${ }^{(a)(\text { b })}$ |
| Retained | \$ | 295,556 | \$ | 154,296 | \$ | 560,354 | \$ 1,010,206 |
| Held-for-sale |  | 1,287 |  | - |  | 7,401 | 8,688 |
| At fair value |  | 26,463 |  | - |  | 32,357 | 58,820 |
| Total | \$ | 323,306 | \$ | 154,296 | \$ | 600,112 | \$ 1,077,714 |

(a) Excludes $\$ 5.2$ billion and $\$ 2.7$ billion of accrued interest receivable at December 31, 2022 and 2021, respectively. The Firm wrote off accrued interest receivable of $\$ 39$ million and $\$ 56$ million for the years ended December 31, 2022 and 2021, respectively.
(b) Loans (other than those for which the fair value option has been elected) are presented net of unamortized discounts and premiums and net deferred loan fees or costs. These amounts were not material as of December 31, 2022 and 2021.
The following tables provide information about the carrying value of retained loans purchased, sold and reclassified to held-for-sale during the periods indicated. Loans that were reclassified to held-for-sale and sold in a subsequent period are excluded from the sales line of this table.

| Year ended December 31, (in millions) | 2022 |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Consumer, excluding credit card |  |  | Credit card |  | Wholesale |  | Total |  |
| Purchases | \$ | 1,625 | (b)(c) | \$ | - | \$ | 1,088 | \$ | 2,713 |
| Sales |  | 2,884 |  |  | - |  | 41,934 |  | 44,818 |
| Retained loans reclassified to held-for-sale ${ }^{(a)}$ |  | 229 |  |  | - |  | 1,055 |  | 1,284 |
|  | 2021 |  |  |  |  |  |  |  |  |
| Year ended December 31, (in millions) | Consumer, excluding credit card |  |  | Credit card |  | Wholesale |  | Total |  |
| Purchases | \$ | 515 |  | \$ | - | \$ | 1,122 | \$ | 1,637 |
| Sales |  | 799 |  |  | - |  | 31,022 |  | 31,821 |
| Retained loans reclassified to held-for-sale ${ }^{(a)}$ |  | 1,225 |  |  | - |  | 2,178 |  | 3,403 |


| Year ended December 31, (in millions) | 2020 |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Consumer, excluding credit card |  |  | Credit card |  | Wholesale |  | Total |  |
| Purchases | \$ | 3,474 | ${ }^{\text {(b)(c) }}$ | \$ | - | \$ | 1,159 | \$ | 4,633 |
| Sales |  | 352 |  |  | - |  | 17,916 |  | 18,268 |
| Retained loans reclassified to held-for-sale ${ }^{(2)}$ |  | 2,084 |  |  | 787 |  | 1,580 |  | 4,451 |

(a) Reclassifications of loans to held-for-sale are non-cash transactions.
(b) Predominantly includes purchases of residential real estate loans, including the Firm's voluntary repurchases of certain delinquent loans from loan pools as permitted by Government National Mortgage Association ("Ginnie Mae") guidelines for the years ended December 31, 2022 , 2021 and 2020 . The Firm typically elects to repurchase these delinquent loans as it continues to service them and/or manage the foreclosure process in accordance with applicable requirements of Ginnie Mae, FHA, RHS, and/or VA.
(c) Excludes purchases of retained loans of $\$ 12.4$ billion, $\$ 25.8$ billion and $\$ 16.3$ billion for the years ended December 31, 2022, 2021 and 2020, respectively, which are predominantly sourced through the correspondent origination channel and underwritten in accordance with the Firm's standards. The amount of purchases of retained loans at December 31, 2020 has been revised to conform with the current presentation.

Gains and losses on sales of loans
Net gains/(losses) on sales of loans and lending-related commitments (including adjustments to record loans and lendingrelated commitments held-for-sale at the lower of cost or fair value) recognized in noninterest revenue was $\$(186)$ million for the year ended December 31, 2022 of which $\$(48)$ million was related to loans. Net gains/(losses) on sales of loans and lending-related commitments was $\$ 261$ million for the year ended December 31, 2021 of which $\$ 253$ million was related to loans. Net losses on sales of loans was $\$$ (36) million for the year ended December 31, 2020. In addition, the sale of loans may also result in write downs, recoveries or changes in the allowance recognized in the provision for credit losses.

## Notes to consolidated financial statements

## Consumer, excluding credit card loan portfolio

Consumer loans, excluding credit card loans, consist primarily of scored residential mortgages, home equity loans and lines of credit, auto and business banking loans, with a focus on serving the prime consumer credit market. The portfolio also includes home equity loans secured by junior liens, prime mortgage loans with an interest-only payment period, and certain payment-option loans that may result in negative amortization.

The following table provides information about retained consumer loans, excluding credit card, by class.

| December 31, (in millions) | 2022 | 2021 |  |
| :--- | ---: | ---: | ---: |
| Residential real estate | $\$ 237,561$ | $\$$ | 224,795 |
| Auto and other $^{(\mathrm{a})}$ | $\mathbf{6 3 , 1 9 2}$ | 70,761 |  |
| Total retained loans | $\$ 300,753$ | $\$$ | 295,556 |

(a) At December 31, 2022 and 2021, included $\$ 350$ million and $\$ 5.4$ billion of loans, respectively, in Business Banking under the PPP.

Delinquency rates are the primary credit quality indicator for consumer loans. Loans that are more than 30 days past due provide an early warning of borrowers who may be experiencing financial difficulties and/or who may be unable or unwilling to repay the loan. As the loan continues to age, it becomes more clear whether the borrower is likely to be unable or unwilling to pay. In the case of residential real estate loans, late-stage delinquencies (greater than 150 days past due) are a strong indicator of loans that will ultimately result in a foreclosure or similar liquidation transaction. In addition to delinquency rates, other credit quality indicators for consumer loans vary based on the class of loan, as follows:

- For residential real estate loans, the current estimated LTV ratio, or the combined LTV ratio in the case of junior lien loans, is an indicator of the potential loss severity in the event of default. Additionally, LTV or combined LTV ratios can provide insight into a borrower's continued willingness to pay, as the delinquency rate of high-LTV loans tends to be greater than that for loans where the borrower has equity in the collateral. The geographic distribution of the loan collateral also provides insight as to the credit quality of the portfolio, as factors such as the regional economy, home price changes and specific events such as natural disasters, will affect credit quality. The borrower's current or "refreshed" FICO score is a secondary credit quality indicator for certain loans, as FICO scores are an indication of the borrower's credit payment history. Thus, a Ioan to a borrower with a low FICO score (less than 660) is considered to be of higher risk than a loan to a borrower with a higher FICO score. Further, a loan to a borrower with a high LTV ratio and a low FICO score is at greater risk of default than a loan to a borrower that has both a high LTV ratio and a high FICO score.
- For scored auto and business banking loans, geographic distribution is an indicator of the credit performance of the portfolio. Similar to residential real estate loans, geographic distribution provides insights into the portfolio performance based on regional economic activity and events.


## Residential real estate

The following tables provide information on delinquency, which is the primary credit quality indicator for retained residential real estate loans.

(a) Individual delinquency classifications include mortgage loans insured by U.S. government agencies which were not material at December 31, 2022 and 2021.
(b) At December 31, 2022 and 2021, loans under payment deferral programs offered in response to the COVID-19 pandemic which are still within their deferral period and performing according to their modified terms are generally not considered delinquent.
(c) Excludes mortgage loans that are 30 or more days past due insured by U.S. government agencies which were not material at December 31, 2022 and 2021. These amounts have been excluded based upon the government guarantee.
(d) Purchased loans are included in the year in which they were originated.

Approximately $37 \%$ of the total revolving loans are senior lien loans; the remaining balance are junior lien loans. The lien position the Firm holds is considered in the Firm's allowance for credit losses. Revolving loans that have been converted to term loans have higher delinquency rates than those that are still within the revolving period. That is primarily because the fully-amortizing payment that is generally required for those products is higher than the minimum payment options available for revolving loans within the revolving period.

## Notes to consolidated financial statements

## Nonaccrual Ioans and other credit quality indicators

The following table provides information on nonaccrual and other credit quality indicators for retained residential real estate loans.

| (in millions, except weighted-average data) | December 31, 2022 |  | December 31, 2021 |  |
| :---: | :---: | :---: | :---: | :---: |
| Nonaccrual loans ${ }^{(\mathrm{a})(\mathrm{b})(\mathrm{c})(\mathrm{d})(\mathrm{e})}$ | \$ | 3,745 | \$ | 4,759 |
| Current estimated LTV ratios ${ }^{(f)(\mathrm{g})(\mathrm{h})}$ |  |  |  |  |
| Greater than 125\% and refreshed FICO scores: |  |  |  |  |
| Equal to or greater than 660 | \$ | 2 | \$ | 2 |
| Less than 660 |  | - |  | 2 |
| 101\% to $125 \%$ and refreshed FICO scores: |  |  |  |  |
| Equal to or greater than 660 |  | 174 |  | 37 |
| Less than 660 |  | 6 |  | 15 |
| 80\% to 100\% and refreshed FICO scores: |  |  |  |  |
| Equal to or greater than 660 |  | 12,034 |  | 2,701 |
| Less than 660 |  | 184 |  | 89 |
| Less than 80\% and refreshed FICO scores: |  |  |  |  |
| Equal to or greater than 660 |  | 215,096 |  | 209,295 |
| Less than 660 |  | 8,659 |  | 9,658 |
| No FICO/LTV available |  | 1,360 |  | 2,930 |
| U.S. government-guaranteed |  | 46 |  | 66 |
| Total retained loans | \$ | 237,561 | \$ | 224,795 |
| Weighted average LTV ratio ${ }^{(f)(\text { (i) }}$ |  | 51 \% |  | 50 \% |
| Weighted average FICO ${ }^{(\mathrm{g})(\mathrm{i})}$ |  | 769 |  | 765 |
| Geographic region ${ }^{(\mathrm{j})}$ |  |  |  |  |
| California | \$ | 73,111 | \$ | 71,383 |
| New York |  | 34,469 |  | 32,545 |
| Florida |  | 18,868 |  | 16,182 |
| Texas |  | 14,961 |  | 13,865 |
| Illinois |  | 11,293 |  | 11,565 |
| Colorado |  | 9,968 |  | 8,885 |
| Washington |  | 9,059 |  | 8,292 |
| New Jersey |  | 7,106 |  | 6,832 |
| Massachusetts |  | 6,379 |  | 6,105 |
| Connecticut |  | 5,432 |  | 5,242 |
| All other |  | 46,915 |  | 43,899 |
| Total retained loans | \$ | 237,561 | \$ | 224,795 |

(a) Includes collateral-dependent residential real estate loans that are charged down to the fair value of the underlying collateral less costs to sell. The Firm reports, in accordance with regulatory guidance, residential real estate loans that have been discharged under Chapter 7 bankruptcy and not reaffirmed by the borrower ("Chapter 7 loans") as collateral-dependent nonaccrual TDRs, regardless of their delinquency status. At December 31, 2022, approximately $5 \%$ of Chapter 7 residential real estate loans were 30 days or more past due.
(b) Nonaccrual loans exclude mortgage loans insured by U.S. government agencies which were not material at December 31, 2022 and 2021.
(c) Generally, all consumer nonaccrual loans have an allowance. In accordance with regulatory guidance, certain nonaccrual loans that are considered collateral-dependent have been charged down to the lower of amortized cost or the fair value of their underlying collateral less costs to sell. If the value of the underlying collateral improves subsequent to charge down, the related allowance may be negative.
(d) Interest income on nonaccrual loans recognized on a cash basis was $\$ 175$ million and $\$ 172$ million for the years ended December 31, 2022 and 2021, respectively.
(e) Generally excludes loans under payment deferral programs offered in response to the COVID-19 pandemic.
(f) Represents the aggregate unpaid principal balance of loans divided by the estimated current property value. Current property values are estimated, at a minimum, quarterly, based on home valuation models using nationally recognized home price index valuation estimates incorporating actual data to the extent available and forecasted data where actual data is not available. Current estimated combined LTV for junior lien home equity loans considers all available lien positions, as well as unused lines, related to the property.
(g) Refreshed FICO scores represent each borrower's most recent credit score, which is obtained by the Firm on at least a quarterly basis.
(h) Includes residential real estate loans, primarily held in LLCS in AWM that did not have a refreshed FICO score. These loans have been included in a FICO band based on management's estimation of the borrower's credit quality.
(i) Excludes loans with no FICO and/or LTV data available.
(j) The geographic regions presented in the table are ordered based on the magnitude of the corresponding loan balances at December 31, 2022.

## Loan modifications

Modifications of residential real estate loans, where the Firm grants concessions to borrowers who are experiencing financial difficulty are generally accounted for and reported as TDRs. Loans with short-term or other insignificant modifications that are not considered concessions are not TDRs. The carrying value of new TDRs was $\$ 362$ million, $\$ 866$ million and $\$ 819$ million for the years ended December 31, 2022, 2021 and 2020, respectively. There were no additional commitments to lend to borrowers whose residential real estate loans have been modified in TDRs.

## Nature and extent of modifications

The Firm's proprietary modification programs as well as government programs, including U.S. GSE programs, generally provide various concessions to financially troubled borrowers including, but not limited to, interest rate reductions, term or payment extensions and delays of principal and/or interest payments that would otherwise have been required under the terms of the original agreement. The following table provides information about how residential real estate loans were modified in TDRs under the Firm's loss mitigation programs described above during the periods presented. This table excludes Chapter 7 loans where the sole concession granted is the discharge of debt and loans with short-term or other insignificant modifications that are not considered concessions.

| Year ended December 31, | 2022 | 2021 | 2020 |
| :---: | :---: | :---: | :---: |
| Number of loans approved for a trial modification | 3,902 | 6,246 | 5,522 |
| Number of loans permanently modified | 4,182 | 4,588 | 6,850 |
| Concession granted: ${ }^{(a)}$ |  |  |  |
| Interest rate reduction | 54 \% | 74 \% | 50 \% |
| Term or payment extension | 67 | 53 | 49 |
| Principal and/or interest deferred | 10 | 23 | 14 |
| Principal forgiveness | 1 | 2 | 2 |
| Other ${ }^{(b)}$ | 37 | 36 | 66 |

(a) Represents concessions granted in permanent modifications as a percentage of the number of loans permanently modified. The sum of the percentages exceeds $100 \%$ because predominantly all of the modifications include more than one type of concession. Concessions offered on trial modifications are generally consistent with those granted on permanent modifications.
(b) Includes variable interest rate to fixed interest rate modifications and payment delays that meet the definition of a TDR.

## Financial effects of modifications and redefaults

The following table provides information about the financial effects of the various concessions granted in modifications of residential real estate loans under the loss mitigation programs described above and about redefaults of certain loans modified in TDRs for the periods presented. The following table presents only the financial effects of permanent modifications and do not include temporary concessions offered through trial modifications. This table also excludes Chapter 7 loans where the sole concession granted is the discharge of debt and loans with short-term or other insignificant modifications that are not considered concessions.

| Year ended December 31, (in millions, except weighted - average data) |  | 2022 |  | 2021 |  | 2020 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Weighted-average interest rate of loans with interest rate reductions - before TDR |  | 4.75 \% |  | 4.54 \% |  | 5.09 \% |
| Weighted-average interest rate of loans with interest rate reductions - after TDR |  | 3.35 |  | 2.92 |  | 3.28 |
| Weighted-average remaining contractual term (in years) of loans with term or payment extensions - before TDR |  | 22 |  | 23 |  | 22 |
| Weighted-average remaining contractual term (in years) of loans with term or payment extensions - after TDR |  | 38 |  | 38 |  | 39 |
| Charge-offs recognized upon permanent modification | \$ | 1 | \$ | - | \$ | 5 |
| Principal deferred |  | 16 |  | 28 |  | 16 |
| Principal forgiven |  | 2 |  | 1 |  | 5 |
| Balance of loans that redefaulted within one year of permanent modification ${ }^{(\mathrm{a})}$ | \$ | 147 | \$ | 160 | \$ | 199 |

(a) Represents loans permanently modified in TDRs that experienced a payment default in the periods presented, and for which the payment default occurred within one year of the modification. The dollar amounts presented represent the balance of such loans at the end of the reporting period in which such loans defaulted. For residential real estate loans modified in TDRs, payment default is deemed to occur when the loan becomes two contractual payments past due. In the event that a modified loan redefaults, it will generally be liquidated through foreclosure or another similar type of liquidation transaction. Redefaults of loans modified within the last twelve months may not be representative of ultimate redefault levels.

At December 31, 2022, the weighted-average estimated remaining lives of residential real estate loans permanently modified in TDRs were six years. The estimated remaining lives of these loans reflect estimated prepayments, both voluntary and involuntary (i.e., foreclosures and other forced liquidations).

## Notes to consolidated financial statements

## Active and suspended foreclosure

At December 31, 2022 and 2021, the Firm had residential real estate loans, excluding those insured by U.S. government agencies, with a carrying value of $\$ 565$ million and $\$ 619$ million, respectively, that were not included in REO, but were in the process of active or suspended foreclosure.

## Auto and other

The following tables provide information on delinquency, which is the primary credit quality indicator for retained auto and other consumer loans.

(a) At December 31, 2022 and 2021, auto and other loans excluded $\$ 153$ million and $\$ 667$ million, respectively, of PPP loans guaranteed by the SBA that are 30 or more days past due. These amounts have been excluded based upon the SBA guarantee.
(b) Includes $\$ 252$ million of loans originated in 2021 and $\$ 98$ million of loans originated in 2020 in Business Banking under the PPP. PPP loans are guaranteed by the SBA. Other than in certain limited circumstances, the Firm typically does not recognize charge-offs, classify as nonaccrual nor record an allowance for loan losses on these loans.
(c) Includes $\$ 4.4$ billion of loans originated in 2021 and $\$ 1.0$ billion of loans originated in 2020 in Business Banking under the PPP.
(d) Prior-period amount has been revised to conform with the current presentation.

## Nonaccrual and other credit quality indicators

The following table provides information on nonaccrual and other credit quality indicators for retained auto and other consumer loans.

| (in millions) | Total Auto and other |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | $\begin{array}{r} \text { December } \\ 31,2022 \\ \hline \end{array}$ |  | $\begin{array}{r} \text { December } \\ 31,2021 \\ \hline \end{array}$ |  |
| Nonaccrual loans ${ }^{(\mathrm{a})(\mathrm{b})(\mathrm{c})}$ | \$ | 129 | \$ | 119 |
| Geographic region ${ }^{(d)}$ |  |  |  |  |
| California | \$ | 9,689 | \$ | 11,163 |
| Texas |  | 7,216 |  | 7,859 |
| Florida |  | 4,847 |  | 4,901 |
| New York |  | 4,345 |  | 5,848 |
| Illinois |  | 2,839 |  | 2,930 |
| New Jersey |  | 2,219 |  | 2,355 |
| Pennsylvania |  | 1,822 |  | 2,004 |
| Georgia |  | 1,708 |  | 1,748 |
| Ohio |  | 1,603 |  | 1,843 |
| Louisiana |  | 1,576 |  | 1,801 |
| All other |  | 25,328 |  | 28,309 |
| Total retained loans | \$ | 63,192 | \$ | 70,761 |

(a) At December 31, 2022 and 2021, nonaccrual loans excluded $\$ 101$ million and $\$ 506$ million, respectively, of PPP loans 90 or more days past due and guaranteed by the SBA, of which $\$ 76$ million and $\$ 35$ million, respectively, were no longer accruing interest based on the guidelines set by the SBA. Typically the principal balance of the loans is insured and interest is guaranteed at a specified reimbursement rate subject to meeting the guidelines set by the SBA. There were no loans that were not guaranteed by the SBA that are 90 or more days past due and still accruing interest at December 31, 2022 and 2021.
(b) Generally, all consumer nonaccrual loans have an allowance. In accordance with regulatory guidance, certain nonaccrual loans that are considered collateral-dependent have been charged down to the lower of amortized cost or the fair value of their underlying collateral less costs to sell. If the value of the underlying collateral improves subsequent to charge down, the related allowance may be negative.
(c) Interest income on nonaccrual loans recognized on a cash basis was not material for the years ended December 31, 2022 and 2021.
(d) The geographic regions presented in this table are ordered based on the magnitude of the corresponding loan balances at December 31, 2022.

## Loan modifications

Certain auto and other loan modifications are considered to be TDRs as they provide various concessions to borrowers who are experiencing financial difficulty. Loans with short-term or other insignificant modifications that are not considered concessions are not TDRs.

The impact of these modifications, as well as new TDRs, were not material to the Firm for the years ended December 31, 2022, 2021 and 2020. Additional commitments to lend to borrowers whose loans have been modified in TDRs as of December 31, 2022 and 2021 were not material.

## Notes to consolidated financial statements

## Credit card loan portfolio

The credit card portfolio segment includes credit card loans originated and purchased by the Firm. Delinquency rates are the primary credit quality indicator for credit card loans as they provide an early warning that borrowers may be experiencing difficulties ( 30 days past due); information on those borrowers that have been delinquent for a longer period of time ( 90 days past due) is also considered. In addition to delinquency rates, the geographic distribution of the loans provides insight as to the credit quality of the portfolio based on the regional economy.

While the borrower's credit score is another general indicator of credit quality, the Firm does not view credit scores as a primary indicator of credit quality because the borrower's credit score tends to be a lagging indicator. The
distribution of such scores provides a general indicator of credit quality trends within the portfolio; however, the score does not capture all factors that would be predictive of future credit performance. Refreshed FICO score information, which is obtained at least quarterly, for a statistically significant random sample of the credit card portfolio is indicated in the following table. FICO is considered to be the industry benchmark for credit scores.

The Firm generally originates new credit card accounts to prime consumer borrowers. However, certain cardholders' FICO scores may decrease over time, depending on the performance of the cardholder and changes in the credit score calculation.

The following tables provide information on delinquency, which is the primary credit quality indicator for retained credit card loans.

| (in millions, except ratios) | December 31, 2022 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Within the revolving period |  | Converted to term loans ${ }^{\text {(a) }}$ |  | Total |  |
| Loan delinquency |  |  |  |  |  |  |
| Current and less than 30 days past due and still accruing | \$ | 181,793 | \$ | 696 | \$ | 182,489 |
| 30-89 days past due and still accruing |  | 1,356 |  | 64 |  | 1,420 |
| 90 or more days past due and still accruing |  | 1,230 |  | 36 |  | 1,266 |
| Total retained loans | \$ | 184,379 | \$ | 796 | \$ | 185,175 |
| Loan delinquency ratios |  |  |  |  |  |  |
| \% of 30+ days past due to total retained loans |  | $1.40 \%$ |  | 12.56 |  | 1.45 \% |
| \% of $90+$ days past due to total retained loans |  | 0.67 |  | 4.52 |  | 0.68 |
| (in millions, except ratios) | December 31, 2021 |  |  |  |  |  |
|  |  | ving period |  | loans ${ }^{\text {(a) }}$ |  |  |
| Loan delinquency |  |  |  |  |  |  |
| Current and less than 30 days past due and still accruing | \$ | 151,798 | \$ | 901 | \$ | 152,699 |
| 30-89 days past due and still accruing |  | 770 |  | 59 |  | 829 |
| 90 or more days past due and still accruing |  | 741 |  | 27 |  | 768 |
| Total retained loans | \$ | 153,309 | \$ | 987 | \$ | 154,296 |
| Loan delinquency ratios |  |  |  |  |  |  |
| \% of 30+ days past due to total retained loans |  | 0.99 \% |  | 8.71 |  | 1.04 \% |
| \% of $90+$ days past due to total retained loans |  | 0.48 |  | 2.74 |  | 0.50 |

[^139]Other credit quality indicators
The following table provides information on other credit quality indicators for retained credit card loans.

| (in millions, except ratios) | December 31, 2022 |  | December 31, 2021 |  |
| :---: | :---: | :---: | :---: | :---: |
| Geographic region ${ }^{(\mathrm{a})}$ |  |  |  |  |
| California | \$ | 28,154 | \$ | 23,030 |
| Texas |  | 19,171 |  | 15,879 |
| New York |  | 15,046 |  | 12,652 |
| Florida |  | 12,905 |  | 10,412 |
| Illinois |  | 10,089 |  | 8,530 |
| New Jersey |  | 7,643 |  | 6,367 |
| Ohio |  | 5,792 |  | 4,923 |
| Pennsylvania |  | 5,517 |  | 4,708 |
| Colorado |  | 5,493 |  | 4,573 |
| Arizona |  | 4,487 |  | 3,668 |
| All other |  | 70,878 |  | 59,554 |
| Total retained loans | \$ | 185,175 | \$ | 154,296 |
| Percentage of portfolio based on carrying value with estimated refreshed FICO scores |  |  |  |  |
| Equal to or greater than 660 |  | 86.8 \% |  | 88.5 \% |
| Less than 660 |  | 13.0 |  | 11.3 |
| No FICO available |  | 0.2 |  | 0.2 |

(a) The geographic regions presented in the table are ordered based on the magnitude of the corresponding loan balances at December $31,2022$.

## Loan modifications

The Firm may offer Ioan modification programs granting concessions to credit card borrowers who are experiencing financial difficulty. The Firm grants concessions for most of the credit card loans under long-term programs. These modifications involve placing the customer on a fixed payment plan, generally for 60 months, and typically include reducing the interest rate on the credit card. Substantially all modifications under the Firm's long-term programs are considered to be TDRs. Loans with short-term or other insignificant modifications that are not considered concessions are not TDRs.

If the cardholder does not comply with the modified payment terms, then the credit card loan continues to age and will ultimately be charged-off in accordance with the Firm's standard charge-off policy. In most cases, the Firm does not reinstate the borrower's line of credit.

## Financial effects of modifications and redefaults

The following table provides information about the financial effects of the concessions granted on credit card loans modified in TDRs and redefaults for the periods presented. For all periods disclosed, new enrollments were less than $1 \%$ of total retained credit card loans.

| Year ended December 31, (in millions, except weighted-average data) |  | 2022 |  | 2021 |  | 2020 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Balance of new TDRs ${ }^{(a)}$ | \$ | 418 | \$ | 393 | \$ | 818 |
| Weighted-average interest rate of loans - before TDR |  | 19.86 \% |  | 17.75 \% |  | 18.04 \% |
| Weighted-average interest rate of loans - after TDR |  | 4.13 |  | 5.14 |  | 4.64 |
| Balance of loans that redefaulted within one year of modification ${ }^{(b)}$ | \$ | 34 | \$ | 57 | \$ | 110 |

(a) Represents the outstanding balance prior to modification.
(b) Represents loans modified in TDRs that experienced a payment default in the periods presented, and for which the payment default occurred within one year of the modification. The amounts presented represent the balance of such loans as of the end of the quarter in which they defaulted.
For credit card loans modified in TDRs, payment default is deemed to have occurred when the borrower misses two consecutive contractual payments. Defaulted modified credit card loans remain in the modification program and continue to be charged off in accordance with the Firm's standard charge-off policy.

## Notes to consolidated financial statements

## Wholesale loan portfolio

Wholesale loans include loans made to a variety of clients, ranging from large corporate and institutional clients to high-net-worth individuals.

The primary credit quality indicator for wholesale loans is the internal risk rating assigned to each loan. Risk ratings are used to identify the credit quality of loans and differentiate risk within the portfolio. Risk ratings on loans consider the PD and the LGD. The PD is the likelihood that a loan will default. The LGD is the estimated loss on the loan that would be realized upon the default of the borrower and takes into consideration collateral and structural support for each credit facility.

Management considers several factors to determine an appropriate internal risk rating, including the obligor's debt capacity and financial flexibility, the level of the obligor's earnings, the amount and sources for repayment, the level and nature of contingencies, management strength, and the industry and geography in which the obligor operates. The Firm's internal risk ratings generally align with the qualitative characteristics (e.g., borrower capacity to meet financial commitments and vulnerability to changes in the economic environment) defined by S\&P and Moody's, however the quantitative characteristics (e.g., PD and LGD) may differ as they reflect internal historical experiences and assumptions. The Firm generally considers internal ratings with qualitative characteristics equivalent to BBB-/Baa3 or higher as investment grade, and these ratings have a lower PD and/or lower LGD than non-investment grade ratings.

Noninvestment-grade ratings are further classified as noncriticized and criticized, and the criticized portion is further subdivided into performing and nonaccrual loans, representing management's assessment of the collectibility of principal and interest. Criticized loans have a higher PD than noncriticized loans. The Firm's definition of criticized aligns with the U.S. banking regulatory definition of criticized exposures, which consist of special mention, substandard and doubtful categories.

Risk ratings are reviewed on a regular and ongoing basis by Credit Risk Management and are adjusted as necessary for updated information affecting the obligor's ability to fulfill its obligations.

As noted above, the risk rating of a loan considers the industry in which the obligor conducts its operations. As part of the overall credit risk management framework, the Firm focuses on the management and diversification of its industry and client exposures, with particular attention paid to industries with an actual or potential credit concern. Refer to Note 4 for further detail on industry concentrations.

The following tables provide information on internal risk rating, which is the primary credit quality indicator for retained wholesale loans.

| December 31, (in millions, except ratios) | Secured by real estate |  |  |  | Commercial and industrial |  |  |  | Other ${ }^{(b)}$ |  |  |  | Total retained loans |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2022 |  | 2021 |  | 2022 |  | 2021 |  | 2022 |  | 2021 |  | 2022 |  | 2021 |  |
| Loans by risk ratings |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Investment-grade | \$ | 99,552 | \$ | 92,369 | \$ | 76,275 | \$ | 75,783 | \$ | 249,585 | \$ | 241,859 | \$ | 425,412 | \$ | 410,011 |
| Noninvestment- grade: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Noncriticized |  | 23,272 |  | 22,495 |  | 81,393 |  | 62,039 |  | 57,888 |  | 52,440 |  | 162,553 |  | 136,974 |
| Criticized performing |  | 3,662 |  | 3,645 |  | 8,974 |  | 6,900 |  | 1,106 |  | 770 |  | 13,742 |  | 11,315 |
| Criticized nonaccrual ${ }^{(a)}$ |  | 246 |  | 326 |  | 1,018 |  | 969 |  | 699 |  | 759 |  | 1,963 |  | 2,054 |
| Total noninvestment-grade |  | 27,180 |  | 26,466 |  | 91,385 |  | 69,908 |  | 59,693 |  | 53,969 |  | 178,258 |  | 150,343 |
| Total retained loans | \$ | 126,732 | \$ | 118,835 | \$ | 167,660 | \$ | 145,691 | \$ | 309,278 | \$ | 295,828 | \$ | 603,670 | \$ | 560,354 |
| \% of investment-grade to total retained loans |  | 78.55 \% |  | 77.73 \% |  | 45.49 \% |  | 52.02 \% |  | 80.70 \% |  | 81.76 \% |  | 70.47 \% |  | 73.17 \% |
| \% of total criticized to total retained loans |  | 3.08 |  | 3.34 |  | 5.96 |  | 5.40 |  | 0.58 |  | 0.52 |  | 2.60 |  | 2.39 |
| \% of criticized nonaccrual to total retained loans |  | 0.19 |  | 0.27 |  | 0.61 |  | 0.67 |  | 0.23 |  | 0.26 |  | 0.33 |  | 0.37 |

(a) At December 31, 2021 nonaccrual loans excluded $\$ 127$ million of PPP loans 90 or more days past due and guaranteed by the SBA, predominantly in commercial and industrial. At December 31, 2022 the amount excluded was not material.
(b) Includes loans to financial institutions, states and political subdivisions, SPEs, nonprofits, personal investment companies and trusts, as well as loans to individuals and individual entities (predominantly Global Private Bank clients within AWM and J.P. Morgan Wealth Management within CCB). Refer to Note 14 for more information on SPEs.

| (in millions) | Secured by real estate <br> December 31, 2022 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Term loans by origination year |  |  |  |  |  |  |  |  |  |  |  | Revolving loans |  |  |  | Total |  |
|  | 2022 |  | 2021 |  | 2020 |  | 2019 |  | 2018 |  | Prior to 2018 |  | Within the revolving period |  | Converted to term loans |  |  |  |
| Loans by risk ratings |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Investment-grade | \$ | 24,134 | \$ | 22,407 | \$ | 14,773 | \$ | 14,666 | \$ | 5,277 | \$ | 17,289 | \$ | 1,006 | \$ | - | \$ | 99,552 |
| Noninvestment-grade |  | 6,072 |  | 5,602 |  | 3,032 |  | 3,498 |  | 2,395 |  | 5,659 |  | 920 |  | 2 |  | 27,180 |
| Total retained loans | \$ | 30,206 | \$ | 28,009 | \$ | 17,805 | \$ | 18,164 | \$ | 7,672 | \$ | 22,948 | \$ | 1,926 | \$ | 2 | \$ | 126,732 |
|  | Secured by real estate |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | December 31, 2021 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Term loans by origination year |  |  |  |  |  |  |  |  |  |  |  | Revolving loans |  |  |  | Total |  |
| (in millions) | 2021 |  |  | 2020 | 2019 |  | 2018 |  | 2017 |  | Prior to 2017 |  | Within the revolving period |  | Converted to term loans |  |  |  |
| Loans by risk ratings |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Investment-grade | \$ | 23,346 | \$ | 16,030 | \$ | 17,265 | \$ | 8,103 | \$ | 7,325 | \$ | 19,066 | \$ | 1,226 | \$ | 8 | \$ | 92,369 |
| Noninvestment-grade |  | 5,364 |  | 3,826 |  | 4,564 |  | 3,806 |  | 2,834 |  | 5,613 |  | 458 |  | 1 |  | 26,466 |
| Total retained loans | \$ | 28,710 | \$ | 19,856 | \$ | 21,829 | \$ | 11,909 | \$ | 10,159 | \$ | 24,679 | \$ | 1,684 | \$ | 9 | \$ | 118,835 |

## Notes to consolidated financial statements


(a) At December 31, 2022, $\$ 139$ million of the $\$ 140$ million total PPP loans in the wholesale portfolio were commercial and industrial. Of the $\$ 139$ million, $\$ 58$ million were originated in 2021, and $\$ 81$ million were originated in 2020. PPP loans are guaranteed by the SBA and considered investment-grade. Other than in certain limited circumstances, the Firm typically does not recognize charge-offs, classify as nonaccrual nor record an allowance for loan losses on these loans.
(b) At December 31, 2021, $\$ 1.1$ billion of the $\$ 1.3$ billion total PPP loans in the wholesale portfolio were commercial and industrial. Of the $\$ 1.1$ billion, $\$ 698$ million were originated in 2021 and $\$ 396$ million were originated in 2020.

| (in millions) | Other ${ }^{(a)}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | December 31, 2022 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Term loans by origination year |  |  |  |  |  |  |  |  |  |  |  | Revolving loans |  |  |  | Total |  |
|  | 2022 |  | 2021 |  | 2020 |  | 2019 |  | 2018 |  | Prior to 2018 |  | Within the revolving period |  | Converted to term loans |  |  |  |
| Loans by risk ratings |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Investment-grade | \$ | 32,121 | \$ | 15,864 | \$ | 13,015 | \$ | 4,529 | \$ | 2,159 | \$ | 7,251 | \$ | 171,049 | \$ | 3,597 | \$ | 249,585 |
| Noninvestment-grade |  | 16,829 |  | 7,096 |  | 1,821 |  | 699 |  | 451 |  | 475 |  | 32,240 |  | 82 |  | 59,693 |
| Total retained loans | \$ | 48,950 | \$ | 22,960 | \$ | 14,836 | \$ | 5,228 | \$ | 2,610 | \$ | 7,726 | \$ | 203,289 | \$ | 3,679 | \$ | 309,278 |
|  | Other ${ }^{(a)}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | December 31, 2021 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Term loans by origination year |  |  |  |  |  |  |  |  |  |  |  | Revolving loans |  |  |  |  |  |
| (in millions) | 2021 |  | 2020 |  | 2019 |  | 2018 |  | 2017 |  | Prior to 2017 |  | Within the revolving period |  | Converted to term loans |  | Total |  |
| Loans by risk ratings |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Investment-grade | \$ | 26,782 | \$ | 17,829 | \$ | 6,125 | \$ | 2,885 | \$ | 3,868 |  | 7,651 | \$ | 176,118 | \$ | 601 | \$ | 241,85953,969 |
| Noninvestment-grade |  | 16,905 |  | 2,399 |  | 1,455 |  | 935 |  | 218 | \$ | 467 | 31,585 |  |  | 5 |  |  |
| Total retained loans | \$ | 43,687 | \$ | 20,228 | \$ | 7,580 | \$ | 3,820 | \$ | 4,086 | \$ | 8,118 | \$ | 207,703 | \$ | 606 | \$ | 295,828 |

(a) Includes loans to financial institutions, states and political subdivisions, SPEs, nonprofits, personal investment companies and trusts, as well as loans to individuals and individual entities (predominantly Global Private Bank clients within AWM and J.P. Morgan Wealth Management within CCB). Refer to Note 14 for more information on SPEs.

The following table presents additional information on retained loans secured by real estate within the Wholesale portfolio, which consists of loans secured wholly or substantially by a lien or liens on real property at origination. Multifamily lending includes financing for acquisition, leasing and construction of apartment buildings. Other commercial lending largely includes financing for acquisition, leasing and construction, largely for office, retail and industrial real estate. Included in secured by real estate loans is $\$ 6.4$ billion and $\$ 5.7$ billion as of December 31, 2022 and 2021, respectively, of construction and development loans made to finance land development and on-site construction of commercial, industrial, residential, or farm buildings.

| December 31, (in millions, except ratios) | Multifamily |  |  |  | Other Commercial |  |  |  | Total retained loans secured by real estate |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2022 |  | 2021 |  | 2022 |  | 2021 |  | 2022 |  | 2021 |  |
| Retained loans secured by real estate | \$ | 79,139 | \$ | 73,801 | \$ | 47,593 | \$ | 45,034 | \$ | 126,732 | \$ | 118,835 |
| Criticized |  | 1,916 |  | 1,671 |  | 1,992 |  | 2,300 |  | 3,908 |  | 3,971 |
| \% of criticized to total retained loans secured by real estate |  | 2.42 \% |  | 2.26 \% |  | 4.19 \% |  | 5.11 \% |  | 3.08 \% |  | 3.34 \% |
| Criticized nonaccrual | \$ | 51 | \$ | 91 | \$ | 195 | \$ | 235 | \$ | 246 | \$ | 326 |
| \% of criticized nonaccrual loans to total retained loans secured by real estate |  | 0.06 \% |  | 0.12 \% |  | 0.41 \% |  | 0.52 \% |  | 0.19 \% |  | 0.27 \% |

## Geographic distribution and delinquency

The following table provides information on the geographic distribution and delinquency for retained wholesale loans.

| December 31, (in millions) | Secured by real estate |  |  |  | Commercial and industrial |  |  |  | Other |  |  |  | Total retained loans |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2022 |  | 2021 |  | 2022 |  | 2021 |  | 2022 |  | 2021 |  | 2022 |  | 2021 |  |
| Loans by geographic distribution ${ }^{(a)}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total U.S. | \$ | 123,740 | \$ | 115,732 | \$ | 125,324 | \$ | 106,449 | \$ | 230,525 | \$ | 215,750 | \$ | 479,589 | \$ | 437,931 |
| Total non-U.S. |  | 2,992 |  | 3,103 |  | 42,336 |  | 39,242 |  | 78,753 |  | 80,078 |  | 124,081 |  | 122,423 |
| Total retained loans | \$ | 126,732 | \$ | 118,835 | \$ | 167,660 | \$ | 145,691 | \$ | 309,278 | \$ | 295,828 | \$ | 603,670 | \$ | 560,354 |
| Loan delinquency |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Current and less than 30 days past due and still accruing | \$ | 126,083 | \$ | 118,163 | \$ | 165,415 | \$ | 143,459 | \$ | 307,511 | \$ | 293,358 | \$ | 599,009 | \$ | 554,980 |
| 30-89 days past due and still accruing |  | 402 |  | 331 |  | 1,127 |  | 1,193 |  | 1,015 |  | 1,590 |  | 2,544 |  | 3,114 |
| 90 or more days past due and still accruing ${ }^{(b)}$ |  | 1 |  | 15 |  | 100 |  | 70 |  | 53 |  | 121 |  | 154 |  | 206 |
| Criticized nonaccrual ${ }^{(\mathrm{c})}$ |  | 246 |  | 326 |  | 1,018 |  | 969 |  | 699 |  | 759 |  | 1,963 |  | 2,054 |
| Total retained loans | \$ | 126,732 | \$ | 118,835 | \$ | 167,660 | \$ | 145,691 | \$ | 309,278 | \$ | 295,828 | \$ | 603,670 | \$ | 560,354 |

(a) The U.S. and non-U.S. distribution is determined based predominantly on the domicile of the borrower.
(b) Represents loans that are considered well-collateralized and therefore still accruing interest.
(c) At December 31, 2021 nonaccrual loans excluded $\$ 127$ million of PPP loans 90 or more days past due and guaranteed by the SBA, predominantly in commercial and industrial. At December 31, 2022 the amount excluded was not material.

## Nonaccrual loans

The following table provides information on retained wholesale nonaccrual loans.

| December 31, (in millions) | Secured by real estate |  |  |  | Commercial and industrial |  |  |  | Other |  |  |  | Total retained loans |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2022 |  | 2021 |  | 2022 |  | 2021 |  | 2022 |  | 2021 |  | 2022 |  | 2021 |  |
| Nonaccrual loans |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| With an allowance | \$ | 172 | \$ | 254 | \$ | 686 | \$ | 604 | \$ | 487 | \$ | 286 | \$ | 1,345 | \$ | 1,144 |
| Without an allowance ${ }^{\left({ }^{(a)}\right.}$ |  | 74 |  | 72 |  | 332 |  | 365 |  | 212 |  | 473 |  | 618 |  | 910 |
| Total nonaccrual loans ${ }^{(b)}$ | \$ | 246 | \$ | 326 | \$ | 1,018 | \$ | 969 | \$ | 699 | \$ | 759 | \$ | 1,963 | \$ | 2,054 |

(a) When the discounted cash flows or collateral value equals or exceeds the amortized cost of the loan, the loan does not require an allowance. This typically occurs when the loans have been partially charged off and/or there have been interest payments received and applied to the loan balance.
(b) Interest income on nonaccrual loans recognized on a cash basis were not material for the years ended December 31, 2022 and 2021.

## Loan modifications

Certain loan modifications are considered to be TDRs as they provide various concessions to borrowers who are experiencing financial difficulty. Loans with short-term or other insignificant modifications that are not considered concessions are not TDRs nor are loans for which the Firm has elected to suspend TDR accounting guidance under the option provided by the CARES Act. New TDRs during the years ended December 31, 2022, 2021 and 2020 were $\$ 801$ million, $\$ 881$ million and $\$ 734$ million, respectively. New TDRs during the years ended December 31, 2022, 2021 and 2020 reflected the extension of maturity dates, covenant waivers, receipt of assets in partial satisfaction of the loan and deferral of principal and interest payments, predominantly in the Commercial and Industrial and Other loan classes. The impact of these modifications resulting in new TDRs was not material to the Firm for the years ended December 31, 2022, 2021 and 2020.

The carrying value of TDRs was $\$ 936$ million and $\$ 607$ million as of December 31, 2022 and 2021, respectively.

## Notes to consolidated financial statements

## Note 13 - Allowance for credit losses

The Firm's allowance for credit losses represents management's estimate of expected credit losses over the remaining expected life of the Firm's financial assets measured at amortized cost and certain off-balance sheet lending-related commitments. The allowance for credit losses comprises:

- the allowance for loan losses, which covers the Firm's retained loan portfolios (scored and risk-rated) and is presented separately on the Consolidated balance sheets,
- the allowance for lending-related commitments, which is presented on the Consolidated balance sheets in accounts payable and other liabilities, and
- the allowance for credit losses on investment securities, which is reflected in investment securities on the Consolidated balance sheets.

The income statement effect of all changes in the allowance for credit losses is recognized in the provision for credit losses.
Determining the appropriateness of the allowance for credit losses is complex and requires significant judgment by management about the effect of matters that are inherently uncertain. At least quarterly, the allowance for credit losses is reviewed by the CRO, the CFO and the Controller of the Firm. Subsequent evaluations of credit exposures, considering the macroeconomic conditions, forecasts and other factors then prevailing, may result in significant changes in the allowance for credit losses in future periods. The Firm's policies used to determine its allowance for loan losses and its allowance for lending-related commitments are described in the following paragraphs. Refer to Note 10 for a description of the policies used to determine the allowance for credit losses on investment securities.

Methodology for allowances for loan losses and lendingrelated commitments
The allowance for loan losses and allowance for lendingrelated commitments represents expected credit losses over the remaining expected life of retained loans and lending-related commitments that are not unconditionally cancellable. The Firm does not record an allowance for future draws on unconditionally cancellable lending-related commitments (e.g., credit cards). Expected losses related to accrued interest on credit card loans are considered in the Firm's allowance for loan losses. However, the Firm does not record an allowance on other accrued interest receivables, due to its policy to write these receivables off no later than 90 days past due by reversing interest income.

The expected life of each instrument is determined by considering its contractual term, expected prepayments, cancellation features, and certain extension and call options. The expected life of funded credit card loans is generally estimated by considering expected future payments on the credit card account, and determining how much of those amounts should be allocated to repayments of the funded Ioan balance (as of the balance sheet date)
versus other account activity. This allocation is made using an approach that incorporates the payment application requirements of the Credit Card Accountability Responsibility and Disclosure Act of 2009, generally paying down the highest interest rate balances first.

The estimate of expected credit losses includes expected recoveries of amounts previously charged off or expected to be charged off, even if such recoveries result in a negative allowance.

## Collective and Individual Assessments

When calculating the allowance for loan losses and the allowance for lending-related commitments, the Firm assesses whether exposures share similar risk characteristics. If similar risk characteristics exist, the Firm estimates expected credit losses collectively, considering the risk associated with a particular pool and the probability that the exposures within the pool will deteriorate or default. The assessment of risk characteristics is subject to significant management judgment. Emphasizing one characteristic over another or considering additional characteristics could affect the allowance.

- Relevant risk characteristics for the consumer portfolio include product type, delinquency status, current FICO scores, geographic distribution, and, for collateralized loans, current LTV ratios.
- Relevant risk characteristics for the wholesale portfolio include risk rating, delinquency status, tenor, level and type of collateral, LOB, geography, industry, credit enhancement, product type, facility purpose, and payment terms.
The majority of the Firm's credit exposures share risk characteristics with other similar exposures, and as a result are collectively assessed for impairment ("portfolio-based component"). The portfolio-based component covers consumer loans, performing risk-rated loans and certain lending-related commitments.

If an exposure does not share risk characteristics with other exposures, the Firm generally estimates expected credit losses on an individual basis, considering expected repayment and conditions impacting that individual exposure ("asset-specific component"). The asset-specific component covers modified PCD loans, loans modified or reasonably expected to be modified in a TDR, collateraldependent loans, as well as, risk-rated loans that have been placed on nonaccrual status.

## Portfolio-based component

The portfolio-based component begins with a quantitative calculation that considers the likelihood of the borrower changing delinquency status or moving from one risk rating to another. The quantitative calculation covers expected credit losses over an instrument's expected life and is estimated by applying credit loss factors to the Firm's estimated exposure at default. The credit loss factors incorporate the probability of borrower default as well as loss severity in the event of default. They are derived using
a weighted average of five internally developed macroeconomic scenarios over an eight-quarter forecast period, followed by a single year straight-line interpolation to revert to long run historical information for periods beyond the eight-quarter forecast period. The five macroeconomic scenarios consist of a central, relative adverse, extreme adverse, relative upside and extreme upside scenario, and are updated by the Firm's central forecasting team. The scenarios take into consideration the Firm's macroeconomic outlook, internal perspectives from subject matter experts across the Firm, and market consensus and involve a governed process that incorporates feedback from senior management across LOBs, Corporate Finance and Risk Management.
The quantitative calculation is adjusted to take into consideration model imprecision, emerging risk assessments, trends and other subjective factors that are not yet reflected in the calculation. These adjustments are accomplished in part by analyzing the historical loss experience, including during stressed periods, for each major product or model. Management applies judgment in making this adjustment, including taking into account uncertainties associated with the economic and political conditions, quality of underwriting standards, borrower behavior, credit concentrations or deterioration within an industry, product or portfolio, as well as other relevant internal and external factors affecting the credit quality of the portfolio. In certain instances, the interrelationships between these factors create further uncertainties.
The application of different inputs into the quantitative calculation, and the assumptions used by management to adjust the quantitative calculation, are subject to significant management judgment, and emphasizing one input or assumption over another, or considering other inputs or assumptions, could affect the estimate of the allowance for Ioan losses and the allowance for lending-related commitments.

## Asset-specific component

To determine the asset-specific component of the allowance, collateral-dependent loans (including those loans for which foreclosure is probable) and larger, nonaccrual risk-rated loans in the wholesale portfolio segment are generally evaluated individually, while smaller loans (both scored and risk-rated) are aggregated for evaluation using factors relevant for the respective class of assets.

The Firm generally measures the asset-specific allowance as the difference between the amortized cost of the loan and the present value of the cash flows expected to be collected, discounted at the loan's original effective interest rate. Subsequent changes in impairment are generally recognized as an adjustment to the allowance for loan losses. For collateral-dependent loans, the fair value of collateral less estimated costs to sell is used to determine the charge-off amount for declines in value (to reduce the amortized cost of the loan to the fair value of collateral) or the amount of negative allowance that should be
recognized (for recoveries of prior charge-offs associated with improvements in the fair value of collateral).
The asset-specific component of the allowance for loans that have been or are expected to be modified in TDRs incorporates the effect of the modification on the loan's expected cash flows (including forgone interest, principal forgiveness, as well as other concessions), and also the potential for redefault. For residential real estate loans modified in or expected to be modified in TDRs, the Firm develops product-specific probability of default estimates, which are applied at a loan level to compute expected losses. In developing these probabilities of default, the Firm considers the relationship between the credit quality characteristics of the underlying loans and certain assumptions about housing prices and unemployment, based upon industry-wide data. The Firm also considers its own historical loss experience to-date based on actual redefaulted modified loans. For credit card loans modified in or expected to be modified in TDRs, expected losses incorporate projected delinquencies and charge-offs based on the Firm's historical experience by type of modification program. For wholesale loans modified or expected to be modified in TDRs, expected losses incorporate management's expectation of the borrower's ability to repay under the modified terms.
Estimating the timing and amounts of future cash flows is highly judgmental as these cash flow projections rely upon estimates such as loss severities, asset valuations, default rates (including redefault rates on modified loans), the amounts and timing of interest or principal payments (including any expected prepayments) or other factors that are reflective of current and expected market conditions. These estimates are, in turn, dependent on factors such as the duration of current overall economic conditions, industry, portfolio, or borrower-specific factors, the expected outcome of insolvency proceedings as well as, in certain circumstances, other economic factors. All of these estimates and assumptions require significant management judgment and certain assumptions are highly subjective.

## Notes to consolidated financial statements

## Allowance for credit losses and related information

The table below summarizes information about the allowances for credit losses, and includes a breakdown of loans and lending-related commitments by impairment methodology. Refer to Note 10 for further information on the allowance for credit losses on investment securities.

| Year ended December 31, (in millions) | 2022 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Consumer, excluding credit card |  | Credit card |  | Wholesale |  | Total |  |
| Allowance for loan losses |  |  |  |  |  |  |  |  |
| Beginning balance at January 1, | \$ | 1,765 | \$ | 10,250 | \$ | 4,371 | \$ | 16,386 |
| Cumulative effect of a change in accounting principle ${ }^{(\sqrt{(a)}}$ |  | NA |  | NA |  | NA |  | NA |
| Gross charge-offs |  | 812 |  | 3,192 |  | 322 |  | 4,326 |
| Gross recoveries collected |  | (543) |  | (789) |  | (141) |  | $(1,473)$ |
| Net charge-offs |  | 269 |  | 2,403 |  | 181 |  | 2,853 |
| Provision for loan losses |  | 543 |  | 3,353 |  | 2,293 |  | 6,189 |
| Other |  | 1 |  | - |  | 3 |  | 4 |
| Ending balance at December 31, | \$ | 2,040 | \$ | 11,200 | \$ | 6,486 | \$ | 19,726 |
| Allowance for lending-related commitments |  |  |  |  |  |  |  |  |
| Beginning balance at January 1, | \$ | 113 | \$ | - | \$ | 2,148 | \$ | 2,261 |
| Cumulative effect of a change in accounting principle ${ }^{(a)}$ |  | NA |  | NA |  | NA |  | NA |
| Provision for lending-related commitments |  | (37) |  | - |  | 157 |  | 120 |
| Other |  | - |  | - |  | 1 |  | 1 |
| Ending balance at December 31, | \$ | 76 | \$ | - | \$ | 2,306 | \$ | 2,382 |
| Total allowance for investment securities |  | NA |  | NA |  | NA | \$ | 96 |
| Total allowance for credit losses ${ }^{(b)}$ | \$ | 2,116 | \$ | 11,200 | \$ | 8,792 | \$ | 22,204 |
| Allowance for loan losses by impairment methodology |  |  |  |  |  |  |  |  |
| Asset-specific ${ }^{\text {c }}$ ( | \$ | (624) | \$ | 223 | \$ | 467 | \$ | 66 |
| Portfolio-based |  | 2,664 |  | 10,977 |  | 6,019 |  | 19,660 |
| Total allowance for loan losses | \$ | 2,040 | \$ | 11,200 | \$ | 6,486 | \$ | 19,726 |
| Loans by impairment methodology |  |  |  |  |  |  |  |  |
| Asset-specific ${ }^{\text {cl }}$ | \$ | 11,978 | \$ | 796 | \$ | 2,189 | \$ | 14,963 |
| Portfolio-based |  | 288,775 |  | 184,379 |  | 601,481 |  | 1,074,635 |
| Total retained loans | \$ | 300,753 | \$ | 185,175 | \$ | 603,670 | \$ | 1,089,598 |
| Collateral-dependent loans |  |  |  |  |  |  |  |  |
| Net charge-offs | \$ | (33) | \$ | - | \$ | 16 | \$ | (17) |
| Loans measured at fair value of collateral less cost to sell |  | 3,585 |  | - |  | 464 |  | 4,049 |
| Allowance for lending-related commitments by impairment methodology |  |  |  |  |  |  |  |  |
| Asset-specific | \$ | - | \$ | - | \$ | 90 | \$ | 90 |
| Portfolio-based |  | 76 |  | - |  | 2,216 |  | 2,292 |
| Total allowance for lending-related commitments ${ }^{(\mathrm{d})}$ | \$ | 76 | \$ | - | \$ | 2,306 | \$ | 2,382 |
| Lending-related commitments by impairment methodology |  |  |  |  |  |  |  |  |
| Asset-specific | \$ | - | \$ | - | \$ | 455 | \$ | 455 |
| Portfolio-based ${ }^{(\text {e })}$ |  | 20,423 |  | - |  | 461,688 |  | 482,111 |
| Total lending-related commitments | \$ | 20,423 | \$ | - | \$ | 462,143 | \$ | 482,566 |

(a) Represents the impact to allowance for credit losses upon the adoption of CECL on January 1, 2020. Refer to Note 1 for further information.
(b) At December 31, 2022 excludes an allowance for credit losses associated with certain accounts receivable in CIB of $\$ 21$ million.
(c) Includes collateral dependent loans, including those considered TDRs and those for which foreclosure is deemed probable, modified PCD loans and noncollateral dependent loans that have been modified or are reasonably expected to be modified in a TDR. Also includes risk-rated loans that have been placed on nonaccrual status for the wholesale portfolio segment. The asset-specific credit card allowance for loans modified, or reasonably expected to be modified, in a TDR is calculated based on the loans' original contractual interest rates and does not consider any incremental penalty rates.
(d) The allowance for lending-related commitments is reported in accounts payable and other liabilities on the Consolidated balance sheets.
(e) At December 31, 2022, 2021 and 2020, lending-related commitments excluded $\$ 13.1$ billion, $\$ 15.7$ billion and $\$ 19.5$ billion, respectively, for the consumer, excluding credit card portfolio segment; $\$ 821.3$ billion, $\$ 730.5$ billion and $\$ 658.5$ billion, respectively, for the credit card portfolio segment; and $\$ 9.8$ billion, $\$ 32.1$ billion and $\$ 25.3$ billion, respectively, for the wholesale portfolio segment, which were not subject to the allowance for lending-
related commitments. Prior-period amount for wholesale lending-related commitments, including the amount not subject to allowance, has been revised to conform with the current presentation.

| 2021 |  |  |  |  |  |  |  | 2020 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | sumer, uding it card | Credit card |  | Wholesale |  | Total |  | Consumer, excluding credit card |  | Credit card |  | Wholesale |  | Total |  |
| \$ | 3,636 | \$ | 17,800 | \$ | 6,892 | \$ | 28,328 | \$ | 2,538 | \$ | 5,683 | \$ | 4,902 | \$ | 13,123 |
|  | NA |  | NA |  | NA |  | NA |  | 297 |  | 5,517 |  | $(1,642)$ |  | 4,172 |
|  | 630 |  | 3,651 |  | 283 |  | 4,564 |  | 805 |  | 5,077 |  | 954 |  | 6,836 |
|  | (619) |  | (939) |  | (141) |  | $(1,699)$ |  | (631) |  | (791) |  | (155) |  | $(1,577)$ |
|  | 11 |  | 2,712 |  | 142 |  | 2,865 |  | 174 |  | 4,286 |  | 799 |  | 5,259 |
|  | $(1,858)$ |  | $(4,838)$ |  | $(2,375)$ |  | $(9,071)$ |  | 974 |  | 10,886 |  | 4,431 |  | 16,291 |
|  | (2) |  | - |  | (4) |  | (6) |  | 1 |  | - |  | - |  | 1 |
| \$ | 1,765 | \$ | 10,250 | \$ | 4,371 | \$ | 16,386 | \$ | 3,636 | \$ | 17,800 | \$ | 6,892 | \$ | 28,328 |
| \$ | 187 | \$ | - | \$ | 2,222 | \$ | 2,409 | \$ | 12 | \$ | - | \$ | 1,179 | \$ | 1,191 |
|  | NA |  | NA |  | NA |  | NA |  | 133 |  | - |  | (35) |  | 98 |
|  | (75) |  | - |  | (74) |  | (149) |  | 42 |  | - |  | 1,079 |  | 1,121 |
|  | 1 |  | - |  | - |  | 1 |  | - |  | - |  | (1) |  | (1) |
| \$ | 113 | \$ | - | \$ | 2,148 | \$ | 2,261 | \$ | 187 | \$ | - | \$ | 2,222 | \$ | 2,409 |
|  | NA |  | NA |  | NA | \$ | 42 |  | NA |  | NA |  | NA | \$ | 78 |
| \$ | 1,878 | \$ | 10,250 | \$ | 6,519 | \$ | 18,689 | \$ | 3,823 | \$ | 17,800 | \$ | 9,114 | \$ | 30,815 |


| $\$$ | $(665)$ | $\$$ | 313 | $\$$ | 263 | $\$$ | $(89)$ | $\$$ | $(7)$ | $\$$ | 633 | $\$$ |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
|  | 2,430 |  | 9,937 |  | 4,108 |  | 16,475 |  | 3,643 | 682 | $\$$ | 17,167 |


| $\$$ | 13,919 | $\$$ | 987 | $\$$ | 2,255 | $\$$ | 17,161 | $\$$ | 16,648 | $\$$ | 1,375 | $\$$ |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
|  | 281,637 |  | 153,309 |  | 558,099 |  | 993,045 |  | 285,479 |  | 142,057 |  |
| $\$$ | 295,556 | $\$$ | 154,296 | $\$$ | 560,354 | $\$$ | $1,010,206$ | $\$$ | 302,127 | $\$$ | 143,432 | $\$$ |


| $\$$ | 33 | $\$$ | - | $\$$ | 38 | $\$$ | 71 | $\$$ | 133 | $\$$ | - |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 4,472 |  | - |  | 617 |  | 5,089 |  | 4,956 |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |


| $\$$ | - | $\$$ | - | $\$$ | 167 | $\$$ | 167 | $\$$ | - | $\$$ | - | $\$$ | 114 |
| :--- | ---: | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | 113 |  | - |  | 1,981 |  | 2,094 |  | 187 |  |  | - |  |
| $\$$ | 113 | $\$$ | - | $\$$ | 2,148 | $\$$ | 2,261 | $\$$ | 187 | $\$$ |  | - | $\$$ |


| $\$$ | - | $\$$ | - | $\$$ | 764 | $\$$ | 764 | $\$$ | - | $\$$ | - | $\$$ | 577 |
| :--- | ---: | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | 29,588 |  | - |  | 453,571 |  | 483,159 |  | 37,783 |  |  | - |  |
| $\$$ | 29,588 | $\$$ | - | $\$$ | 454,335 | $\$$ | 483,923 | $\$$ | 37,783 | $\$$ |  | - | $\$$ |

## Notes to consolidated financial statements

## Discussion of changes in the allowance

The allowance for credit losses as of December 31, 2022 was $\$ 22.2$ billion, reflecting a net addition of $\$ 3.5$ billion from December 31, 2021, consisting of:

- $\$ 2.3$ billion in wholesale, driven by deterioration in the Firm's macroeconomic outlook and loan growth, predominantly in CB and CIB, and
- \$1.2 billion in consumer, predominantly driven by Card Services, reflecting higher outstanding balances and deterioration in the Firm's macroeconomic outlook, partially offset by a reduction in the allowance related to a decrease in uncertainty associated with borrower behavior as the effects of the pandemic gradually recede.
Deterioration in the Firm's macroeconomic outlook included both updates to the central scenario in the fourth quarter of 2022, which now reflects a mild recession, as well as the impact of the increased weight placed on the adverse scenarios beginning in the first quarter of 2022 due to the effects associated with higher inflation, changes in monetary policy, and geopolitical risks, including the war in Ukraine.
The Firm's allowance for credit losses is estimated using a weighted average of five internally developed macroeconomic scenarios. The adverse scenarios incorporate more punitive macroeconomic factors than the central case assumptions provided in the table below, resulting in a weighted average U.S. unemployment rate peaking at $5.6 \%$ in the second quarter of 2024, and a $1.2 \%$ lower U.S. real GDP exiting the second quarter of 2024.

The Firm's central case assumptions reflected U.S. unemployment rates and U.S. real GDP as follows:

|  | Assumptions at December 31, 2022 |  |  |
| :---: | :---: | :---: | :---: |
|  | 2Q23 | 4Q23 | 2Q24 |
| U.S. unemployment rate ${ }^{(\mathrm{a})}$ | 3.8 \% | 4.3 \% | 5.0 \% |
| YoY growth in U.S. real GDP ${ }^{(b)}$ | 1.5 \% | 0.4 \% | - \% |
|  | Assumptions at December 31, 2021 |  |  |
|  | 2Q22 | 4Q22 | 2Q23 |
| U.S. unemployment rate ${ }^{(\mathrm{a})}$ | 4.2 \% | 4.0 \% | 3.9 \% |
| YoY growth in U.S. real GDP ${ }^{(b)}$ | 3.1 \% | 2.8 \% | 2.1 \% |

(a) Reflects quarterly average of forecasted U.S. unemployment rate.
(b) The year over year growth in U.S. real GDP in the forecast horizon of the central scenario is calculated as the percentage change in U.S. real GDP levels from the prior year.

Subsequent changes to this forecast and related estimates will be reflected in the provision for credit losses in future periods.

Refer to Critical Accounting Estimates Used by the Firm on pages 149-152 for further information on the allowance for credit losses and related management judgments. Refer to Consumer Credit Portfolio on pages 110-115, Wholesale Credit Portfolio on pages 116-126 for additional information on the consumer and wholesale credit portfolios.

## Note 14 - Variable interest entities

Refer to Note 1 on page 164 for a further description of JPMorgan Chase's accounting policies regarding consolidation of VIEs. The following table summarizes the most significant types of Firm-sponsored VIEs by business segment. The Firm considers a "Firm-sponsored" VIE to include any entity where: (1) JPMorgan Chase is the primary beneficiary of the structure; (2) the VIE is used by JPMorgan Chase to securitize Firm assets; (3) the VIE issues financial instruments with the JPMorgan Chase name; or (4) the entity is a JPMorgan Chase-administered asset-backed commercial paper conduit.

| Line of Business | Transaction Type | Activity | 2022 Form 10-K <br> page references |
| :--- | :--- | :--- | :--- |
| CCB | Credit card securitization trusts | Securitization of originated credit card receivables | pages 247-248 |
|  | Mortgage securitization trusts | Servicing and securitization of both originated and <br> purchased residential mortgages | pages 248-250 |

The Firm's other business segments are also involved with VIEs (both third-party and Firm-sponsored), but to a lesser extent, as follows:

- Asset \& Wealth Management: AWM sponsors and manages certain funds that are deemed VIEs. As asset manager of the funds, AWM earns a fee based on assets managed; the fee varies with each fund's investment objective and is competitively priced. For fund entities that qualify as VIEs, AWM's interests are, in certain cases, considered to be significant variable interests that result in consolidation of the financial results of these entities.
- Commercial Banking: CB provides financing and lending-related services to a wide spectrum of clients, including certain third-party-sponsored entities that may meet the definition of a VIE. CB does not control the activities of these entities and does not consolidate these entities. CB's maximum loss exposure, regardless of whether the entity is a VIE, is generally limited to loans and lending-related commitments which are reported and disclosed in the same manner as any other thirdparty transaction.
- Corporate: Corporate is involved with entities that may meet the definition of VIEs; however these entities are generally subject to specialized investment company accounting, which does not require the consolidation of investments, including VIEs. In addition, Treasury and CIO invest in securities generally issued by third parties which may meet the definition of VIEs (e.g., issuers of asset-backed securities). In general, the Firm does not have the power to direct the significant activities of these entities and therefore does not consolidate these entities. Refer to Note 10 for further information on the Firm's investment securities portfolio.

In addition, CIB also invests in and provides financing and other services to VIEs sponsored by third parties. Refer to pages 251-252 of this Note for more information on consolidated VIE assets and liabilities as well as the VIEs sponsored by third parties.

## Significant Firm-sponsored variable interest entities

## Credit card securitizations

CCB’s Card Services business may securitize originated credit card loans, primarily through the Chase Issuance Trust (the "Trust"). The Firm's continuing involvement in credit card securitizations includes servicing the receivables, retaining an undivided seller's interest in the receivables, retaining certain senior and subordinated securities and maintaining escrow accounts.
The Firm consolidates the assets and liabilities of its sponsored credit card trusts as it is considered to be the primary beneficiary of these securitization trusts based on the Firm's ability to direct the activities of these VIEs through its servicing responsibilities and other duties, including making decisions as to the receivables that are transferred into those trusts and as to any related modifications and workouts. Additionally, the nature and extent of the Firm's other continuing involvement with the
trusts, as indicated above, obligates the Firm to absorb losses and gives the Firm the right to receive certain benefits from these VIEs that could potentially be significant.
The underlying securitized credit card receivables and other assets of the securitization trusts are available only for payment of the beneficial interests issued by the securitization trusts; they are not available to pay the Firm's other obligations or the claims of the Firm's creditors.
The agreements with the credit card securitization trusts require the Firm to maintain a minimum undivided interest in the credit card trusts (generally 5\%). As of December 31, 2022 and 2021, the Firm held undivided interests in Firm-sponsored credit card securitization trusts of $\$ 6.1$ billion and $\$ 7.1$ billion, respectively. The Firm maintained an average undivided interest in principal

## Notes to consolidated financial statements

receivables owned by those trusts of approximately 62\% and 57\% for the years ended December 31, 2022 and 2021, respectively. The Firm did not retain any senior securities and retained $\$ 1.5$ billion of subordinated securities in certain of its credit card securitization trusts at both December 31, 2022 and 2021. The Firm's undivided interests in the credit card trusts and securities retained are eliminated in consolidation.

Firm-sponsored mortgage and other securitization trusts
The Firm securitizes (or has securitized) originated and purchased residential mortgages, commercial mortgages and other consumer loans primarily in its CCB and CIB businesses. Depending on the particular transaction, as well as the respective business involved, the Firm may act as the servicer of the loans and/or retain certain beneficial interests in the securitization trusts.

The following tables present the total unpaid principal amount of assets held in Firm-sponsored private-label securitization entities, including those in which the Firm has continuing involvement, and those that are consolidated by the Firm. Continuing involvement includes servicing the loans, holding senior interests or subordinated interests (including amounts required to be held pursuant to credit risk retention rules), recourse or guarantee arrangements, and derivative contracts. In certain instances, the Firm's only continuing involvement is servicing the loans. The Firm's maximum loss exposure from retained and purchased interests is the carrying value of these interests.

(a) Excludes U.S. GSEs and government agency securitizations and re-securitizations, which are not Firm-sponsored.
(b) Consists of securities backed by commercial real estate loans and non-mortgage-related consumer receivables.
(c) Excludes the following: retained servicing; securities retained from loan sales and securitization activity related to U.S. GSEs and government agencies; interest rate and foreign exchange derivatives primarily used to manage interest rate and foreign exchange risks of securitization entities; senior securities of $\$ 134$ million and $\$ 145$ million at December 31, 2022 and 2021,respectively, and subordinated securities which were not material at both December 31, 2022 and 2021, which the Firm purchased in connection with CIB's secondary market-making activities.
(d) Includes interests held in re-securitization transactions.
(e) As of December 31, 2022 and 2021, $84 \%$ and $79 \%$, respectively, of the Firm's retained securitization interests, which are predominantly carried at fair value and include amounts required to be held pursuant to credit risk retention rules, were risk-rated "A" or better, on an S\&P-equivalent basis. The retained interests in prime residential mortgages consisted of $\$ 2.6$ billion and $\$ 1.6$ billion of investment-grade retained interests at December 31 , 2022 and 2021, respectively, and $\$ 131$ million of noninvestment-grade retained interests at December 31, 2021; noninvestment-grade retained interests were not material at December 31, 2022. The retained interests in commercial and other securitization trusts consisted of $\$ 5.8$ billion and $\$ 3.5$ billion of investment-grade retained interests, and $\$ 1.1$ billion and $\$ 929$ million of noninvestment-grade retained interests at December 31, 2022 and 2021, respectively.
(f) Prior-period amount has been revised to conform with the current presentation.

## Residential mortgage

The Firm securitizes residential mortgage loans originated by CCB, as well as residential mortgage loans purchased from third parties by either CCB or CIB. CCB generally retains servicing for all residential mortgage loans it originated or purchased, and for certain mortgage loans purchased by CIB. For securitizations of loans serviced by CCB, the Firm has the power to direct the significant activities of the VIE because it is responsible for decisions related to loan modifications and workouts. CCB may also retain an interest upon securitization.

In addition, CIB engages in underwriting and trading activities involving securities issued by Firm-sponsored securitization trusts. As a result, CIB at times retains senior and/or subordinated interests (including residual interests and amounts required to be held pursuant to credit risk retention rules) in residential mortgage securitizations at the time of securitization, and/or reacquires positions in the secondary market in the normal course of business. In certain instances, as a result of the positions retained or reacquired by CIB or held by Treasury and CIO or CCB, when considered together with the servicing arrangements entered into by CCB, the Firm is deemed to be the primary beneficiary of certain securitization trusts.
The Firm does not consolidate residential mortgage securitizations (Firm-sponsored or third-party-sponsored) when it is not the servicer (and therefore does not have the power to direct the most significant activities of the trust) or does not hold a beneficial interest in the trust that could potentially be significant to the trust.

Commercial mortgages and other consumer securitizations CIB originates and securitizes commercial mortgage loans, and engages in underwriting and trading activities involving the securities issued by securitization trusts. CIB may retain unsold senior and/or subordinated interests (including amounts required to be held pursuant to credit risk retention rules) in commercial mortgage securitizations at the time of securitization but, generally, the Firm does not service commercial loan securitizations. Treasury and CIO may choose to invest in these securitizations as well. For commercial mortgage securitizations the power to direct the significant activities of the VIE generally is held by the servicer or investors in a specified class of securities ("controlling class"). The Firm generally does not retain an interest in the controlling class in its sponsored commercial mortgage securitization transactions.

## Re-securitizations

The Firm engages in certain re-securitization transactions in which debt securities are transferred to a VIE in exchange for new beneficial interests. These transfers occur in connection with both U.S. GSEs and government agency sponsored VIEs, which are backed by residential mortgages. The Firm's consolidation analysis is largely dependent on the Firm's role and interest in the re-securitization trusts.

The following table presents the principal amount of securities transferred to re-securitization VIEs.

| Year ended December 31, <br> (in millions) | $\mathbf{2 0 2 2}$ | 2021 | 2020 |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Transfers of securities to VIEs |  |  |  |  |  |
| U.S. GSEs and government <br> agencies | $\mathbf{\$ 1 6 , 1 2 8}$ | $\$$ | 53,923 | $\$$ | 46,123 |

Most re-securitizations with which the Firm is involved are client-driven transactions in which a specific client or group of clients is seeking a specific return or risk profile. For these transactions, the Firm has concluded that the decision-making power of the entity is shared between the Firm and its clients, considering the joint effort and decisions in establishing the re-securitization trust and its assets, as well as the significant economic interest the client holds in the re-securitization trust; therefore the Firm does not consolidate the re-securitization VIE.
The Firm did not transfer any private label securities to resecuritization VIEs during 2022, 2021 and 2020, and retained interests in any such Firm-sponsored VIEs as of December 31, 2022 and 2021 were not material.
Additionally, the Firm may invest in beneficial interests of third-party-sponsored re-securitizations and generally purchases these interests in the secondary market. In these circumstances, the Firm does not have the unilateral ability to direct the most significant activities of the resecuritization trust, either because it was not involved in the initial design of the trust, or the Firm was involved with an independent third-party sponsor and demonstrated shared power over the creation of the trust; therefore, the Firm does not consolidate the re-securitization VIE.

## Notes to consolidated financial statements

The following table presents information on the Firm's interests in nonconsolidated re-securitization VIEs.

|  | Nonconsolidated <br> re-securitization VIEs |  |  |
| :--- | :--- | :--- | :--- |
| December 31, <br> (in millions) | $\mathbf{2 0 2 2}$ | 2021 |  |
| U.S. GSEs and government agencies |  |  |  |
| Interest in VIEs | $\mathbf{\$}$ | $\mathbf{2 , 5 8 0}$ | $\$$ |

As of December 31, 2022 and 2021, the Firm did not consolidate any U.S. GSE and government agency resecuritization VIEs or any Firm-sponsored private-label resecuritization VIEs.

## Multi-seller conduits

Multi-seller conduit entities are separate bankruptcy remote entities that provide secured financing, collateralized by pools of receivables and other financial assets, to customers of the Firm. The conduits fund their financing facilities through the issuance of highly rated commercial paper. The primary source of repayment of the commercial paper is the cash flows from the pools of assets. In most instances, the assets are structured with dealspecific credit enhancements provided to the conduits by the customers (i.e., sellers) or other third parties. Dealspecific credit enhancements are generally structured to cover a multiple of historical losses expected on the pool of assets, and are typically in the form of overcollateralization provided by the seller. The deal-specific credit enhancements mitigate the Firm's potential losses on its agreements with the conduits.
To ensure timely repayment of the commercial paper, and to provide the conduits with funding to provide financing to customers in the event that the conduits do not obtain funding in the commercial paper market, each asset pool financed by the conduits has a minimum $100 \%$ dealspecific liquidity facility associated with it provided by JPMorgan Chase Bank, N.A. JPMorgan Chase Bank, N.A. also provides the multi-seller conduit vehicles with uncommitted program-wide liquidity facilities and program-wide credit enhancement in the form of standby letters of credit. The amount of program-wide credit enhancement required is based upon commercial paper issuance and approximates $10 \%$ of the outstanding balance of commercial paper.
The Firm consolidates its Firm-administered multi-seller conduits, as the Firm has both the power to direct the significant activities of the conduits and a potentially significant economic interest in the conduits. As administrative agent and in its role in structuring transactions, the Firm makes decisions regarding asset types and credit quality, and manages the commercial paper funding needs of the conduits. The Firm's interests that could potentially be significant to the VIEs include the fees received as administrative agent and liquidity and program-wide credit enhancement provider, as well as the potential exposure created by the liquidity and credit enhancement facilities provided to the conduits.

In the normal course of business, JPMorgan Chase makes markets in and invests in commercial paper issued by the Firm-administered multi-seller conduits. The Firm held $\$ 13.8$ billion and $\$ 13.7$ billion of the commercial paper issued by the Firm-administered multi-seller conduits at December 31, 2022 and 2021, respectively, which have been eliminated in consolidation. The Firm's investments reflect the Firm's funding needs and capacity and were not driven by market illiquidity. Other than the amounts required to be held pursuant to credit risk retention rules, the Firm is not obligated under any agreement to purchase the commercial paper issued by the Firm-administered multi-seller conduits.

Deal-specific liquidity facilities, program-wide liquidity and credit enhancement provided by the Firm have been eliminated in consolidation. The Firm or the Firmadministered multi-seller conduits provide lending-related commitments to certain clients of the Firm-administered multi-seller conduits. The unfunded commitments were $\$ 10.6$ billion and $\$ 13.4$ billion at December 31, 2022 and 2021, respectively, and are reported as off-balance sheet lending-related commitments in other unfunded commitments to extend credit. Refer to Note 28 for more information on off-balance sheet lending-related commitments.

## Municipal bond vehicles

Municipal bond vehicles or tender option bond ("TOB") trusts allow institutions to finance their municipal bond investments at short-term rates. In a typical TOB transaction, the trust purchases highly rated municipal bond(s) of a single issuer and funds the purchase by issuing two types of securities: (1) puttable floating-rate certificates ("floaters") and (2) inverse floating-rate residual interests ("residuals"). The floaters are typically purchased by money market funds or other short-term investors and may be tendered, with requisite notice, to the TOB trust. The residuals are retained by the investor seeking to finance its municipal bond investment. TOB transactions where the residual is held by a third-party investor are typically known as customer TOB trusts, and non-customer TOB trusts are transactions where the Residual is retained by the Firm. Customer TOB trusts are sponsored by a third party. The Firm serves as sponsor for all non-customer TOB transactions. The Firm may provide various services to a TOB trust, including remarketing agent, liquidity or tender option provider, and/or sponsor.
J.P. Morgan Securities LLC may serve as a remarketing agent on the floaters for TOB trusts. The remarketing agent is responsible for establishing the periodic variable rate on the floaters, conducting the initial placement and remarketing tendered floaters. The remarketing agent may, but is not obligated to, make markets in floaters. Floaters held by the Firm were not material during 2022 and 2021.

JPMorgan Chase Bank, N.A. or J.P. Morgan Securities LLC often serves as the sole liquidity or tender option provider for the TOB trusts. The liquidity provider's obligation to perform is conditional and is limited by certain events
("Termination Events"), which include bankruptcy or failure to pay by the municipal bond issuer or credit enhancement provider, an event of taxability on the municipal bonds or the immediate downgrade of the municipal bond to below investment grade. In addition, the liquidity provider's exposure is typically further limited by the high credit quality of the underlying municipal bonds, the excess collateralization in the vehicle, or, in certain transactions, the reimbursement agreements with the Residual holders.
Holders of the floaters may "put," or tender, their floaters to the TOB trust. If the remarketing agent cannot successfully remarket the floaters to another investor, the
liquidity provider either provides a loan to the TOB trust for the TOB trust's purchase of the floaters, or it directly purchases the tendered floaters.
TOB trusts are considered to be variable interest entities. The Firm consolidates non-customer TOB trusts because as the Residual holder, the Firm has the right to make decisions that significantly impact the economic performance of the municipal bond vehicle, and it has the right to receive benefits and bear losses that could potentially be significant to the municipal bond vehicle.

## Consolidated VIE assets and liabilities

The following table presents information on assets and liabilities related to VIEs consolidated by the Firm as of December 31, 2022 and 2021.

(a) Includes residential mortgage securitizations.
(b) Primarily includes purchased supply chain finance receivables and purchased auto loan securitizations in CIB.
(c) Includes assets classified as cash and other assets on the Consolidated balance sheets.
(d) The assets of the consolidated VIEs included in the program types above are used to settle the liabilities of those entities. The assets and liabilities include third-party assets and liabilities of consolidated VIEs and exclude intercompany balances that eliminate in consolidation.
(e) The interest-bearing beneficial interest liabilities issued by consolidated VIEs are classified in the line item on the Consolidated balance sheets titled, "Beneficial interests issued by consolidated VIEs". The holders of these beneficial interests generally do not have recourse to the general credit of JPMorgan Chase. Included in beneficial interests in VIE assets are long-term beneficial interests of $\$ 2.1$ billion and $\$ 2.6$ billion at December 31 , 2022 and 2021, respectively.
(f) Includes liabilities classified as accounts payable and other liabilities on the Consolidated balance sheets.

## Notes to consolidated financial statements

## VIEs sponsored by third parties

The Firm enters into transactions with VIEs structured by other parties. These include, for example, acting as a derivative counterparty, liquidity provider, investor, underwriter, placement agent, remarketing agent, trustee or custodian. These transactions are conducted at arm'slength, and individual credit decisions are based on the analysis of the specific VIE, taking into consideration the quality of the underlying assets. Where the Firm does not have the power to direct the activities of the VIE that most significantly impact the VIE's economic performance, or a variable interest that could potentially be significant, the Firm generally does not consolidate the VIE, but it records and reports these positions on its Consolidated balance sheets in the same manner it would record and report positions in respect of any other third-party transaction.

## Tax credit vehicles

The Firm holds investments in unconsolidated tax credit vehicles, which are limited partnerships and similar entities that own and operate affordable housing, energy, and other projects. These entities are primarily considered VIEs. A third party is typically the general partner or managing member and has control over the significant activities of the tax credit vehicles, and accordingly the Firm does not consolidate tax credit vehicles. The Firm generally invests in these partnerships as a limited partner and earns a return primarily through the receipt of tax credits allocated to the projects. The maximum loss exposure, represented by equity investments and funding commitments, was $\$ 30.2$ billion and $\$ 26.8$ billion, of which $\$ 10.6$ billion and $\$ 9.4$ billion was unfunded at December 31, 2022 and 2021, respectively. The Firm assesses each project and to reduce the risk of loss, may withhold varying amounts of its capital investment until the project qualifies for tax credits. Refer to Note 25 for further information on affordable housing tax credits and Note 28 for more information on off-balance sheet lending-related commitments.

Customer municipal bond vehicles (TOB trusts) The Firm may provide various services to customer TOB trusts, including remarketing agent, liquidity or tender option provider. In certain customer TOB transactions, the Firm, as liquidity provider, has entered into a reimbursement agreement with the Residual holder. In those transactions, upon the termination of the vehicle, the Firm has recourse to the third-party Residual holders for any shortfall. The Firm does not have any intent to protect Residual holders from potential losses on any of the underlying municipal bonds. The Firm does not consolidate customer TOB trusts, since the Firm does not have the power to make decisions that significantly impact the economic performance of the municipal bond vehicle. The Firm's maximum exposure as a liquidity provider to customer TOB trusts at December 31, 2022 and 2021, was $\$ 5.8$ billion and $\$ 6.8$ billion, respectively. The fair value of assets held by such VIEs at December 31, 2022 and 2021 was $\$ 8.2$ billion and $\$ 10.5$ billion respectively.

## Loan securitizations

The Firm has securitized and sold a variety of loans, including residential mortgages, credit card receivables, commercial mortgages and other consumer loans. The purposes of these securitization transactions were to satisfy investor demand and to generate liquidity for the Firm.
For loan securitizations in which the Firm is not required to consolidate the trust, the Firm records the transfer of the loan receivable to the trust as a sale when all of the following accounting criteria for a sale are met: (1) the transferred financial assets are legally isolated from the Firm's creditors; (2) the transferee or beneficial interest holder can pledge or exchange the transferred financial assets; and (3) the Firm does not maintain effective control over the transferred financial assets (e.g., the Firm cannot repurchase the transferred assets before their maturity and it does not have the ability to unilaterally cause the holder to return the transferred assets).
For loan securitizations accounted for as a sale, the Firm recognizes a gain or loss based on the difference between the value of proceeds received (including cash, beneficial interests, or servicing assets received) and the carrying value of the assets sold. Gains and losses on securitizations are reported in noninterest revenue.

## Securitization activity

The following table provides information related to the Firm's securitization activities for the years ended December 31, 2022, 2021 and 2020, related to assets held in Firm-sponsored securitization entities that were not consolidated by the Firm, and where sale accounting was achieved at the time of the securitization.

| Year ended December 31, (in millions) | 2022 |  |  |  | 2021 |  |  |  | 2020 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Residential mortgage ${ }^{\text {(d }}$ |  | Commercial and other ${ }^{(\mathrm{e})}$ |  | Residential mortgage ${ }^{\text {(d) }}$ |  | Commercial and other ${ }^{(\mathrm{e})}$ |  | Residential mortgage ${ }^{\text {(d) }}$ |  | Commercial and other ${ }^{(\text {e })}$ |  |
| Principal securitized | \$ | 10,218 | \$ | 9,036 | \$ | 23,876 | \$ | 14,917 | \$ | 7,103 | \$ | 6,624 |
| All cash flows during the period: ${ }^{(a)}$ |  |  |  |  |  |  |  |  |  |  |  |  |
| Proceeds received from loan sales as financial instruments ${ }^{(b)(C)}$ | \$ | 9,783 | \$ | 8,921 | \$ | 24,450 | \$ | 15,044 | \$ | 7,321 | \$ | 6,865 |
| Servicing fees collected |  | 62 |  | 2 |  | 153 |  | 1 |  | 211 |  | 1 |
| Cash flows received on interests |  | 489 |  | 285 |  | 578 |  | 273 |  | 801 |  | 239 |

(a) Excludes re-securitization transactions.
(b) Predominantly includes Level 2 assets.
(c) The carrying value of the loans accounted for at fair value approximated the proceeds received upon loan sale.
(d) Represents prime mortgages. Excludes Ioan securitization activity related to U.S. GSEs and government agencies.
(e) Includes commercial mortgage and other consumer loans.

Key assumptions used to value retained interests originated during the year are shown in the table below.

| Year ended December 31, | 2022 | 2021 | 2020 |
| :--- | :--- | :--- | :--- |
| Residential mortgage retained interest: |  |  |  |
| Weighted-average life (in years) | $\mathbf{1 0 . 8}$ | 3.9 | 4.7 |
| Weighted-average discount rate | $\mathbf{4 . 0} \%$ | $3.3 \%$ | $8.2 \%$ |
| Commercial mortgage retained interest: |  |  |  |
| Weighted-average life (in years) | $\mathbf{5 . 9}$ | 6.0 | 6.9 |
| Weighted-average discount rate | $\mathbf{2 . 9} \%$ | $1.2 \%$ | $3.0 \%$ |

Loans and excess MSRs sold to U.S. governmentsponsored enterprises and loans in securitization transactions pursuant to Ginnie Mae guidelines In addition to the amounts reported in the securitization activity tables above, the Firm, in the normal course of business, sells originated and purchased mortgage loans and certain originated excess MSRs on a nonrecourse basis, predominantly to U.S. GSEs. These loans and excess MSRs are sold primarily for the purpose of securitization by the U.S. GSEs, who provide certain guarantee provisions (e.g., credit enhancement of the loans). The Firm also sells loans into securitization transactions pursuant to Ginnie Mae guidelines; these loans are typically insured or guaranteed by another U.S. government agency. The Firm does not consolidate the securitization vehicles underlying these transactions as it is not the primary beneficiary. For a limited number of loan sales, the Firm is obligated to share a portion of the credit risk associated with the sold loans with the purchaser. Refer to Note 28 for additional information about the Firm's loan sales- and securitizationrelated indemnifications and Note 15 for additional information about the impact of the Firm's sale of certain excess MSRs.

## Notes to consolidated financial statements

The following table summarizes the activities related to loans sold to the U.S. GSEs, and loans in securitization transactions pursuant to Ginnie Mae guidelines.

| Year ended December 31, (in millions) | 2022 |  | 2021 |  | 2020 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Carrying value of loans sold | \$ | 48,891 | \$ | 105,035 | \$ | 81,153 |
| Proceeds received from Ioan sales as cash | \$ | 22 | \$ | 161 | \$ | 45 |
| Proceeds from loan sales as securities ${ }^{(\mathrm{a})(\mathrm{b})}$ |  | 48,096 |  | 103,286 |  | 80,186 |
| Total proceeds received from loan sales ${ }^{(c)}$ | \$ | 48,118 | \$ | 103,447 | \$ | 80,231 |
| Gains/(losses) on loan sales ${ }^{(d)(e)}$ | \$ | (25) | \$ | 9 | \$ | 6 |

(a) Includes securities from U.S. GSEs and Ginnie Mae that are generally sold shortly after receipt or retained as part of the Firm's investment securities portfolio.
(b) Included in level 2 assets.
(c) Excludes the value of MSRs retained upon the sale of loans.
(d) Gains/(losses) on loan sales include the value of MSRs.
(e) The carrying value of the loans accounted for at fair value approximated the proceeds received upon loan sale.

## Options to repurchase delinquent loans

In addition to the Firm's obligation to repurchase certain loans due to material breaches of representations and warranties as discussed in Note 28, the Firm also has the option to repurchase delinquent loans that it services for Ginnie Mae loan pools, as well as for other U.S. government agencies under certain arrangements. The Firm typically
elects to repurchase delinquent loans from Ginnie Mae Ioan pools as it continues to service them and/or manage the foreclosure process in accordance with the applicable requirements, and such loans continue to be insured or guaranteed. When the Firm's repurchase option becomes exercisable, such loans must be reported on the Consolidated balance sheets as a loan with a corresponding liability. Refer to Note 12 for additional information.
The following table presents loans the Firm repurchased or had an option to repurchase, real estate owned, and foreclosed government-guaranteed residential mortgage loans recognized on the Firm's Consolidated balance sheets as of December 31, 2022 and 2021. Substantially all of these loans and real estate are insured or guaranteed by U.S. government agencies.

| December 31, <br> (in millions) |  | $\mathbf{2 0 2 2}$ | 2021 |  |
| :--- | ---: | ---: | ---: | ---: |
| Loans repurchased or option to repurchase $^{(\mathrm{a})}$ | $\mathbf{\$}$ | $\mathbf{8 3 9}$ | $\$$ | 1,022 |
| Real estate owned |  |  |  |  |

(a) Predominantly all of these amounts relate to loans that have been repurchased from Ginnie Mae loan pools.
(b) Relates to voluntary repurchases of loans, which are included in accrued interest and accounts receivable.

## Loan delinquencies and liquidation losses

The table below includes information about components of and delinquencies related to nonconsolidated securitized financial assets held in Firm-sponsored private-label securitization entities, in which the Firm has continuing involvement as of December 31, 2022 and 2021.

| As of or for the year ended December 31, (in millions) | Securitized assets |  |  |  |  | 90 days past due |  |  |  |  | Net liquidation losses / (recoveries) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2022 |  | 2021 |  | 2022 |  |  | 2021 |  |  | 2022 |  | 2021 |  |  |
| Securitized loans |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Residential mortgage: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Prime/ Alt-A \& option ARMs | \$ | 37,058 | \$ | 42,522 | (a) | \$ | 511 | \$ | 1,937 | (a) | \$ | (29) | \$ | 16 | (a) |
| Subprime |  | 1,743 |  | 10,115 |  |  | 212 |  | 1,609 |  |  | (1) |  | 16 |  |
| Commercial and other |  | 127,037 |  | 93,698 |  |  | 948 |  | 1,456 |  |  | 50 |  | 288 |  |
| Total loans securitized | \$ | 165,838 | \$ | 146,335 |  | \$ | 1,671 | \$ | 5,002 |  | \$ | 20 | \$ | 320 |  |

(a) Prior-period amounts have been revised to conform with the current presentation.

## Note 15 - Goodwill and Mortgage servicing rights

## Goodwill

Goodwill is recorded upon completion of a business combination as the difference between the purchase price and the fair value of the net assets acquired, and can be adjusted up to one year from the acquisition date as more information is obtained about the fair value of assets acquired and liabilities assumed. Subsequent to initial recognition, goodwill is not amortized but is tested for impairment during the fourth quarter of each fiscal year, or more often if events or circumstances, such as adverse changes in the business climate, indicate that there may be an impairment.
The goodwill associated with each business combination is allocated to the related reporting units, which are generally determined based on how the Firm's businesses are managed and how they are reviewed. The following table presents goodwill attributed to the reportable business segments and Corporate.

| December 31, (in millions) | $\mathbf{2 0 2 2}$ | 2021 | 2020 |
| :--- | ---: | ---: | ---: |
| Consumer \& Community Banking | $\mathbf{\$ 3 2 , 1 2 1}$ | $\$ 31,474$ | $\$ 31,311$ |
| Corporate \& Investment Bank | $\mathbf{8 , 0 0 8}$ | 7,906 | 7,913 |
| Commercial Banking | $\mathbf{2 , 9 8 5}$ | 2,986 | 2,985 |
| Asset \& Wealth Management | $\mathbf{7 , 9 0 2}$ | 7,222 | 7,039 |
| Corporate $^{(\mathrm{a})}$ | $\mathbf{6 4 6}$ | 727 | - |
| Total goodwill | $\$ \mathbf{5 1 , 6 6 2}$ | $\$ 50,315$ | $\$ 49,248$ |

(a) For goodwill in Corporate acquired in the third quarter of 2021, the Firm elected to perform a qualitative impairment assessment, as permitted under U.S. GAAP.
The following table presents changes in the carrying amount of goodwill.

| Year ended December 31, (in millions) | 2022 | 2021 | 2020 |
| :---: | :---: | :---: | :---: |
| Balance at beginning of period | \$ 50,315 | \$ 49,248 | \$ 47,823 |
| Changes during the period from: |  |  |  |
| Business combinations ${ }^{(\mathrm{a})}$ | 1,426 | 1,073 (c) | 1,412 |
| Other ${ }^{(b)}$ | (79) | (6) ${ }^{(c)}$ | 13 |
| Balance at December 31, | \$ 51,662 | \$ 50,315 | \$ 49,248 |

(a) For 2022, represents estimated goodwill associated with the acquisitions of Global Shares PLC in AWM, Frosch Travel Group, LLC and Figg, Inc. in CCB, and Renovite Technologies, Inc. and Volkswagen Payments S.A. in CIB. For 2021, represents goodwill associated with the acquisitions of Nutmeg in Corporate, OpenInvest and Campbell Global in AWM, and Frank and The Infatuation in CCB. For 2020, represents goodwill associated with the acquisitions of cxLoyalty in CCB and 55ip in AWM.
(b) Predominantly foreign currency adjustments.
(c) Prior-period amounts have been revised to conform with the current presentation.

## Goodwill impairment testing

The Firm's goodwill was not impaired at December 31, 2022, 2021 and 2020.
The goodwill impairment test is generally performed by comparing the current fair value of each reporting unit with its carrying value. If the fair value is in excess of the carrying value, then the reporting unit's goodwill is considered not to be impaired. If the fair value is less than the carrying value, then an impairment charge is recognized
for the amount by which the reporting unit's carrying value exceeds its fair value, up to the amount of goodwill allocated to that reporting unit.
The Firm uses the reporting units' allocated capital plus goodwill and other intangible assets as a proxy for the carrying values of equity for the reporting units in the goodwill impairment testing. Reporting unit equity is determined on a similar basis as the allocation of capital to the LOBS which takes into consideration a variety of factors including capital levels of similarly rated peers and applicable regulatory capital requirements. Proposed LOB capital levels are incorporated into the Firm's annual budget process, which is reviewed by the Firm's Board of Directors and Operating Committee. Allocated capital is further reviewed at least annually and updated as needed.
The primary method the Firm uses to estimate the fair value of its reporting units is the income approach. This approach projects cash flows for the forecast period and uses the perpetuity growth method to calculate terminal values. These cash flows and terminal values, which are based on the reporting units' annual budgets and forecasts are then discounted using an appropriate discount rate. The discount rate used for each reporting unit represents an estimate of the cost of equity for that reporting unit and is determined considering the Firm's overall estimated cost of equity (estimated using the Capital Asset Pricing Model), as adjusted for the risk characteristics specific to each reporting unit (for example, for higher levels of risk or uncertainty associated with the business or management's forecasts and assumptions). To assess the reasonableness of the discount rates used for each reporting unit, management compares the discount rate to the estimated cost of equity for publicly traded institutions with similar businesses and risk characteristics. In addition, the weighted average cost of equity (aggregating the various reporting units) is compared with the Firm's overall estimated cost of equity to ensure reasonableness. The valuations derived from the discounted cash flow analysis are then compared with market-based trading and transaction multiples for relevant competitors. Trading and transaction comparables are used as general indicators to assess the overall reasonableness of the estimated fair values, although precise conclusions generally cannot be drawn due to the differences that naturally exist between the Firm's businesses and competitor institutions.
The Firm also takes into consideration a comparison between the aggregate fair values of the Firm's reporting units and JPMorgan Chase's market capitalization. In evaluating this comparison, the Firm considers several factors, including (i) a control premium that would exist in a market transaction, (ii) factors related to the level of execution risk that would exist at the Firmwide level that do not exist at the reporting unit level and (iii) short-term market volatility and other factors that do not directly affect the value of individual reporting units.

## Notes to consolidated financial statements

Unanticipated declines in business performance, increases in credit losses, increases in capital requirements, as well as deterioration in economic or market conditions, adverse regulatory or legislative changes or increases in the estimated market cost of equity, could cause the estimated fair values of the Firm's reporting units to decline in the future, which could result in a material impairment charge to earnings in a future period related to some portion of the associated goodwill.

Mortgage servicing rights
MSRs represent the fair value of expected future cash flows for performing servicing activities for others. The fair value considers estimated future servicing fees and ancillary revenue, offset by estimated costs to service the loans, and generally declines over time as net servicing cash flows are received, effectively amortizing the MSR asset against contractual servicing and ancillary fee income. MSRs are either purchased from third parties or recognized upon sale or securitization of mortgage loans if servicing is retained.

As permitted by U.S. GAAP, the Firm has elected to account for its MSRs at fair value. The Firm treats its MSRs as a single class of servicing assets based on the availability of market inputs used to measure the fair value of its MSR asset and its treatment of MSRs as one aggregate pool for risk management purposes. The Firm estimates the fair value of MSRs using an option-adjusted spread ("OAS") model, which projects MSR cash flows over multiple interest rate scenarios in conjunction with the Firm's prepayment model, and then discounts these cash flows at risk-adjusted rates. The model considers portfolio characteristics, contractually specified servicing fees, prepayment assumptions, delinquency rates, costs to service, late charges and other ancillary revenue, and other economic factors. The Firm compares fair value estimates and assumptions to observable market data where available, and also considers recent market activity and actual portfolio experience.

The fair value of MSRs is sensitive to changes in interest rates, including their effect on prepayment speeds. MSRs typically decrease in value when interest rates decline because declining interest rates tend to increase prepayments and therefore reduce the expected life of the net servicing cash flows that comprise the MSR asset. Conversely, securities (e.g., mortgage-backed securities), and certain derivatives (e.g., those for which the Firm
receives fixed-rate interest payments) increase in value when interest rates decline. JPMorgan Chase uses combinations of derivatives and securities to manage the risk of changes in the fair value of MSRs. The intent is to offset any interest-rate related changes in the fair value of MSRs with changes in the fair value of the related risk management instruments.

The following table summarizes MSR activity for the years ended December 31, 2022, 2021 and 2020.

| As of or for the year ended December 31, (in millions, except where otherwise noted) | 2022 |  | 2021 |  | 2020 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fair value at beginning of period | \$ | 5,494 | \$ | 3,276 | \$ | 4,699 |
| MSR activity: |  |  |  |  |  |  |
| Originations of MSRs |  | 798 |  | 1,659 |  | 944 |
| Purchase of MSRs |  | 1,400 |  | 1,363 |  | 248 |
| Disposition of MSRs ${ }^{(a)}$ |  | (822) |  | (114) |  | (176) |
| Net additions/(dispositions) |  | 1,376 |  | 2,908 |  | 1,016 |
| Changes due to collection/realization of expected cash flows |  | (936) |  | (788) |  | (899) |
| Changes in valuation due to inputs and assumptions: |  |  |  |  |  |  |
| Changes due to market interest rates and other ${ }^{(b)}$ |  | 2,022 |  | 404 |  | $(1,568)$ |
| Changes in valuation due to other inputs and assumptions: |  |  |  |  |  |  |
| Projected cash flows (e.g., cost to service) |  | 14 |  | 109 |  | (54) |
| Discount rates |  | - |  | - |  | 199 |
| Prepayment model changes and other ${ }^{(c)}$ |  | 3 |  | (415) |  | (117) |
| Total changes in valuation due to other inputs and assumptions |  | 17 |  | (306) |  | 28 |
| Total changes in valuation due to inputs and assumptions |  | 2,039 |  | 98 |  | $(1,540)$ |
| Fair value at December 31, | \$ | 7,973 | \$ | 5,494 | \$ | 3,276 |
| Change in unrealized gains/(losses) included in income related to MSRs held at December 31, | \$ | 2,039 | \$ | 98 | \$ | $(1,540)$ |
| Contractual service fees, late fees and other ancillary fees included in income |  | 1,535 |  | 1,298 |  | 1,325 |
| Third-party mortgage loans serviced at December 31, (in billions) |  | 584 |  | 520 |  | 448 |
| Servicer advances, net of an allowance for uncollectible amounts, at December 31, (in billions) ${ }^{\text {(d) }}$ |  | 0.8 |  | 1.6 |  | 1.8 |

(a) Includes excess MSRs transferred to agency-sponsored trusts in exchange for stripped mortgage backed securities ("SMBS") for the years ended December 31, 2022 and 2020. In each transaction, a portion of the SMBS was acquired by third parties at the transaction date; the Firm acquired the remaining balance of those SMBS as trading securities.
(b) Represents both the impact of changes in estimated future prepayments due to changes in market interest rates, and the difference between actual and expected prepayments.
(c) Represents changes in prepayments other than those attributable to changes in market interest rates.
(d) Represents amounts the Firm pays as the servicer (e.g., scheduled principal and interest, taxes and insurance), which will generally be reimbursed within a short period of time after the advance from future cash flows from the trust or the underlying loans. The Firm's credit risk associated with these servicer advances is minimal because reimbursement of the advances is typically senior to all cash payments to investors. In addition, the Firm maintains the right to stop payment to investors if the collateral is insufficient to cover the advance. However, certain of these servicer advances may not be recoverable if they were not made in accordance with applicable rules and agreements.

## Notes to consolidated financial statements

The following table presents the components of mortgage fees and related income (including the impact of MSR risk management activities) for the years ended December 31, 2022, 2021 and 2020.

| Year ended December 31, (in millions) |  | 2022 | 2021 | 2020 |
| :---: | :---: | :---: | :---: | :---: |
| CCB mortgage fees and related income |  |  |  |  |
| Production revenue | \$ | 497 | \$ 2,215 | \$ 2,629 |
| Net mortgage servicing revenue: Operating revenue: |  |  |  |  |
|  |  |  |  |  |
| Loan servicing revenue |  | 1,582 | 1,257 | 1,367 |
| Changes in MSR asset fair value due to collection/realization of expected cash flows |  | (936) | (788) | (899) |
| Total operating revenue |  | 646 | 469 | 468 |
| Risk management: |  |  |  |  |
| Changes in MSR asset fair value due to market interest rates and other ${ }^{(a)}$ |  | 2,022 | 404 | $(1,568)$ |
| Other changes in MSR asset fair value due to other inputs and assumptions in model ${ }^{(b)}$ |  | 17 | (306) | 28 |
| Change in derivative fair value and other |  | $(1,946)$ | (623) | 1,522 |
| Total risk management |  | 93 | (525) | (18) |
| Total net mortgage servicing revenue |  | 739 | (56) | 450 |
| Total CCB mortgage fees and related income |  | 1,236 | 2,159 | 3,079 |
| All other |  | 14 | 11 | 12 |
| Mortgage fees and related income | \$ | 1,250 | \$ 2,170 | \$ 3,091 |

(a) Represents both the impact of changes in estimated future prepayments due to changes in market interest rates, and the difference between actual and expected prepayments.
(b) Represents the aggregate impact of changes in model inputs and assumptions such as projected cash flows (e.g., cost to service), discount rates and changes in prepayments other than those attributable to changes in market interest rates (e.g., changes in prepayments due to changes in home prices).

Changes in fair value based on variations in assumptions generally cannot be easily extrapolated, because the relationship of the change in the assumptions to the change in fair value are often highly interrelated and may not be linear. In the following table, the effect that a change in a particular assumption may have on the fair value is calculated without changing any other assumption. In reality, changes in one factor may result in changes in another, which would either magnify or counteract the impact of the initial change.

The table below outlines the key economic assumptions used to determine the fair value of the Firm's MSRs at December 31, 2022 and 2021, and outlines the sensitivities of those fair values to immediate adverse changes in those assumptions, as defined below.

| December 31, (in millions, except rates) | 2022 |  | 2021 |  |
| :---: | :---: | :---: | :---: | :---: |
| Weighted-average prepayment speed assumption (constant prepayment rate) |  | 6.12 \% |  | 9.90 \% |
| Impact on fair value of 10\% adverse change |  | (183) |  | (210) |
| Impact on fair value of 20\% adverse change |  | (356) |  | (404) |
| Weighted-average option adjusted spread ${ }^{(a)}$ |  | 5.77 \% |  | 6.44 \% |
| Impact on fair value of 100 basis points adverse change | \$ | (341) | \$ | (225) |
| Impact on fair value of 200 basis points adverse change |  | (655) |  | (433) |

(a) Includes the impact of operational risk and regulatory capital.

## Note 16 - Premises and equipment

Premises and equipment, including leasehold improvements, are carried at cost less accumulated depreciation and amortization. JPMorgan Chase computes depreciation using the straight-line method over the estimated useful life of an asset. For leasehold improvements, the Firm uses the straight-line method computed over the lesser of the remainder of the lease term, or estimated useful life of the improvements.

JPMorgan Chase capitalizes certain costs associated with the acquisition or development of internal-use software. Once the software is ready for its intended use, these costs are amortized on a straight-line basis over the software's expected useful life.

Impairment is assessed periodically when events or changes in circumstances indicate that the carrying value of an asset may not be fully recoverable.

## Note 17 - Deposits

At December 31, 2022 and 2021, noninterest-bearing and interest-bearing deposits were as follows.

| December 31, (in millions) | 2022 | 2021 |
| :---: | :---: | :---: |
| U.S. offices |  |  |
| Noninterest-bearing (included \$26,363 and $\$ 8,115$ at fair value) ${ }^{(a)}$ | \$ 644,902 | \$ 711,525 |
| Interest-bearing (included \$586 and $\$ 629$ at fair value $)^{(\mathrm{a})}$ | 1,276,346 | 1,359,932 |
| Total deposits in U.S. offices | 1,921,248 | 2,071,457 |
| Non-U.S. offices |  |  |
| Noninterest-bearing (included \$1,398 and $\$ 2,420$ at fair value) ${ }^{(\mathrm{a})}$ | 27,005 | 26,229 |
| Interest-bearing (included \$273 and $\$ 169$ at fair value $)^{(a)}$ | 391,926 | 364,617 |
| Total deposits in non-U.S. offices | 418,931 | 390,846 |
| Total deposits | \$2,340,179 | \$2,462,303 |

(a) Includes structured notes classified as deposits for which the fair value option has been elected. Refer to Note 3 for further discussion.
(b) Prior-period amounts have been revised to conform with the current presentation.

At December 31, 2022 and 2021, time deposits in denominations that met or exceeded the insured limit were as follows.

| December 31, (in millions) | 2022 | 2021 |
| :--- | ---: | ---: |
| U.S. offices | $\$ \mathbf{6 4 , 6 2 2}$ | $\$ 38,970$ |
| Non-U.S. offices |  |  |
| (a) | $\mathbf{7 7 , 9 0 7}$ | 54,535 |
| Total | $\mathbf{\$ 1 4 2 , 5 2 9}$ | $\$ 93,505$ |

(a) Represents all time deposits in non-U.S. offices as these deposits typically exceed the insured limit.

At December 31, 2022, the remaining maturities of interest-bearing time deposits were as follows.

| December 31, 2022 <br> (in millions) | U.S. | Non-U.S. | Total |
| :--- | ---: | ---: | ---: |
| 2023 | $\$ 75,606$ | $\$ 75,088$ | $\$ 150,694$ |
| 2024 | 1,335 | 358 | 1,693 |
| 2025 | 300 | 17 | 317 |
| 2026 | 178 | 30 | 208 |
| 2027 | 131 | 897 | 1,028 |
| After 5 years | 572 | 109 | 681 |
| Total | $\$ 78,122$ | $\$ 76,499$ | $\$ 154,621$ |

## Notes to consolidated financial statements

## Note 18 - Leases

## Firm as lessee

At December 31, 2022, JPMorgan Chase and its subsidiaries were obligated under a number of noncancellable leases, predominantly operating leases for premises and equipment used primarily for business purposes. These leases generally have terms of 20 years or less, determined based on the contractual maturity of the lease, and include periods covered by options to extend or terminate the lease when the Firm is reasonably certain that it will exercise those options. All leases with lease terms greater than twelve months are reported as a lease liability with a corresponding right-of-use ("ROU") asset. None of these lease agreements impose restrictions on the Firm's ability to pay dividends, engage in debt or equity financing transactions or enter into further lease agreements. Certain of these leases contain escalation clauses that will increase rental payments based on maintenance, utility and tax increases, which are non-lease components. The Firm elected not to separate lease and non-lease components of a contract for its real estate leases. As such, real estate lease payments represent payments on both lease and non-lease components.

Operating lease liabilities and ROU assets are recognized at the lease commencement date based on the present value of the future minimum lease payments over the lease term. The future lease payments are discounted at a rate that estimates the Firm's collateralized borrowing rate for financing instruments of a similar term and are included in accounts payable and other liabilities. The operating lease ROU asset, included in premises and equipment, also includes any lease prepayments made, plus initial direct costs incurred, less any lease incentives received. Rental expense associated with operating leases is recognized on a straight-line basis over the lease term, and generally included in occupancy expense in the Consolidated statements of income.

The following tables provide information related to the Firm's operating leases:

| December 31, <br> (in millions, except where otherwise noted) | 2022 |  | 2021 |  |
| :---: | :---: | :---: | :---: | :---: |
| Right-of-use assets | \$ | 7,782 | \$ | 7,888 |
| Lease liabilities |  | 8,183 |  | 8,328 |
| Weighted average remaining lease term (in years) |  | 8.4 |  | 8.5 |
| Weighted average discount rate |  | 3.55 \% |  | 3.40 \% |


| Supplemental cash flow information |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Cash paid for amounts included in the <br> measurement of lease liabilities - operating <br> cash flows | $\$$ |  |  |  |
| Supplemental non-cash information |  |  |  |  |
| Right-of-use assets obtained in exchange <br> for operating lease obligations | $\$$ | $\mathbf{1 , 4 3 5}$ | $\$$ | 1,167 |


| Year ended December 31, <br> (in millions) |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
| Rental expense |  |  |  |  |
| Gross rental expense | $\$$ | $\mathbf{2 , 0 7 9}$ | $\$$ | 2,086 |
| Sublease rental income |  | $\mathbf{( 1 1 9 )}$ | $(129)$ |  |
| Net rental expense | $\$$ | $\mathbf{1 , 9 6 0}$ | $\$$ | 1,957 |

The following table presents future payments under operating leases as of December 31, 2022:

| Year ended December 31, (in millions) |  |  |
| :--- | ---: | ---: |
| 2023 | $\$$ | 1,572 |
| 2024 | 1,433 |  |
| 2025 | 1,273 |  |
| 2026 | 1,034 |  |
| 2027 | 887 |  |
| After 2027 | 3,382 |  |
| Total future minimum lease payments | 9,581 |  |
| Less: Imputed interest | $(1,398)$ |  |
| Total | $\$$ | 8,183 |

In addition to the table above, as of December 31, 2022, the Firm had additional future operating lease commitments of $\$ 588$ million that were signed but had not yet commenced. These operating leases will commence between 2023 and 2026 with lease terms up to 21 years.

## Firm as lessor

The Firm provides auto and equipment lease financing to its customers through lease arrangements with lease terms that may contain renewal, termination and/or purchase options. The Firm's lease financings are predominantly auto operating leases. These assets subject to operating leases are recognized in other assets on the Firm's Consolidated balance sheets and are depreciated on a straight-line basis over the lease term to reduce the asset to its estimated residual value. Depreciation expense is included in technology, communications and equipment expense in the Consolidated statements of income. The Firm's lease income is generally recognized on a straight-line basis over the lease term and is included in other income in the Consolidated statements of income.

On a periodic basis, the Firm assesses leased assets for impairment, and if the carrying amount of the leased asset exceeds the undiscounted cash flows from the lease payments and the estimated residual value upon disposition of the leased asset, an impairment loss is recognized.
The risk of loss on auto and equipment leased assets relating to the residual value of the leased assets is monitored through projections of the asset residual values at lease origination and periodic review of residual values, and is mitigated through arrangements with certain manufacturers or lessees.

The following table presents the carrying value of assets subject to leases reported on the Consolidated balance sheets:

| December 31, <br> (in millions) | $\mathbf{2 0 2 2}$ | 2021 |  |
| :--- | ---: | ---: | ---: |
| Carrying value of assets subject to <br> operating leases, net of accumulated <br> depreciation |  |  |  |
| Accumulated depreciation | $\mathbf{1 2 , 3 0 2}$ | $\$$ | $\mathbf{1 7 , 5 5 3}$ |

The following table presents the Firm's operating lease income and the related depreciation expense on the Consolidated statements of income:

| Year ended December 31, <br> (in millions) |  | $\mathbf{2 0 2 2}$ |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Operating lease income | $\mathbf{\$}$ | $\mathbf{3 , 6 5 4}$ | $\$$ | 4,914 | $\$$ | 5,539 |
| Depreciation expense |  | $\mathbf{2 , 4 7 5}$ | $\mathbf{3 , 3 8 0}$ | $\mathbf{4 , 2 5 7}$ |  |  |

The following table presents future receipts under operating leases as of December 31, 2022:

| Year ended December 31, (in millions) |  |  |
| :--- | ---: | ---: |
| 2023 | $\$$ | 2,172 |
| 2024 |  | 1,181 |
| 2025 | 389 |  |
| 2026 | 39 |  |
| 2027 | 10 |  |
| After 2027 | 15 |  |
| Total future minimum lease receipts | 3,806 |  |

## Notes to consolidated financial statements

## Note 19 - Accounts payable and other liabilities

Accounts payable and other liabilities consist of brokerage payables, which include payables to customers and payables related to security purchases that did not settle, as well as other accrued expenses, such as compensation accruals, credit card rewards liability, operating lease liabilities, income tax payables, and litigation reserves.

The following table details the components of accounts payable and other liabilities.

| December 31, (in millions) | 2022 |  | 2021 |  |
| :--- | ---: | ---: | ---: | ---: |
| Brokerage payables | $\$$ | $\mathbf{1 8 8 , 6 9 2}$ | $\$$ | 169,172 |
| Other payables and liabilities ${ }^{(\mathrm{a})}$ | $\mathbf{1 1 1 , 4 4 9}$ |  | 93,583 |  |
| Total accounts payable and other | $\$$ | $\mathbf{3 0 0 , 1 4 1}$ | $\$$ | 262,755 |

(a) Includes credit card rewards liability of $\$ 11.3$ billion and $\$ 9.8$ billion at December 31, 2022 and 2021, respectively.

## Note 20 - Long-term debt

JPMorgan Chase issues long-term debt denominated in various currencies, predominantly U.S. dollars, with both fixed and variable interest rates. Included in senior and subordinated debt below are various equity-linked or other indexed instruments, which the Firm has elected to measure at fair value. Changes in fair value are recorded in principal transactions revenue in the Consolidated statements of income, except for unrealized gains/(losses) due to DVA which are recorded in OCI. The following table is a summary of long-term debt carrying values (including unamortized premiums and discounts, issuance costs, valuation adjustments and fair value adjustments, where applicable) by remaining contractual maturity as of December 31, 2022.

| By remaining maturity at December 31, <br> (in millions, except rates) |  | 2022 |  |  |  |  |  |  |  | 2021 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Under 1 year |  | 1-5 years |  | After 5 years |  | Total |  | Total |
| Parent company |  |  |  |  |  |  |  |  |  |  |
| Senior debt: | Fixed rate | \$ | 6,770 | \$ | 78,821 | \$ | 108,924 | \$ | 194,515 | 202,370 |
|  | Variable rate |  | 604 |  | 8,053 |  | 2,908 |  | 11,565 | 13,343 |
|  | Interest rates ${ }^{(e)}$ |  | 2.64 \% |  | 2.67 \% |  | 3.41 \% |  | 3.06 \% | 2.67 \% |
| Subordinated debt: | Fixed rate | \$ | 1,982 | \$ | 8,809 | \$ | 8,902 | \$ | 19,693 | 18,269 |
|  | Variable rate |  | - |  | - |  | - |  | - | - |
|  | Interest rates ${ }^{(e)}$ |  | 3.38 \% |  | 4.54 \% |  | 4.69 \% |  | 4.50 \% | 4.24 \% |
|  | Subtotal | \$ | 9,356 | \$ | 95,683 | \$ | 120,734 | \$ | 225,773 | 233,982 |
| Subsidiaries |  |  |  |  |  |  |  |  |  |  |
| Federal Home Loan Banks advances: | Fixed rate | \$ | 4 | \$ | 43 | \$ | 46 | \$ | 93 | 110 |
|  | Variable rate |  | 7,000 |  | 4,000 |  | - |  | 11,000 | 11,000 |
|  | Interest rates ${ }^{(e)}$ |  | 4.36 \% |  | 4.22 \% |  | 6.08 \% |  | 4.32 \% | 0.23 \% |
| Senior debt: | Fixed rate | \$ | 2,358 | \$ | 6,743 | \$ | 6,282 | \$ | 15,383 | 15,504 |
|  | Variable rate |  | 13,445 |  | 22,562 |  | 5,499 |  | 41,506 | 38,147 |
|  | Interest rates ${ }^{(e)}$ |  | 4.12 \% |  | 4.85\% |  | 1.63 \% |  | 2.02 \% | 2.09 \% |
| Subordinated debt: | Fixed rate | \$ | - | \$ | 262 | \$ | - | \$ | 262 | 287 |
|  | Variable rate |  | - |  | - |  | - |  | - | - |
|  | Interest rates ${ }^{(e)}$ |  | - \% |  | 8.25 \% |  | - \% |  | 8.25 \% | 8.25 \% |
|  | Subtotal | \$ | 22,807 | \$ | 33,610 | \$ | 11,827 | \$ | 68,244 | 65,048 |
| Junior subordinated debt: | Fixed rate | \$ | - | \$ | - | \$ | 550 | \$ | 550 | 678 |
|  | Variable rate |  | - |  | 373 |  | 925 |  | 1,298 | 1,297 |
|  | Interest rates ${ }^{(e)}$ |  | - \% |  | 5.03 \% |  | 6.67 \% |  | 6.33 \% | 3.20 \% |
|  | Subtotal | \$ | - | \$ | 373 | \$ | 1,475 | \$ | 1,848 | 1,975 |
| Total long-term debt ${ }^{(\mathrm{a})(\mathrm{b})(\mathrm{c})}$ |  | \$ | 32,163 | \$ | 129,666 | \$ | 134,036 | \$ | 295,865 | 301,005 |
| Long-term beneficial interests: | Fixed rate | \$ | 1,000 | \$ | 999 | \$ | - | \$ | 1,999 | 1,747 |
|  | Variable rate |  | - |  | - |  | 143 |  | 143 | 829 |
|  | Interest rates ${ }^{(e)}$ |  | 1.53 \% |  | 3.97 \% |  | 3.60 \% |  | 2.81 \% | 1.57 \% |
| Total long-term beneficial interests ${ }^{\text {(d) }}$ |  | \$ | 1,000 | \$ | 999 | \$ | 143 | \$ | 2,142 | 2,576 |

(a) Included Iong-term debt of $\$ 13.8$ billion and $\$ 14.1$ billion secured by assets totaling $\$ 208.3$ billion and $\$ 170.6$ billion at December 31, 2022 and 2021 , respectively. The amount of long-term debt secured by assets does not include amounts related to hybrid instruments.
(b) Included $\$ 72.3$ billion and $\$ 74.9$ billion of long-term debt accounted for at fair value at December 31, 2022 and 2021, respectively.
(c) Included $\$ 10.3$ billion and $\$ 15.8$ billion of outstanding zero-coupon notes at December 31, 2022 and 2021, respectively. The aggregate principal amount of these notes at their respective maturities is $\$ 45.3$ billion and $\$ 46.4$ billion, respectively. The aggregate principal amount reflects the contractual principal payment at maturity, which may exceed the contractual principal payment at the Firm's next call date, if applicable.
(d) Included on the Consolidated balance sheets in beneficial interests issued by consolidated VIEs. Also included $\$ 5$ million and $\$ 12$ million accounted for at fair value at December 31, 2022 and 2021, respectively. Excluded short-term commercial paper and other short-term beneficial interests of $\$ 10.5$ billion and $\$ 8.2$ billion at December 31, 2022 and 2021, respectively.
(e) The interest rates shown are the weighted average of contractual rates in effect at December 31, 2022 and 2021, respectively, including non-U.S. dollar fixed- and variable-rate issuances, which excludes the effects of the associated derivative instruments used in hedge accounting relationships, if applicable. The interest rates shown exclude structured notes accounted for at fair value.
(f) At December 31, 2022, long-term debt in the aggregate of $\$ 194.9$ billion was redeemable at the option of JPMorgan Chase, in whole or in part, prior to maturity, based on the terms specified in the respective instruments.
(g) The aggregate carrying values of debt that matures in each of the five years subsequent to 2022 is $\$ 32.2$ billion in 2023 , $\$ 40.1$ billion in 2024 , $\$ 34.3$ billion in 2025, \$32.5 billion in 2026 and $\$ 22.8$ billion in 2027.

## Notes to consolidated financial statements

The weighted-average contractual interest rates for total long-term debt excluding structured notes accounted for at fair value were $3.26 \%$ and $2.67 \%$ as of December 31, 2022 and 2021, respectively. In order to modify exposure to interest rate and currency exchange rate movements, JPMorgan Chase utilizes derivative instruments, primarily interest rate and cross-currency interest rate swaps, in conjunction with some of its debt issuances. The use of these instruments modifies the Firm's interest expense on the associated debt. The modified weighted-average interest rates for total long-term debt, including the effects of related derivative instruments, were $4.89 \%$ and $1.43 \%$ as of December 31, 2022 and 2021, respectively.

JPMorgan Chase \& Co. has guaranteed certain long-term debt of its subsidiaries, including structured notes. These guarantees rank on parity with the Firm's other unsecured and unsubordinated indebtedness. The amount of such guaranteed long-term debt and structured notes was $\$ 28.2$ billion and $\$ 16.4$ billion at December 31, 2022 and 2021, respectively.

The Firm's unsecured debt does not contain requirements that would call for an acceleration of payments, maturities or changes in the structure of the existing debt, provide any limitations on future borrowings or require additional collateral, based on unfavorable changes in the Firm's credit ratings, financial ratios, earnings or stock price.

## Note 21 - Preferred stock

At December 31, 2022 and 2021, JPMorgan Chase was authorized to issue 200 million shares of preferred stock, in one or more series, with a par value of $\$ 1$ per share. In the event of a liquidation or dissolution of the Firm, JPMorgan Chase's preferred stock then outstanding takes precedence over the Firm's common stock with respect to the payment of dividends and the distribution of assets.

The following is a summary of JPMorgan Chase's non-cumulative preferred stock outstanding as of December 31, 2022 and 2021, and the quarterly dividend declarations for the years ended December 31, 2022, 2021 and 2020.

|  | Shares ${ }^{(a)}$ |  | Carrying value (in millions) |  |  |  | Issue date | Contractual rate in effect at December 31, 2022 | Earliest redemption date ${ }^{(\text {b })}$ | Floatingannualizedand rate ${ }^{(c)}$ | Dividend declared per share ${ }^{(\mathrm{d})}$ |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | December 31, |  | December 31, |  |  |  |  |  |  |  | Year ended December 31, |  |  |  |  |  |  |
|  | 2022 | 2021 |  | 2022 |  | 2021 |  |  |  |  |  | 2022 |  | 2021 |  | 2020 |  |
| Fixed-rate: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Series Y | - | - | \$ | - | \$ | - | 2/12/2015 | - \% | 3/1/2020 | NA | \$ | - | \$ | - | \$ | 153.13 |  |
| Series AA | - | - |  | - |  | - | 6/4/2015 | - | 9/1/2020 | NA |  | - |  | 305.00 |  | 610.00 |  |
| Series BB | - | - |  | - |  | - | 7/29/2015 | - | 9/1/2020 | NA |  | - |  | 307.50 |  | 615.00 |  |
| Series DD | 169,625 | 169,625 |  | 1,696 |  | 1,696 | 9/21/2018 | 5.750 | 12/1/2023 | NA |  | 575.00 |  | 575.00 |  | 575.00 |  |
| Series EE | 185,000 | 185,000 |  | 1,850 |  | 1,850 | 1/24/2019 | 6.000 | 3/1/2024 | NA |  | 600.00 |  | 600.00 |  | 600.00 |  |
| Series GG | 90,000 | 90,000 |  | 900 |  | 900 | 11/7/2019 | 4.750 | 12/1/2024 | NA |  | 475.00 |  | 475.00 |  | 506.67 | (e) |
| Series JJ | 150,000 | 150,000 |  | 1,500 |  | 1,500 | 3/17/2021 | 4.550 | 6/1/2026 | NA |  | 455.00 |  | 321.03 |  | NA | (e) |
| Series LL | 185,000 | 185,000 |  | 1,850 |  | 1,850 | 5/20/2021 | 4.625 | 6/1/2026 | NA |  | 462.52 |  | 245.39 |  | NA | (e) |
| Series MM | 200,000 | 200,000 |  | 2,000 |  | 2,000 | 7/29/2021 | 4.200 | 9/1/2026 | NA |  | 420.00 |  | 142.33 |  | NA | (e) |
| Fixed-to-floating-rate: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Series I | - | 293,375 | \$ | - | \$ | 2,934 | 4/23/2008 | - | 4/30/2018 | LIBOR + 3.47\% | \$ | 375.03 | \$ | 370.38 | \$ | 428.03 |  |
| Series Q | 150,000 | 150,000 |  | 1,500 |  | 1,500 | 4/23/2013 | 5.150 | 5/1/2023 | LIBOR + 3.25 |  | 515.00 |  | 515.00 |  | 515.00 |  |
| Series R | 150,000 | 150,000 |  | 1,500 |  | 1,500 | 7/29/2013 | 6.000 | 8/1/2023 | LIBOR + 3.30 |  | 600.00 |  | 600.00 |  | 600.00 |  |
| Series S | 200,000 | 200,000 |  | 2,000 |  | 2,000 | 1/22/2014 | 6.750 | 2/1/2024 | LIBOR + 3.78 |  | 675.00 |  | 675.00 |  | 675.00 |  |
| Series U | 100,000 | 100,000 |  | 1,000 |  | 1,000 | 3/10/2014 | 6.125 | 4/30/2024 | LIBOR + 3.33 |  | 612.50 |  | 612.50 |  | 612.50 |  |
| Series V | - | 250,000 |  | - |  | 2,500 | 6/9/2014 | - | 7/1/2019 | LIBOR + 3.32 |  | 340.91 |  | 353.65 |  | 436.85 |  |
| Series X | 160,000 | 160,000 |  | 1,600 |  | 1,600 | 9/23/2014 | 6.100 | 10/1/2024 | LIBOR + 3.33 |  | 610.00 |  | 610.00 |  | 610.00 |  |
| Series Z | - | 200,000 |  | - |  | 2,000 | 4/21/2015 | - | 5/1/2020 | LIBOR + 3.80 |  | - |  | 401.44 |  | 453.52 |  |
| Series CC | 125,750 | 125,750 |  | 1,258 |  | 1,258 | 10/20/2017 | LIBOR + 2.58 | 11/1/2022 | LIBOR + 2.58 |  | 526.27 |  | 462.50 |  | 462.50 | ${ }^{(f)}$ |
| Series FF | 225,000 | 225,000 |  | 2,250 |  | 2,250 | 7/31/2019 | 5.000 | 8/1/2024 | SOFR + 3.38 |  | 500.00 |  | 500.00 |  | 500.00 |  |
| Series HH | 300,000 | 300,000 |  | 3,000 |  | 3,000 | 1/23/2020 | 4.600 | 2/1/2025 | SOFR + 3.125 |  | 460.00 |  | 460.00 |  | 470.22 | (e) |
| Series II | 150,000 | 150,000 |  | 1,500 |  | 1,500 | 2/24/2020 | 4.000 | 4/1/2025 | SOFR + 2.745 |  | 400.00 |  | 400.00 |  | 341.11 | (e) |
| Series KK | 200,000 | 200,000 |  | 2,000 |  | 2,000 | 5/12/2021 | 3.650 | 6/1/2026 | CMT + 2.85 |  | 365.00 |  | 201.76 |  | NA | (e) |
| Total preferred stock | 2,740,375 | 3,483,750 |  | 27,404 | \$ | 34,838 |  |  |  |  |  |  |  |  |  |  |  |

(a) Represented by depositary shares.
(b) Fixed-to-floating rate notes convert to a floating rate at the earliest redemption date.
(c) Floating annualized rate includes three-month LIBOR, three-month term SOFR or five-year Constant Maturity Treasury ("CMT") rate, as applicable, plus the spreads noted above.
(d) Dividends on preferred stock are discretionary and non-cumulative. When declared, dividends are declared quarterly. Dividends are payable quarterly on fixed-rate preferred stock. Dividends are payable semiannually on fixed-to-floating-rate preferred stock while at a fixed rate, and payable quarterly after converting to a floating rate.
(e) The initial dividend declared is prorated based on the number of days outstanding for the period. Dividends were declared quarterly thereafter at the contractual rate.
(f) The dividend rate for Series CC preferred stock became floating and payable quarterly starting on November 1, 2022; prior to which the dividend rate was fixed at $4.625 \%$ or $\$ 231.25$ per share payable semiannually.

Each series of preferred stock has a liquidation value and redemption price per share of $\$ 10,000$, plus accrued but unpaid dividends. The aggregate liquidation value was $\$ 27.7$ billion at December 31, 2022.

## Notes to consolidated financial statements

## Redemptions

On October 31, 2022, the Firm redeemed all $\$ 2.93$ billion of its fixed to floating rate non-cumulative perpetual preferred stock, Series I.

On October 3, 2022, the Firm redeemed all $\$ 2.5$ billion of its fixed-to-floating rate non-cumulative preferred stock, Series V.
On February 1, 2022, the Firm redeemed all $\$ 2.0$ billion of its fixed-to-floating rate non-cumulative preferred stock, Series $Z$.
On June 1, 2021, the Firm redeemed all $\$ 1.43$ billion of its $6.10 \%$ non-cumulative preferred stock, Series AA and all $\$ 1.15$ billion of its $6.15 \%$ non-cumulative preferred stock, Series BB.
Redemption rights
Each series of the Firm's preferred stock may be redeemed on any dividend payment date on or after the earliest redemption date for that series. All outstanding preferred stock series may also be redeemed following a "capital treatment event," as described in the terms of each series. Any redemption of the Firm's preferred stock is subject to non-objection from the Board of Governors of the Federal Reserve System (the "Federal Reserve").

## Note 22 - Common stock

At December 31, 2022 and 2021, JPMorgan Chase was authorized to issue 9.0 billion shares of common stock with a par value of $\$ 1$ per share.
Common shares issued (reissuances from treasury) by JPMorgan Chase during the years ended December 31, 2022, 2021 and 2020 were as follows.

| Year ended December 31, (in millions) | 2022 | 2021 | 2020 |
| :---: | :---: | :---: | :---: |
| Total issued - balance at January 1 | 4,104.9 | 4,104.9 | 4,104.9 |
| Treasury - balance at January 1 | $(1,160.8)$ | $(1,055.5)$ | $(1,020.9)$ |
| Repurchase | (23.1) | (119.7) | (50.0) |
| Reissuance: |  |  |  |
| Employee benefits and compensation plans | 12.0 | 13.5 | 14.2 |
| Employee stock purchase plans | 1.2 | 0.9 | 1.2 |
| Total reissuance | 13.2 | 14.4 | 15.4 |
| Total treasury - balance at December 31 | $(1,170.7)$ | $(1,160.8)$ | $(1,055.5)$ |
| Outstanding at December 31 | 2,934.2 | 2,944.1 | 3,049.4 |

Effective May 1, 2022, the Firm is authorized to purchase up to $\$ 30$ billion of common shares under its common share repurchase program, which superseded the previously approved repurchase program under which the Firm was authorized to purchase up to $\$ 30$ billion of common shares. In the second half of 2022, as a result of the expected increases in regulatory capital requirements, the Firm temporarily suspended share repurchases. In the first quarter of 2023, the Firm resumed repurchasing shares under its common share repurchase program.

The following table sets forth the Firm's repurchases of common stock for the years ended December 31, 2022, 2021 and 2020.

| Year ended December 31, <br> (in millions) | 2022 | 2021 | 2020 |
| :--- | :---: | :---: | :---: |
| Total number of shares of common <br> stock repurchased | $\mathbf{2 3 . 1}$ | 119.7 | 50.0 |
| Aggregate purchase price of <br> common stock repurchases | $\mathbf{\$ 3 , 1 2 2}$ | $\$ 18,448$ | $\$ 6,397$ |

(a) As directed by the Federal Reserve, total net repurchases and common stock dividends in the first and second quarter of 2021 were restricted and could not exceed the average of the Firm's net income for the four preceding calendar quarters. Effective July 1, 2021, the Firm became subject to the normal capital distribution restrictions provided under the regulatory capital framework.
(b) On March 15, 2020, in response to the economic disruptions caused by the COVID-19 pandemic, the Firm temporarily suspended repurchases of its common stock. Subsequently, the Federal Reserve directed all large banks, including the Firm, to discontinue net share repurchases through the end of 2020.

The Board of Directors' authorization to repurchase common shares is utilized at management's discretion, and the timing of purchases and the exact amount of common shares that may be repurchased is subject to various factors, including market conditions; legal and regulatory considerations affecting the amount and timing of repurchase activity; the Firm's capital position (taking into account goodwill and intangibles); internal capital generation; and alternative investment opportunities. The $\$ 30$ billion common share repurchase program approved by the Board does not establish specific price targets or timetables. The repurchase program may be suspended by management at any time; and may be executed through open market purchases or privately negotiated transactions, or utilizing Rule 10b5-1 plans, which are written trading plans that the Firm may enter into from time to time under Rule 10b5-1 of the Securities Exchange Act of 1934 and which allow the Firm to repurchase its common shares during periods when it may otherwise not be repurchasing common shares - for example, during internal trading blackout periods.
As of December 31, 2022, approximately 58.9 million shares of common stock were reserved for issuance under various employee incentive, compensation, option and stock purchase plans, and directors' compensation plans.

## Notes to consolidated financial statements

## Note 23 - Earnings per share

Basic earnings per share ("EPS") is calculated using the two-class method. Under the two-class method, all earnings (distributed and undistributed) are allocated to common stock and participating securities. JPMorgan Chase grants RSUs under its share-based compensation programs, predominantly all of which entitle recipients to receive nonforfeitable dividends during the vesting period on a basis equivalent to dividends paid to holders of the Firm's common stock. These unvested RSUs meet the definition of participating securities based on their respective rights to receive nonforfeitable dividends, and they are treated as a separate class of securities in computing basic EPS. Participating securities are not included as incremental shares in computing diluted EPS; refer to Note 9 for additional information.
Diluted EPS incorporates the potential impact of contingently issuable shares, including awards which require future service as a condition of delivery of the underlying common stock. Diluted EPS is calculated under both the two-class and treasury stock methods, and the more dilutive amount is reported. For each of the periods presented in the table below, diluted EPS calculated under the two-class method was more dilutive.
The following table presents the calculation of net income applicable to common stockholders and basic and diluted EPS for the years ended December 31, 2022, 2021 and 2020.

| Year ended December 31, (in millions, except per share amounts) | 2022 | 2021 | 2020 |
| :---: | :---: | :---: | :---: |
| Basic earnings per share |  |  |  |
| Net income | \$ 37,676 | \$ 48,334 | \$ 29,131 |
| Less: Preferred stock dividends | 1,595 | 1,600 | 1,583 |
| Net income applicable to common equity | 36,081 | 46,734 | 27,548 |
| Less: Dividends and undistributed earnings allocated to participating securities | 189 | 231 | 138 |
| Net income applicable to common stockholders | \$ 35,892 | \$ 46,503 | \$ 27,410 |
| Total weighted-average basic shares outstanding | 2,965.8 | 3,021.5 | 3,082.4 |
| Net income per share | \$ 12.10 | \$ 15.39 | \$ 8.89 |
| Diluted earnings per share |  |  |  |
| Net income applicable to common stockholders | \$ 35,892 | \$ 46,503 | \$ 27,410 |
| Total weighted-average basic shares outstanding | 2,965.8 | 3,021.5 | 3,082.4 |
| Add: Dilutive impact of SARs and employee stock options, unvested PSUs and nondividend-earning RSUS | 4.2 | 5.1 | 5.0 |
| Total weighted-average diluted shares outstanding | 2,970.0 | 3,026.6 | 3,087.4 |
| Net income per share | \$ 12.09 | \$ 15.36 | \$ 8.88 |

## Note 24 - Accumulated other comprehensive income/(Ioss)

AOCI includes the after-tax change in unrealized gains and losses on investment securities, foreign currency translation adjustments (including the impact of related derivatives), fair value changes of excluded components on fair value hedges, cash flow hedging activities, net gain/(loss) related to the Firm's defined benefit pension and OPEB plans, and fair value option-elected liabilities arising from changes in the Firm's own credit risk (DVA).

| Year ended December 31, (in millions) | Unrealized gains/(losses) on investment securities | Translation adjustments , net of hedges |  | Fair value hedges |  | Cash flow hedges |  | Defined benefit pension and OPEB plans |  | DVA on fair value option elected liabilities |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Balance at December 31, 2019 | \$ 4,057 | \$ | (707) | \$ | (131) | \$ | 63 | \$ | $(1,344)$ | \$ | (369) | \$ | 1,569 |
| Net change | 4,123 |  | 234 |  | 19 |  | 2,320 |  | 212 |  | (491) |  | 6,417 |
| Balance at December 31, 2020 | \$ 8,180 ${ }^{\text {(a) }}$ | \$ | (473) | \$ | (112) | \$ | 2,383 | \$ | $(1,132)$ | \$ | (860) | \$ | 7,986 |
| Net change | $(5,540)$ |  | (461) |  | (19) |  | $(2,679)$ |  | 922 |  | (293) |  | $(8,070)$ |
| Balance at December 31, 2021 | \$ 2,640 ${ }^{\text {(a) }}$ | \$ | (934) | \$ | (131) | \$ | (296) | \$ | (210) | \$ | $(1,153)$ | \$ | (84) |
| Net change | $(11,764)$ |  | (611) |  | 98 |  | $(5,360)$ |  | $(1,241)$ |  | 1,621 |  | $(17,257)$ |
| Balance at December 31, 2022 | \$ (9,124) ${ }^{\text {(a) }}$ | \$ | $(1,545)$ | \$ | (33) | \$ | $(5,656)$ | \$ | $(1,451)$ | \$ | 468 | \$ | $(17,341)$ |

(a) Includes after-tax net unamortized unrealized gains/(losses) of $\$(1.3)$ billion, $\$ 2.4$ billion, and $\$ 3.3$ billion related to AFS securities that have been transferred to HTM for the years ended 2022, 2021 and 2020, respectively. Refer to Note 10 for further information.
The following table presents the pre-tax and after-tax changes in the components of OCI.

| Year ended December 31, (in millions) | 2022 |  |  | 2021 |  |  |  | 2020 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Pre-tax | Tax effect | After-tax | Pre-tax |  | Tax effect | After-tax | Pre-tax | Tax effect | After-tax |
| Unrealized gains/(losses) on investment securities |  |  |  |  |  |  |  |  |  |  |
| Net unrealized gains/(losses) arising during the period | \$(17,862) | \$ 4,290 | \$(13,572) | \$ $(7,634)$ | \$ | 1,832 | \$ $(5,802)$ | \$ 6,228 | \$ $(1,495)$ | \$ 4,733 |
| Reclassification adjustment for realized (gains)/Iosses included in net income ${ }^{(a)}$ | 2,380 | (572) | 1,808 | 345 |  | (83) | 262 | (802) | 192 | (610) |
| Net change | $(15,482)$ | 3,718 | $(11,764)$ | $(7,289)$ |  | 1,749 | $(5,540)$ | 5,426 | $(1,303)$ | 4,123 |
| Translation adjustments ${ }^{(\text {b })}$ |  |  |  |  |  |  |  |  |  |  |
| Translation | $(3,574)$ | 265 | $(3,309)$ | $(2,447)$ |  | 125 | $(2,322)$ | 1,407 | (103) | 1,304 |
| Hedges | 3,553 | (855) | 2,698 | 2,452 |  | (591) | 1,861 | $(1,411)$ | 341 | $(1,070)$ |
| Net change | (21) | (590) | (611) | 5 |  | (466) | (461) | (4) | 238 | 234 |
| Fair value hedges, net change ${ }^{(c)}$ | 130 | (32) | 98 | (26) |  | 7 | (19) | 25 | (6) | 19 |
| Cash flow hedges |  |  |  |  |  |  |  |  |  |  |
| Net unrealized gains/(losses) arising during the period | $(7,473)$ | 1,794 | $(5,679)$ | $(2,303)$ |  | 553 | $(1,750)$ | 3,623 | (870) | 2,753 |
| Reclassification adjustment for realized (gains)/Iosses included in net income ${ }^{(d)}$ | 420 | (101) | 319 | $(1,222)$ |  | 293 | (929) | (570) | 137 | (433) |
| Net change | $(7,053)$ | 1,693 | $(5,360)$ | $(3,525)$ |  | 846 | $(2,679)$ | 3,053 | (733) | 2,320 |
| Defined benefit pension and OPEB plans, net change ${ }^{(e)}$ | $(1,459)$ | 218 | $(1,241)$ | 1,129 |  | (207) | 922 | 214 | (2) | 212 |
| DVA on fair value option elected liabilities, net change | 2,141 | (520) | 1,621 | (393) |  | 100 | (293) | (648) | 157 | (491) |
| Total other comprehensive income/(loss) | \$(21,744) | \$ 4,487 | \$ $(17,257)$ | \$ $(10,099)$ | \$ | 2,029 | \$ $(8,070)$ | \$ 8,066 | \$ $(1,649)$ | \$ 6,417 |

(a) The pre-tax amount is reported in Investment securities gains/(losses) in the Consolidated statements of income.
(b) Reclassifications of pre-tax realized gains/(losses) on translation adjustments and related hedges are reported in other income/expense in the Consolidated statements of income. During the year ended December 31, 2022, the Firm reclassified a net pre-tax loss of \$8 million to other expense and other revenue related to the liquidation of certain legal entities, $\$ 38$ million related to the net investment hedge gains and $\$ 46$ million loss related to cumulative translation adjustment. During the year ended December 31, 2021, the Firm reclassified a net pre-tax loss of $\$ 7$ million. During the year ended December 31, 2020, the Firm reclassified net pre-tax gain of $\$ 6$ million.
(c) Represents changes in fair value of cross-currency swaps attributable to changes in cross-currency basis spreads, which are excluded from the assessment of hedge effectiveness and recorded in other comprehensive income. The initial cost of cross-currency basis spreads is recognized in earnings as part of the accrual of interest on the cross-currency swap.
(d) The pre-tax amounts are primarily recorded in noninterest revenue, net interest income and compensation expense in the Consolidated statements of income.
(e) During the year ended December 31, 2022, a remeasurement of the Firm's U.S. principal defined benefit plan in the third quarter, was required as a result of a pension settlement. The remeasurement resulted in a net decrease of $\$ 1.4$ billion in pre-tax AOCI. Refer to Note 8 for further information.

## Notes to consolidated financial statements

## Note 25 - Income taxes

JPMorgan Chase and its eligible subsidiaries file a consolidated U.S. federal income tax return. JPMorgan Chase uses the asset and liability method to provide for income taxes on all transactions recorded in the Consolidated Financial Statements. This method requires that income taxes reflect the expected future tax consequences of temporary differences between the carrying amounts of assets or liabilities for book and tax purposes. Accordingly, a deferred tax asset or liability for each temporary difference is determined based on the tax rates that the Firm expects to be in effect when the underlying items of income and expense are realized. JPMorgan Chase's expense for income taxes includes the current and deferred portions of that expense. A valuation allowance is established to reduce deferred tax assets to the amount the Firm expects to realize.
Due to the inherent complexities arising from the nature of the Firm's businesses, and from conducting business and being taxed in a substantial number of jurisdictions, significant judgments and estimates are required to be made. Agreement of tax liabilities between JPMorgan Chase and the many tax jurisdictions in which the Firm files tax returns may not be finalized for several years. Thus, the Firm's final tax-related assets and liabilities may ultimately be different from those currently reported.

## Effective tax rate and expense

The following table presents a reconciliation of the applicable statutory U.S. federal income tax rate to the effective tax rate.
Effective tax rate

| Year ended December 31, | $\mathbf{2 0 2 2}$ | 2021 | 2020 |
| :--- | :---: | :---: | :---: |
| Statutory U.S. federal tax rate | $\mathbf{2 1 . 0} \%$ | $21.0 \%$ | $21.0 \%$ |
| Increase/(decrease) in tax rate <br> resulting from: |  |  |  |
| U.S. state and local income <br> taxes, net of U.S. federal <br> income tax benefit | $\mathbf{3 . 5}$ | 3.0 | 2.5 |
| Tax-exempt income | $\mathbf{( 0 . 9 )}$ | $(0.9)$ | $(1.6)$ |
| Non-U.S. earnings | $\mathbf{0 . 4}$ | 0.1 | 1.4 |
| Business tax credits | $\mathbf{( 5 . 4 )}$ | $(4.2)$ | $\mathbf{( 5 . 4 )}$ |
| $\quad$ Other, net | $\mathbf{0 . 2 )}$ | $\mathbf{( 0 . 1 )}$ | 0.8 |
| Effective tax rate | $\mathbf{1 8 . 4} \%$ | $18.9 \%$ | $\mathbf{1 8 . 7} \%$ |

The following table reflects the components of income tax expense/(benefit) included in the Consolidated statements of income.
Income tax expense/(benefit)

| Year ended December 31, <br> (in millions) | $\mathbf{2 0 2 2}$ | 2021 | 2020 |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Current income tax expense/ <br> (benefit) |  |  |  |  |  |
| U.S. federal | $\$$ | 5,606 | $\$$ | 2,865 | $\$ 5,759$ |
| Non-U.S. | $\mathbf{2 , 9 9 2}$ | 2,718 | 2,705 |  |  |
| U.S. state and local | $\mathbf{2 , 6 3 0}$ | 1,897 | 1,793 |  |  |
| Total current income tax expense/ <br> (benefit) | $\mathbf{1 1 , 2 2 8}$ | 7,480 | 10,257 |  |  |
| Deferred income tax expense/ <br> (benefit) |  |  |  |  |  |
| U.S. federal | $\mathbf{( 2 , 0 0 4 )}$ | 3,460 | $(2,776)$ |  |  |
| Non-U.S. | $\mathbf{( 1 5 4 )}$ | $(101)$ | $(126)$ |  |  |
| U.S. state and local | $\mathbf{( 5 8 0 )}$ | 389 | $(671)$ |  |  |
| Total deferred income tax <br> expense/(benefit) | $\mathbf{8 , 4 9 0}$ | $\$ 11,228$ | $\$ 6,684$ |  |  |
| Total income tax expense |  |  |  |  |  |

Total income tax expense includes $\$ 331$ million of tax benefits in 2022, $\$ 69$ million of tax expenses in 2021, and $\$ 72$ million of tax benefits in 2020, resulting from the resolution of tax audits.

Tax effect of items recorded in stockholders' equity
The preceding table does not reflect the tax effect of certain items that are recorded each period directly in stockholders' equity. The tax effect of all items recorded directly to stockholders' equity resulted in a decrease of $\$ 4.5$ billion in 2022, an increase of $\$ 2.0$ billion in 2021, and a decrease of $\$ 827$ million in 2020.

Results from U.S. and non-U.S. earnings
The following table presents the U.S. and non-U.S. components of income before income tax expense.

| Year ended December 31, <br> (in millions) | $\mathbf{2 0 2 2}$ | 2021 | 2020 |
| :--- | ---: | ---: | ---: |
| U.S. | $\$ \mathbf{3 4 , 6 2 6}$ | $\$ 50,126$ | $\$ 27,312$ |
| Non-U.S. ${ }^{(a)}$ | $\mathbf{1 1 , 5 4 0}$ | 9,436 | 8,503 |
| Income before income tax <br> expense | $\mathbf{\$ 4 6 , 1 6 6}$ | $\$ 59,562$ | $\$ 35,815$ |

(a) For purposes of this table, non-U.S. income is defined as income generated from operations located outside the U.S.

The Firm will recognize any U.S. income tax expense it may incur on global intangible low tax income as income tax expense in the period in which the tax is incurred. At December 31, 2022 the income tax expense incurred was not material.

## Affordable housing tax credits

The Firm recognized $\$ 1.8$ billion of tax credits and other tax benefits associated with investments in affordable housing projects within income tax expense for the year ended 2022, and $\$ 1.7$ billion and $\$ 1.5$ billion for the years ended 2021 and 2020, respectively. The amount of amortization of such investments reported in income tax expense was $\$ 1.4$ billion, $\$ 1.3$ billion and $\$ 1.2$ billion, respectively. The carrying value of these investments, which are reported in other assets on the Firm's Consolidated balance sheets, was $\$ 12.1$ billion and $\$ 10.8$ billion at December 31, 2022 and 2021, respectively. The amount of commitments related to these investments, which are reported in accounts payable and other liabilities on the Firm's Consolidated balance sheets, was $\$ 5.4$ billion and $\$ 4.6$ billion at December 31, 2022 and 2021, respectively.

## Deferred taxes

Deferred income tax expense/(benefit) results from differences between assets and liabilities measured for financial reporting purposes versus income tax return purposes. Deferred tax assets are recognized if, in management's judgment, their realizability is determined to be more likely than not. If a deferred tax asset is determined to be unrealizable, a valuation allowance is established. The significant components of deferred tax assets and liabilities are reflected in the following table.

| December 31, (in millions) | 2022 |  | 2021 |  |
| :---: | :---: | :---: | :---: | :---: |
| Deferred tax assets |  |  |  |  |
| Allowance for loan losses | \$ | 5,193 | \$ | 4,345 |
| Employee benefits |  | 1,342 |  | 987 |
| Accrued expenses and other |  | 8,577 |  | 3,955 |
| Non-U.S. operations |  | 1,148 |  | 900 |
| Tax attribute carryforwards |  | 365 |  | 615 |
| Gross deferred tax assets |  | 16,625 |  | 10,802 |
| Valuation allowance |  | (198) |  | (378) |
| Deferred tax assets, net of valuation allowance | \$ | 16,427 | \$ | 10,424 |
| Deferred tax liabilities |  |  |  |  |
| Depreciation and amortization | \$ | 2,044 | \$ | 3,289 |
| Mortgage servicing rights, net of hedges |  | 1,864 |  | 2,049 |
| Leasing transactions |  | 2,843 |  | 4,227 |
| Other, net |  | 3,801 |  | 4,459 |
| Gross deferred tax liabilities |  | 10,552 |  | 14,024 |
| Net deferred tax (liabilities)/assets | \$ | 5,875 | \$ | $(3,600)$ |

JPMorgan Chase has recorded deferred tax assets of \$365 million at December 31, 2022, in connection with U.S. federal and non-U.S. NOL carryforwards and other tax attributes, FTC carryforwards, and state and local capital loss carryforwards. At December 31, 2022, total U.S. federal NOL carryforwards were $\$ 648$ million, non-U.S. NOL carryforwards were $\$ 308$ million, FTC carryforwards were \$81 million, state and local capital loss carryforwards were $\$ 1.0$ billion, and other U.S. federal tax attributes were $\$ 256$ million. If not utilized, a portion of the U.S. federal NOL carryforwards and other U.S. federal tax attributes will expire between 2026 and 2037 whereas others have an unlimited carryforward period. Similarly, certain non-U.S. NOL carryforwards will expire between 2026 and 2039 whereas others have an unlimited carryforward period. The FTC carryforwards will expire between 2029 and 2030, and the state and local capital loss carryforwards will expire in 2026.

The valuation allowance at December 31, 2022, was due to the state and local capital loss carryforwards, FTC carryforwards, and certain non-U.S. deferred tax assets, including NOL carryforwards.

## Notes to consolidated financial statements

## Unrecognized tax benefits

At December 31, 2022, 2021 and 2020, JPMorgan Chase's unrecognized tax benefits, excluding related interest expense and penalties, were $\$ 5.0$ billion, $\$ 4.6$ billion and $\$ 4.3$ billion, respectively, of which $\$ 3.8$ billion, $\$ 3.4$ billion and $\$ 3.1$ billion, respectively, if recognized, would reduce the annual effective tax rate. Included in the amount of unrecognized tax benefits are certain items that would not affect the effective tax rate if they were recognized in the Consolidated statements of income. These unrecognized items include the tax effect of certain temporary differences, the portion of gross state and local unrecognized tax benefits that would be offset by the benefit from associated U.S. federal income tax deductions, and the portion of gross non-U.S. unrecognized tax benefits that would have offsets in other jurisdictions. JPMorgan Chase evaluates the need for changes in unrecognized tax benefits based on its anticipated tax return filing positions as part of its U.S. federal and state and local tax returns. In addition, the Firm is presently under audit by a number of taxing authorities, most notably by the Internal Revenue Service, as summarized in the Tax examination status table below. The evaluation of unrecognized tax benefits as well as the potential for audit settlements make it reasonably possible that over the next 12 months the gross balance of unrecognized tax benefits may increase or decrease by as much as approximately $\$ 1.0$ billion. The change in the unrecognized tax benefit would result in a payment or income statement recognition.

The following table presents a reconciliation of the beginning and ending amount of unrecognized tax benefits.

| Year ended December 31, <br> (in millions) | $\mathbf{2 0 2 2}$ | 2021 | 2020 |
| :--- | :---: | :---: | :---: | :---: |
| Balance at January 1, | $\$ 4,636$ | $\$ 4,250$ | $\$ 4,024$ |
| Increases based on tax positions <br> related to the current period | $\mathbf{1 , 2 3 4}$ | $\mathbf{7 9 8}$ | 685 |
| Increases based on tax positions <br> related to prior periods | $\mathbf{1 2 3}$ | 393 | 362 |
| Decreases based on tax positions <br> related to prior periods | $\mathbf{( 8 2 4 )}$ | $\mathbf{( 6 5 7 )}$ | $\mathbf{( 7 0 5 )}$ |
| Decreases related to cash settlements <br> with taxing authorities | $\mathbf{( 1 2 6 )}$ | $(148)$ | $(116)$ |
| Balance at December 31, | $\mathbf{5 5 , 0 4 3}$ | $\$ 4,636$ | $\$ 4,250$ |

After-tax interest expense/(benefit) and penalties related to income tax liabilities recognized in income tax expense were $\$ 141$ million, $\$ 174$ million and $\$ 147$ million in 2022, 2021 and 2020, respectively.

At December 31, 2022 and 2021, in addition to the liability for unrecognized tax benefits, the Firm had accrued \$1.3 billion and $\$ 1.1$ billion, respectively, for income tax-related interest and penalties.

## Tax examination status

JPMorgan Chase is continually under examination by the Internal Revenue Service, by taxing authorities throughout the world, and by many state and local jurisdictions throughout the U.S. The following table summarizes the status of significant income tax examinations of JPMorgan Chase and its consolidated subsidiaries as of December 31, 2022.

|  | Periods under <br> examination | Status |
| :--- | :---: | :---: |
| JPMorgan Chase - U.S. | 2011-2013 | Field examination of <br> amended returns <br> Field examination of <br> original and amended <br> returns |
| JPMorgan Chase - U.S. | $2014-2018$ | Field Examination |
| JPMorgan Chase - New <br> York State | 2012-2014 | Field Examination |
| JPMorgan Chase - New <br> York City | $2015-2017$ | FPMorgan Chase - U.K. | 2011-2020 | Field examination of |
| :---: |
| certain select entities |

## Note 26 - Restricted cash, other restricted assets and intercompany funds transfers

## Restricted cash and other restricted assets

Certain of the Firm's cash and other assets are restricted as to withdrawal or usage. These restrictions are imposed by various regulatory authorities based on the particular activities of the Firm's subsidiaries.
The business of JPMorgan Chase Bank, N.A. is subject to examination and regulation by the OCC. The Bank is a member of the U.S. Federal Reserve System, and its deposits in the U.S. are insured by the FDIC, subject to applicable limits.
The Firm is required to maintain cash reserves at certain non-US central banks.

The Firm is also subject to rules and regulations established by other U.S. and non U.S. regulators. As part of its compliance with the respective regulatory requirements, the Firm's broker-dealer activities are subject to certain restrictions on cash and other assets.

The following table presents the components of the Firm's restricted cash:

| December 31, (in billions) | $\mathbf{2 0 2 2}$ | 2021 |
| :--- | ---: | ---: | ---: |
| Segregated for the benefit of securities and cleared <br> derivative customers | $\mathbf{1 8 . 7}$ | 14.6 |
| Cash reserves at non-U.S. central banks and held for <br> other general purposes | $\mathbf{8 . 1}$ | 5.1 |
| Total restricted cash |  |  |

(a) Comprises $\$ 25.4$ billion and $\$ 18.4$ billion in deposits with banks, and $\$ 1.4$ billion and $\$ 1.3$ billion in cash and due from banks on the Consolidated balance sheets as of December 31, 2022 and 2021, respectively.

Also, as of December 31, 2022 and 2021, the Firm had the following other restricted assets:

- Cash and securities pledged with clearing organizations for the benefit of customers of $\$ 42.4$ billion and $\$ 47.5$ billion, respectively.
- Securities with a fair value of $\$ 31.7$ billion and $\$ 30.0$ billion, respectively, were also restricted in relation to customer activity.


## Intercompany funds transfers

Restrictions imposed by U.S. federal law prohibit JPMorgan Chase Bank, N.A., and its subsidiaries, from lending to JPMorgan Chase \& Co. ("Parent Company") and certain of its affiliates unless the loans are secured in specified amounts. Such secured loans provided by any banking subsidiary to the Parent Company or to any particular affiliate, together with certain other transactions with such affiliate (collectively referred to as "covered transactions"), must be made on terms and conditions that are consistent with safe and sound banking practices. In addition, unless collateralized with cash or US Government debt obligations, covered transactions are generally limited to $10 \%$ of the banking subsidiary's total capital, as determined by the riskbased capital guidelines; the aggregate amount of covered transactions between any banking subsidiary and all of its affiliates is limited to $20 \%$ of the banking subsidiary's total capital.

The Parent Company's two principal subsidiaries are JPMorgan Chase Bank, N.A. and JPMorgan Chase Holdings LLC, an intermediate holding company (the "IHC"). The IHC generally holds the stock of JPMorgan Chase's subsidiaries other than JPMorgan Chase Bank, N.A. and its subsidiaries. The IHC also owns other assets and provides intercompany Ioans to the Parent Company. The Parent Company is obligated to contribute to the IHC substantially all the net proceeds received from securities issuances (including issuances of senior and subordinated debt securities and of preferred and common stock).

The principal sources of income and funding for the Parent Company are dividends from JPMorgan Chase Bank, N.A. and dividends and extensions of credit from the IHC. In addition to dividend restrictions set forth in statutes and regulations, the Federal Reserve, the OCC and the FDIC have authority under the Financial Institutions Supervisory Act to prohibit or to limit the payment of dividends by the banking organizations they supervise, including the Parent Company and its subsidiaries that are banks or bank holding companies, if, in the banking regulator's opinion, payment of a dividend would constitute an unsafe or unsound practice in light of the financial condition of the banking organization. The IHC is prohibited from paying dividends or extending credit to the Parent Company if certain capital or liquidity "thresholds" are breached or if limits are otherwise imposed by the Parent Company's management or Board of Directors.

At January 1, 2023, the Parent Company's banking subsidiaries could pay, in the aggregate, approximately \$34 billion in dividends to their respective bank holding companies without the prior approval of their relevant banking regulators. The capacity to pay dividends in 2023 will be supplemented by the banking subsidiaries' earnings during the year.

## Notes to consolidated financial statements

## Note 27 - Regulatory capital

The Federal Reserve establishes capital requirements, including well-capitalized requirements, for the consolidated financial holding company. The Office of the Comptroller of the Currency ("OCC") establishes similar minimum capital requirements and standards for the Firm's principal IDI subsidiary, JPMorgan Chase Bank, N.A.
The capital rules under Basel III establish minimum capital ratios and overall capital adequacy standards for large and internationally active U.S. bank holding companies and banks, including the Firm and its IDI subsidiaries, including JPMorgan Chase Bank, N.A. Two comprehensive approaches are prescribed for calculating RWA: a standardized approach ("Basel III Standardized"), and an advanced approach ("Basel III Advanced"). For each of the risk-based capital ratios, the capital adequacy of the Firm and JPMorgan Chase Bank, N.A. is evaluated against the lower of the Standardized or Advanced approaches compared to their respective regulatory capital ratio requirements.
The three components of regulatory capital under the Basel III rules are as illustrated below:


Under the risk-based capital and leverage-based guidelines of the Federal Reserve, JPMorgan Chase is required to maintain minimum ratios for CET1 capital, Tier 1 capital, Total capital, Tier 1 leverage and the SLR. Failure to meet these minimum requirements could cause the Federal Reserve to take action. IDI subsidiaries are also subject to these capital requirements established by their respective primary regulators.

The following table presents the risk-based regulatory capital ratio requirements and well-capitalized ratios to which the Firm and its IDI subsidiaries were subject as of December 31, 2022 and 2021.

|  | Standardized capital <br> ratio requirements | Advanced capital <br> ratio requirements |  | Well-capitalized <br> ratios |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\mathrm{BHC}^{(\mathrm{a})(\mathrm{b})}$ | $\mathrm{IDI}^{(\mathrm{c})}$ | $\mathrm{BHC}^{(\mathrm{a})}$ |  | $\mathrm{IDI}^{(\mathrm{c})}$ | $\mathrm{BHC}^{(\mathrm{d})}$ | $\mathrm{IDI}^{(\mathrm{e})}$.

Note: The table above is as defined by the regulations issued by the Federal Reserve, OCC and FDIC and to which the Firm and its IDI subsidiaries are subject.
(a) Represents the regulatory capital ratio requirements applicable to the Firm. The CET1, Tier 1 and Total capital ratio requirements each include a respective minimum requirement plus a GSIB surcharge of $3.5 \%$ as calculated under Method 2; plus a $4.0 \%$ SCB for Basel III Standardized ratios and a fixed 2.5\% capital conservation buffer for Basel III Advanced ratios. The countercyclical buffer is currently set to $0 \%$ by the federal banking agencies.
(b) For the period ended December 31, 2021, the CET1, Tier 1, and Total capital ratio requirements under Basel III Standardized applicable to the Firm were $11.2 \%, 12.7 \%$ and $14.7 \%$, respectively. SCB for Basel III Standardized ratio for 2021 was $3.2 \%$.
(c) Represents requirements for JPMorgan Chase's IDI subsidiaries. The CET1, Tier 1 and Total capital ratio requirements include a fixed capital conservation buffer requirement of $2.5 \%$ that is applicable to the IDI subsidiaries. The IDI subsidiaries are not subject to the GSIB surcharge.
(d) Represents requirements for bank holding companies pursuant to regulations issued by the Federal Reserve.
(e) Represents requirements for IDI subsidiaries pursuant to regulations issued under the FDIC Improvement Act.

The following table presents the leverage-based regulatory capital ratio requirements and well-capitalized ratios to which the Firm and its IDI subsidiaries were subject as of December 31, 2022 and 2021.

|  | Capital ratio <br> requirements |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
|  | BHC |  | IDI | BHC $^{2}$Well-capitalized <br> ratios |
| Leverage-based capital ratios |  |  |  |  |
| Tier 1 leverage | $4.0 \%$ | $4.0 \%$ | NA | 5.0 |
| SLR | 5.0 | 6.0 | NA | 6.0 |

Note: The table above is as defined by the regulations issued by the Federal Reserve, OCC and FDIC and to which the Firm and its IDI subsidiaries are subject.
(a) Represents minimum SLR requirement of $3.0 \%$, as well as supplementary leverage buffer requirements of $2.0 \%$ and $3.0 \%$ for BHC and IDI subsidiaries, respectively.
(b) The Federal Reserve's regulations do not establish well-capitalized thresholds for these measures for BHCs.

CECL regulatory capital transition
Until December 31, 2021, the Firm's capital reflected a two year delay of the effects of CECL provided by the Federal Reserve Board in response to the COVID-19 pandemic.

Beginning January 1, 2022, the $\$ 2.9$ billion CECL capital benefit is being phased out at $25 \%$ per year over a threeyear period. As of December 31, 2022, the Firm's CET1 capital reflected the remaining $\$ 2.2$ billion benefit associated with the CECL capital transition provisions.

Additionally, effective January 1, 2022, the Firm phased out $25 \%$ of the other CECL capital transition provisions which impacted Tier 2 capital, adjusted average assets, total leverage exposure and RWA, as applicable.
Refer to Note 1 for further information on the CECL accounting guidance.

The following tables present risk-based capital metrics under both the Basel III Standardized and Basel III Advanced approaches and leverage-based capital metrics for JPMorgan Chase and JPMorgan Chase Bank, N.A. As of December 31, 2022 and 2021, JPMorgan Chase and JPMorgan Chase Bank, N.A. were well-capitalized and met all capital requirements to which each was subject.

| December 31, 2022 <br> (in millions, except ratios) | Basel III Standardized |  |  |  | Basel III Advanced |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | JPMorgan Chase \& Co. |  | JPMorgan Chase Bank, N.A. |  | JPMorgan Chase \& Co. |  | JPMorgan Chase Bank, N.A. |  |
| Risk-based capital metrics: ${ }^{(a)}$ |  |  |  |  |  |  |  |  |
| CET1 capital | \$ | 218,934 | \$ | 269,668 | \$ | 218,934 | \$ | 269,668 |
| Tier 1 capital |  | 245,631 |  | 269,672 |  | 245,631 |  | 269,672 |
| Total capital |  | 277,769 |  | 288,433 |  | 264,583 |  | 275,255 |
| Risk-weighted assets |  | 1,653,538 |  | 1,597,072 |  | 1,609,773 |  | 1,475,602 |
| CET1 capital ratio |  | 13.2 \% |  | 16.9 \% |  | 13.6 \% |  | 18.3 \% |
| Tier 1 capital ratio |  | 14.9 |  | 16.9 |  | 15.3 |  | 18.3 |
| Total capital ratio |  | 16.8 |  | 18.1 |  | 16.4 |  | 18.7 |
|  |  |  |  |  |  |  |  |  |
|  |  | Basel III Sta | and | dardized |  | Basel III A | dv |  |
| December 31, 2021 (in millions, except ratios) |  | JPMorgan Chase \& Co. |  | JPMorgan Chase Bank, N.A. |  | JPMorgan Chase \& Co. |  | JPMorgan se Bank, N.A. |
| Risk-based capital metrics: ${ }^{(a)}$ |  |  |  |  |  |  |  |  |
| CET1 capital | \$ | 213,942 | \$ | 266,907 | \$ | 213,942 | \$ | 266,907 |
| Tier 1 capital |  | 246,162 |  | 266,910 |  | 246,162 |  | 266,910 |
| Total capital |  | 274,900 |  | 281,826 |  | 265,796 |  | 272,299 |
| Risk-weighted assets |  | 1,638,900 |  | 1,582,280 |  | 1,547,920 |  | 1,392,847 |
| CET1 capital ratio |  | 13.1 \% |  | 16.9 \% |  | 13.8 \% |  | 19.2 \% |
| Tier 1 capital ratio |  | 15.0 |  | 16.9 |  | 15.9 |  | 19.2 |
| Total capital ratio |  | 16.8 |  | 17.8 |  | 17.2 |  | 19.5 |

(a) The capital metrics reflect the CECL capital transition provisions.

| Three months ended (in millions, except ratios) | December 31, 2022 |  |  |  | December 31, 2021 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | JPMorgan Chase \& Co. |  | JPMorgan Chase Bank, N.A. |  | JPMorgan Chase \& Co. |  | JPMorgan Chase Bank, N.A. |  |
| Leverage-based capital metrics: ${ }^{(a)}$ |  |  |  |  |  |  |  |  |
| Adjusted average assets ${ }^{(b)}$ | \$ | 3,703,873 | \$ | 3,249,912 | \$ | 3,782,035 | \$ | 3,334,925 |
| Tier 1 leverage ratio |  | 6.6 \% |  | 8.3 \% |  | 6.5 \% |  | 8.0 \% |
| Total leverage exposure | \$ | 4,367,092 | \$ | 3,925,502 | \$ | 4,571,789 | \$ | 4,119,286 |
| SLR |  | 5.6 \% |  | 6.9 \% |  | 5.4 \% |  | 6.5 \% |

(a) The capital metrics reflect the CECL capital transition provisions.
(b) Adjusted average assets, for purposes of calculating the leverage ratios, includes quarterly average assets adjusted for on-balance sheet assets that are subject to deduction from Tier 1 capital, predominantly goodwill, inclusive of estimated equity method goodwill, and other intangible assets.

# Notes to consolidated financial statements 

## Note 28-0ff-balance sheet lending-related financial instruments, guarantees, and other commitments

JPMorgan Chase provides lending-related financial instruments (e.g., commitments and guarantees) to address the financing needs of its customers and clients. The contractual amount of these financial instruments represents the maximum possible credit risk to the Firm should the customer or client draw upon the commitment or the Firm be required to fulfill its obligation under the guarantee, and should the customer or client subsequently fail to perform according to the terms of the contract. Most of these commitments and guarantees have historically been refinanced, extended, cancelled, or expired without being drawn or a default occurring. As a result, the total contractual amount of these instruments is not, in the Firm's view, representative of its expected future credit exposure or funding requirements.

To provide for expected credit losses in wholesale and certain consumer lending-related commitments, an allowance for credit losses on lending-related commitments is maintained. Refer to Note 13 for further information regarding the allowance for credit losses on lending-related commitments. The following table summarizes the contractual amounts and carrying values of off-balance sheet lending-related financial instruments, guarantees and other commitments at December 31, 2022 and 2021. The amounts in the table below for credit card and home equity lending-related commitments represent the total available credit for these products. The Firm has not experienced, and does not anticipate, that all available lines of credit for these products will be utilized at the same time. The Firm can reduce or cancel credit card lines of credit by providing the borrower notice or, in some cases as permitted by law, without notice. In addition, the Firm typically closes credit card lines when the borrower is 60 days or more past due. The Firm may reduce or close HELOCs when there are significant decreases in the value of the underlying property, or when there has been a demonstrable decline in the creditworthiness of the borrower.

Off-balance sheet lending-related financial instruments, guarantees and other commitments

(a) Includes certain commitments to purchase loans from correspondents.
(b) Also includes commercial card lending-related commitments primarily in CB and CIB .
(c) Predominantly all consumer and wholesale lending-related commitments are in the U.S.
(d) At December 31, 2022 and 2021, reflected the contractual amount net of risk participations totaling $\$ 71$ million and $\$ 44$ million, respectively, for other unfunded commitments to extend credit; $\$ 8.2$ billion and $\$ 7.9$ billion, respectively, for standby letters of credit and other financial guarantees; and $\$ 512$ million and $\$ 451$ million, respectively, for other letters of credit. In regulatory filings with the Federal Reserve these commitments are shown gross of risk participations.
(e) At December 31, 2022 and 2021, collateral held by the Firm in support of securities lending indemnification agreements was $\$ 298.5$ billion and $\$ 357.4$ billion, respectively. Securities lending collateral primarily consists of cash, G7 government securities, and securities issued by u.S. GSEs and government agencies.
(f) At December 31, 2022 and 2021, includes guarantees to the Fixed Income Clearing Corporation under the sponsored member repo program and commitments and guarantees associated with the Firm's membership in certain clearing houses.
(g) At December 31, 2022 and 2021, primarily includes unfunded commitments related to certain tax-oriented equity investments, unfunded commitments to purchase secondary market loans, and other equity investment commitments.
(h) At December 31, 2022, includes net markdowns on held-for-sale positions related to unfunded commitments in the bridge financing portfolio.
(i) For lending-related products, the carrying value represents the allowance for lending-related commitments and the guarantee liability; for derivativerelated products, and lending-related commitments for which the fair value option was elected, the carrying value represents the fair value.

## Notes to consolidated financial statements

Other unfunded commitments to extend credit Other unfunded commitments to extend credit generally consist of commitments for working capital and general corporate purposes, extensions of credit to support commercial paper facilities and bond financings in the event that those obligations cannot be remarketed to new investors, as well as committed liquidity facilities to clearing organizations. The Firm also issues commitments under multipurpose facilities which could be drawn upon in several forms, including the issuance of a standby letter of credit.

## Guarantees

U.S. GAAP requires that a guarantor recognize, at the inception of a guarantee, a liability in an amount equal to the fair value of the obligation undertaken in issuing the guarantee. U.S. GAAP defines a guarantee as a contract that contingently requires the guarantor to pay a guaranteed party based upon: (a) changes in an underlying asset, liability or equity security of the guaranteed party; or (b) a third party's failure to perform under a specified agreement. The Firm considers the following off-balance sheet arrangements to be guarantees under U.S. GAAP: standby letters of credit and other financial guarantees, securities lending indemnifications, certain indemnification agreements included within third-party contractual arrangements, certain derivative contracts and the guarantees under the sponsored member repo program.

As required by U.S. GAAP, the Firm initially records guarantees at the inception date fair value of the noncontingent obligation assumed (e.g., the amount of consideration received or the net present value of the premium receivable). For these obligations, the Firm records this fair value amount in other liabilities with an offsetting entry recorded in cash (for premiums received),
or other assets (for premiums receivable). Any premium receivable recorded in other assets is reduced as cash is received under the contract, and the fair value of the liability recorded at inception is amortized into income as lending and deposit-related fees over the life of the guarantee contract. The lending-related contingent obligation is recognized based on expected credit losses in addition to, and separate from, any non-contingent obligation.

Non-lending-related contingent obligations are recognized when the liability becomes probable and reasonably estimable. These obligations are not recognized if the estimated amount is less than the carrying amount of any non-contingent liability recognized at inception (adjusted for any amortization). Examples of non-lending-related contingent obligations include indemnifications provided in sales agreements, where a portion of the sale proceeds is allocated to the guarantee, which adjusts the gain or loss that would otherwise result from the transaction. For these indemnifications, the initial liability is amortized to income as the Firm's risk is reduced (i.e., over time or when the indemnification expires).

The contractual amount and carrying value of guarantees and indemnifications are included in the table on page 277.

For additional information on the guarantees, see below.
Standby letters of credit and other financial guarantees Standby letters of credit and other financial guarantees are conditional lending commitments issued by the Firm to guarantee the performance of a client or customer to a third party under certain arrangements, such as commercial paper facilities, bond financings, acquisition financings, trade financings and similar transactions.

The following table summarizes the contractual amount and carrying value of standby letters of credit and other financial guarantees and other letters of credit arrangements as of December 31, 2022 and 2021.

Standby letters of credit, other financial guarantees and other letters of credit

| December 31, (in millions) | 2022 |  |  |  | 2021 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Standby letters of credit and other financial guarantees |  | Other letters of credit |  | Standby letters of credit and other financial guarantees |  | Other letters of credit |  |
| Investment-grade ${ }^{(a)}$ | \$ | 19,205 | \$ | 3,040 | \$ | 19,998 | \$ | 3,087 |
| Noninvestment-grade ${ }^{(a)}$ |  | 8,234 |  | 1,094 |  | 8,532 |  | 1,361 |
| Total contractual amount | \$ | 27,439 | \$ | 4,134 | \$ | 28,530 | \$ | 4,448 |
| Allowance for lending-related commitments | \$ | 82 | \$ | 6 | \$ | 123 | \$ | 9 |
| Guarantee liability |  | 326 |  | - |  | 353 |  | - |
| Total carrying value | \$ | 408 | \$ | 6 | \$ | 476 | \$ | 9 |
| Commitments with collateral | \$ | 15,296 | \$ | 795 | \$ | 14,511 | \$ | 999 |

(a) The ratings scale is based on the Firm's internal risk ratings. Refer to Note 12 for further information on internal risk ratings.

## Securities lending indemnifications

Through the Firm's securities lending program, counterparties' securities, via custodial and non-custodial arrangements, may be lent to third parties. As part of this program, the Firm provides an indemnification in the lending agreements which protects the lender against the failure of the borrower to return the lent securities. To minimize its liability under these indemnification agreements, the Firm obtains cash or other highly liquid collateral with a market value exceeding $100 \%$ of the value of the securities on loan from the borrower. Collateral is marked to market daily to help assure that collateralization is adequate. Additional collateral is called from the borrower if a shortfall exists, or collateral may be released to the borrower in the event of overcollateralization. If a borrower defaults, the Firm would use the collateral held to purchase replacement securities in the market or to credit the lending client or counterparty with the cash equivalent thereof.

The cash collateral held by the Firm may be invested on behalf of the client in indemnified resale agreements, whereby the Firm indemnifies the client against the loss of principal invested. To minimize its liability under these agreements, the Firm obtains collateral with a market value exceeding $100 \%$ of the principal invested.

## Derivatives qualifying as guarantees

The Firm transacts in certain derivative contracts that have the characteristics of a guarantee under U.S. GAAP. These contracts include written put options that require the Firm to purchase assets upon exercise by the option holder at a specified price by a specified date in the future. The Firm may enter into written put option contracts in order to meet client needs, or for other trading purposes. The terms of written put options are typically five years or less.
Derivatives deemed to be guarantees also includes stable value contracts, commonly referred to as "stable value products", that require the Firm to make a payment of the difference between the market value and the book value of a counterparty's reference portfolio of assets in the event that market value is less than book value and certain other conditions have been met. Stable value products are transacted in order to allow investors to realize investment returns with less volatility than an unprotected portfolio. These contracts are typically longer-term or may have no stated maturity, but allow the Firm to elect to terminate the contract under certain conditions.
The notional value of derivative guarantees generally represents the Firm's maximum exposure. However, exposure to certain stable value products is contractually limited to a substantially lower percentage of the notional amount.
The fair value of derivative guarantees reflects the probability, in the Firm's view, of whether the Firm will be required to perform under the contract. The Firm reduces exposures to these contracts by entering into offsetting transactions, or by entering into contracts that hedge the market risk related to the derivative guarantees.

The following table summarizes the derivatives qualifying as guarantees as of December 31, 2022 and 2021.

| (in millions) | December 31, <br> 2022 | December 31, <br> 2021 |  |  |
| :--- | ---: | ---: | ---: | ---: |
| Notional amounts | $\mathbf{5}$ | $\mathbf{5 9 , 1 8 0}$ | $\$$ | 55,730 |
| Derivative guarantees <br> Stable value contracts with <br> contractually limited exposure | $\mathbf{3 1 , 8 2 0}$ | 29,778 |  |  |
| Maximum exposure of stable <br> value contracts with <br> contractually limited exposure | $\mathbf{2 , 0 6 3}$ | 2,882 |  |  |
| Fair value <br> Derivative payables | $\mathbf{6 4 9}$ | $\mathbf{4 7 5}$ |  |  |

In addition to derivative contracts that meet the characteristics of a guarantee, the Firm is both a purchaser and seller of credit protection in the credit derivatives market. Refer to Note 5 for a further discussion of credit derivatives.

## Unsettled securities financing agreements

In the normal course of business, the Firm enters into resale and securities borrowed agreements. At settlement, these commitments result in the Firm advancing cash to and receiving securities collateral from the counterparty. The Firm also enters into repurchase and securities loaned agreements. At settlement, these commitments result in the Firm receiving cash from and providing securities collateral to the counterparty. Such agreements settle at a future date. These agreements generally do not meet the definition of a derivative, and therefore, are not recorded on the Consolidated balance sheets until settlement date. These agreements predominantly have regular-way settlement terms. Refer to Note 11 for a further discussion of securities financing agreements.

## Loan sales- and securitization-related indemnifications

## Mortgage repurchase liability

In connection with the Firm's mortgage Ioan sale and securitization activities with U.S. GSEs the Firm has made representations and warranties that the loans sold meet certain requirements, and that may require the Firm to repurchase mortgage loans and/or indemnify the loan purchaser if such representations and warranties are breached by the Firm.

## Private label securitizations

The liability related to repurchase demands associated with private label securitizations is separately evaluated by the Firm in establishing its litigation reserves.

Refer to Note 30 for additional information regarding litigation.

## Loans sold with recourse

The Firm provides servicing for mortgages and certain commercial lending products on both a recourse and nonrecourse basis. In nonrecourse servicing, the principal credit risk to the Firm is the cost of temporary servicing advances of funds (i.e., normal servicing advances). In recourse servicing, the servicer agrees to share credit risk with the owner of the mortgage loans, such as Fannie Mae

## Notes to consolidated financial statements

or Freddie Mac or a private investor, insurer or guarantor. Losses on recourse servicing predominantly occur when foreclosure sales proceeds of the property underlying a defaulted loan are less than the sum of the outstanding principal balance, plus accrued interest on the loan and the cost of holding and disposing of the underlying property. The Firm's securitizations are predominantly nonrecourse, thereby effectively transferring the risk of future credit losses to the purchaser of the mortgage-backed securities issued by the trust. The unpaid principal balance of loans sold with recourse as well as the carrying value of the related liability that the Firm has recorded in accounts payable and other liabilities on the Consolidated balance sheets, which is representative of the Firm's view of the likelihood it will have to perform under its recourse obligations, are disclosed in the table on page 277.

## Other off-balance sheet arrangements

Indemnification agreements - general
In connection with issuing securities to investors outside the U.S., the Firm may agree to pay additional amounts to the holders of the securities in the event that, due to a change in tax law, certain types of withholding taxes are imposed on payments on the securities. The terms of the securities may also give the Firm the right to redeem the securities if such additional amounts are payable. The Firm may also enter into indemnification clauses in connection with the licensing of software to clients ("software licensees") or when it sells a business or assets to a third party ("thirdparty purchasers"), pursuant to which it indemnifies software licensees for claims of liability or damages that may occur subsequent to the licensing of the software, or third-party purchasers for losses they may incur due to actions taken by the Firm prior to the sale of the business or assets. It is difficult to estimate the Firm's maximum exposure under these indemnification arrangements, since this would require an assessment of future changes in tax law and future claims that may be made against the Firm that have not yet occurred. However, based on historical experience, management expects the risk of loss to be remote.

## Merchant charge-backs

Under the rules of payment networks, in its role as a merchant acquirer, the Firm's Merchant Services business in CIB Payments, retains a contingent liability for disputed processed credit and debit card transactions that result in a charge-back to the merchant. If a dispute is resolved in the cardholder's favor, the Firm will (through the cardholder's issuing bank) credit or refund the amount to the cardholder and will charge back the transaction to the merchant. If the Firm is unable to collect the amount from the merchant, the Firm will bear the loss for the amount credited or refunded to the cardholder. The Firm mitigates this risk by withholding future settlements, retaining cash reserve accounts or obtaining other collateral. In addition, the Firm recognizes a valuation allowance that covers the payment or performance risk related to charge-backs.

For the years ended December 31, 2022, 2021 and 2020, the Firm processed an aggregate volume of $\$ 2,158.4$ billion, $\$ 1,886.7$ billion, and $\$ 1,597.3$ billion, respectively.

## Clearing Services - Client Credit Risk

The Firm provides clearing services for clients by entering into securities purchases and sales and derivative contracts with CCPs, including ETDs such as futures and options, as well as OTC-cleared derivative contracts. As a clearing member, the Firm stands behind the performance of its clients, collects cash and securities collateral (margin) as well as any settlement amounts due from or to clients, and remits them to the relevant CCP or client in whole or part. There are two types of margin: variation margin is posted on a daily basis based on the value of clients' derivative contracts and initial margin is posted at inception of a derivative contract, generally on the basis of the potential changes in the variation margin requirement for the contract.

As a clearing member, the Firm is exposed to the risk of nonperformance by its clients, but is not liable to clients for the performance of the CCPs. Where possible, the Firm seeks to mitigate its risk to the client through the collection of appropriate amounts of margin at inception and throughout the life of the transactions. The Firm can also cease providing clearing services if clients do not adhere to their obligations under the clearing agreement. In the event of nonperformance by a client, the Firm would close out the client's positions and access available margin. The CCP would utilize any margin it holds to make itself whole, with any remaining shortfalls required to be paid by the Firm as a clearing member.

The Firm reflects its exposure to nonperformance risk of the client through the recognition of margin receivables from clients and margin payables to CCPs; the clients' underlying securities or derivative contracts are not reflected in the Firm's Consolidated Financial Statements.

It is difficult to estimate the Firm's maximum possible exposure through its role as a clearing member, as this would require an assessment of transactions that clients may execute in the future. However, based upon historical experience, and the credit risk mitigants available to the Firm, management believes it is unlikely that the Firm will have to make any material payments under these arrangements and the risk of loss is expected to be remote.
Refer to Note 5 for information on the derivatives that the Firm executes for its own account and records in its Consolidated Financial Statements.

## Exchange \& Clearing House Memberships

The Firm is a member of several securities and derivative exchanges and clearing houses, both in the U.S. and other countries, and it provides clearing services to its clients. Membership in some of these organizations requires the Firm to pay a pro rata share of the losses incurred by the organization as a result of the default of another member. Such obligations vary with different organizations. These obligations may be limited to the amount (or a multiple of the amount) of the Firm's contribution to the guarantee fund maintained by a clearing house or exchange as part of the resources available to cover any losses in the event of a member default. Alternatively, these obligations may also include a pro rata share of the residual losses after applying the guarantee fund. Additionally, certain clearing houses require the Firm as a member to pay a pro rata share of losses that may result from the clearing house's investment of guarantee fund contributions and initial margin, unrelated to and independent of the default of another member. Generally a payment would only be required should such losses exceed the resources of the clearing house or exchange that are contractually required to absorb the losses in the first instance. In certain cases, it is difficult to estimate the Firm's maximum possible exposure under these membership agreements, since this would require an assessment of future claims that may be made against the Firm that have not yet occurred. However, based on historical experience, management expects the risk of loss to the Firm to be remote. Where the Firm's maximum possible exposure can be estimated, the amount is disclosed in the table on page 277, in the Exchange \& clearing house guarantees and commitments line.

## Sponsored member repo program

The Firm acts as a sponsoring member to clear eligible overnight and term resale and repurchase agreements through the Government Securities Division of the Fixed Income Clearing Corporation ("FICC") on behalf of clients that become sponsored members under the FICC's rules. The Firm also guarantees to the FICC the prompt and full payment and performance of its sponsored member clients’ respective obligations under the FICC's rules. The Firm minimizes its liability under these guarantees by obtaining a security interest in the cash or high-quality securities collateral that the clients place with the clearing house; therefore, the Firm expects the risk of loss to be remote. The Firm's maximum possible exposure, without taking into consideration the associated collateral, is included in the Exchange \& clearing house guarantees and commitments line on page 277. Refer to Note 11 for additional information on credit risk mitigation practices on resale agreements and the types of collateral pledged under repurchase agreements.

## Guarantees of subsidiaries

In the normal course of business, the Parent Company may provide counterparties with guarantees of certain of the trading and other obligations of its subsidiaries on a contract-by-contract basis, as negotiated with the Firm's
counterparties. The obligations of the subsidiaries are included on the Firm's Consolidated balance sheets or are reflected as off-balance sheet commitments; therefore, the Parent Company has not recognized a separate liability for these guarantees. The Firm believes that the occurrence of any event that would trigger payments by the Parent Company under these guarantees is remote.

The Parent Company has guaranteed certain long-term debt and structured notes of its subsidiaries, including JPMorgan Chase Financial Company LLC ("JPMFC"), a 100\%-owned finance subsidiary. All securities issued by JPMFC are fully and unconditionally guaranteed by the Parent Company and no other subsidiary of the parent company guarantees these securities. These guarantees, which rank on a parity with the Firm's unsecured and unsubordinated indebtedness, are not included in the table on page 277 of this Note. Refer to Note 20 for additional information.

## Notes to consolidated financial statements

## Note 29 - Pledged assets and collateral

## Pledged assets

The Firm pledges financial assets that it owns to maintain potential borrowing capacity at discount windows with Federal Reserve banks, various other central banks and FHLBs. Additionally, the Firm pledges assets for other purposes, including to collateralize repurchase and other securities financing agreements, to cover short sales and to collateralize derivative contracts and deposits. Certain of these pledged assets may be sold or repledged or otherwise used by the secured parties and are parenthetically identified on the Consolidated balance sheets as assets pledged.
The following table presents the Firm's pledged assets.

| December 31, (in billions) | $\mathbf{2 0 2 2}$ | 2021 |  |
| :--- | :--- | :--- | :--- |
| Assets that may be sold or repledged or <br> otherwise used by secured parties | $\mathbf{\$}$ | $\mathbf{1 1 0 . 8}$ | $\$$ |
| Assets that may not be sold or repledged or <br> otherwise used by secured parties | $\mathbf{1 1 4 . 8}$ | 112.0 .3 |  |
| Assets pledged at Federal Reserve banks and <br> FHLBs | $\mathbf{5 6 7 . 6}$ | 476.4 |  |
| Total pledged assets | $\mathbf{7 9 3 . 2}$ | $\$$ | $\mathbf{7 1 4 . 7}$ |

Total pledged assets do not include assets of consolidated VIEs; these assets are used to settle the liabilities of those entities. Refer to Note 14 for additional information on assets and liabilities of consolidated VIEs. Refer to Note 11 for additional information on the Firm's securities financing activities. Refer to Note 20 for additional information on the Firm's long-term debt. The significant components of the Firm's pledged assets were as follows.

| December 31, (in billions) | 2022 | 2021 |  |
| :--- | ---: | ---: | ---: |
| Investment securities | $\$ 104.4$ | $\$$ | 80.1 |
| Loans | $\mathbf{4 8 5 . 9}$ |  | 428.5 |
| Trading assets and other | $\mathbf{2 0 2 . 9}$ | 206.1 |  |
| Total pledged assets | $\$$ | $\mathbf{7 9 3 . 2}$ | $\$$ |

## Note 30 - Litigation

Contingencies
As of December 31, 2022, the Firm and its subsidiaries and affiliates are defendants or respondents in numerous legal proceedings, including private, civil litigations, government investigations or regulatory enforcement matters. The litigations range from individual actions involving a single plaintiff to class action lawsuits with potentially millions of class members. Investigations and regulatory enforcement matters involve both formal and informal proceedings, by both governmental agencies and self-regulatory organizations. These legal proceedings are at varying stages of adjudication, arbitration or investigation, and involve each of the Firm's lines of business and several geographies and a wide variety of claims (including common law tort and contract claims and statutory antitrust, securities and consumer protection claims), some of which present novel legal theories.
The Firm believes the estimate of the aggregate range of reasonably possible losses, in excess of reserves established, for its legal proceedings is from $\$ 0$ to approximately $\$ 1.2$ billion at December 31, 2022. This estimated aggregate range of reasonably possible losses was based upon information available as of that date for those proceedings in which the Firm believes that an estimate of reasonably possible loss can be made. For certain matters, the Firm does not believe that such an estimate can be made, as of that date. The Firm's estimate of the aggregate range of reasonably possible losses involves significant judgment, given:

- the number, variety and varying stages of the proceedings, including the fact that many are in preliminary stages,
- the existence in many such proceedings of multiple defendants, including the Firm, whose share of liability (if any) has yet to be determined,
- the numerous yet-unresolved issues in many of the proceedings, including issues regarding class certification and the scope of many of the claims, and
- the uncertainty of the various potential outcomes of such proceedings, including where the Firm has made assumptions concerning future rulings by the court or other adjudicator, or about the behavior or incentives of adverse parties or regulatory authorities, and those assumptions prove to be incorrect.

In addition, the outcome of a particular proceeding may be a result which the Firm did not take into account in its estimate because the Firm had deemed the likelihood of that outcome to be remote. Accordingly, the Firm's estimate of the aggregate range of reasonably possible losses will change from time to time, and actual losses may vary significantly.

Set forth below are descriptions of the Firm's material legal proceedings.

1MDB Litigation. J.P. Morgan (Suisse) SA was named as a defendant in a civil litigation filed in May 2021 in Malaysia by 1Malaysia Development Berhad ("1MDB"), a Malaysian state-owned and controlled investment fund. J.P. Morgan (Suisse) SA was served in August 2022. The claim alleges "dishonest assistance" against J.P. Morgan (Suisse) SA in relation to payments of $\$ 300$ million and $\$ 500$ million, from 2009 and 2010, respectively, received from 1MDB and paid into an account at J.P. Morgan Suisse (SA) held by 1MDB PetroSaudi Limited, a joint venture company between 1MDB and PetroSaudi Holdings (Cayman) Limited. In September 2022, the Firm filed an application challenging the validity of service and the Malaysian court's jurisdiction to hear the claim.
Amrapali. India’s Enforcement Directorate ("ED") is investigating J.P. Morgan India Private Limited in connection with investments made in 2010 and 2012 by two offshore funds formerly managed by JPMorgan Chase entities into residential housing projects developed by the Amrapali Group ("Amrapali"). In 2017, numerous creditors filed civil claims against Amrapali, including petitions brought by home buyers relating to delays in delivering or failure to deliver residential units. The home buyers' petitions have been overseen by the Supreme Court of India and are ongoing. In August 2021, the ED issued an order fining J.P. Morgan India Private Limited approximately $\$ 31.5$ million. The Firm is appealing the order and the fine. Relatedly, in July 2019, the Supreme Court of India issued an order making preliminary findings that Amrapali and other parties, including unspecified JPMorgan Chase entities and the offshore funds that had invested in the projects, violated certain currency control and money laundering provisions, and ordering the ED to conduct a further inquiry under India's Prevention of Money Laundering Act ("PMLA") and Foreign Exchange Management Act ("FEMA"). In May 2020, the ED attached approximately $\$ 25$ million from J.P. Morgan India Private Limited in connection with the criminal PMLA investigation. The Firm is responding to and cooperating with the PMLA investigation.
Federal Republic of Nigeria Litigation. JPMorgan Chase Bank, N.A. operated an escrow and depository account for the Federal Government of Nigeria ("FGN") and two major international oil companies. The account held approximately $\$ 1.1$ billion in connection with a dispute among the clients over rights to an oil field. Following the settlement of the dispute, JPMorgan Chase Bank, N.A. paid out the monies in the account in 2011 and 2013 in accordance with directions received from its clients. In November 2017, the Federal Republic of Nigeria ("FRN") commenced a claim in the English High Court for approximately $\$ 875$ million in payments made out of the accounts. The FRN alleged that the payments were

## Notes to consolidated financial statements

instructed as part of a complex fraud not involving JPMorgan Chase Bank, N.A., but that JPMorgan Chase Bank, N.A. was or should have been on notice that the payments may be fraudulent. A trial was held between February and April 2022. In June 2022, the Court decided the case in favor of JPMorgan Chase Bank, N.A. and dismissed it in full. In November 2022, the Court refused permission to the FRN to appeal the dismissal, and the matter was concluded.

Foreign Exchange Investigations and Litigation. The Firm previously reported settlements with certain government authorities relating to its foreign exchange ("FX") sales and trading activities and controls related to those activities. Among those resolutions, in May 2015, the Firm pleaded guilty to a single violation of federal antitrust law. The Department of Labor ("DOL") granted the Firm exemptions that permit the Firm and its affiliates to continue to rely on the Qualified Professional Asset Manager exemption under the Employee Retirement Income Security Act ("ERISA") through the ten-year disqualification period following the antitrust plea. The only remaining FX-related governmental inquiry is a South Africa Competition Commission matter which is currently pending before the South Africa Competition Tribunal.

With respect to civil litigation matters, in August 2018, the United States District Court for the Southern District of New York granted final approval to the Firm's settlement of a consolidated class action brought by U.S.-based plaintiffs, which principally alleged violations of federal antitrust laws based on an alleged conspiracy to manipulate foreign exchange rates and also sought damages on behalf of persons who transacted in FX futures and options on futures. Although certain members of the settlement class filed requests to the Court to be excluded from the class, an agreement to resolve their claims was reached in December 2022. A putative class action remains pending against the Firm and other foreign exchange dealers on behalf of certain consumers who purchased foreign currencies at allegedly inflated rates. In addition, some FX-related individual and putative class actions based on similar alleged underlying conduct have been filed outside the U.S., including in the U.K., Israel, the Netherlands, Brazil and Australia. An agreement to resolve one of the UK actions was reached in December 2022. In a putative class action pending before the U.K. Competition Appeal Tribunal, proposed class representatives have appealed the tribunal's denial of a request for class certification on an opt-out basis. In Israel, a settlement in principle has been reached in the putative class action, which remains subject to court approval.

Interchange Litigation. Groups of merchants and retail associations filed a series of class action complaints alleging that Visa and Mastercard, as well as certain banks, conspired to set the price of credit and debit card interchange fees and enacted related rules in violation of antitrust laws. In 2012, the parties initially settled the cases for a cash payment, but that settlement was reversed on
appeal and remanded to the United States District Court for the Eastern District of New York.

The original class action was divided into two separate actions, one seeking primarily monetary relief and the other seeking primarily injunctive relief. In September 2018, the parties to the monetary class action finalized an agreement which amends and supersedes the prior settlement agreement. Pursuant to this settlement, the defendants collectively contributed an additional \$900 million to the approximately $\$ 5.3$ billion previously held in escrow from the original settlement. In December 2019, the amended settlement agreement was approved by the District Court. Certain merchants appealed the District Court's approval order, and those appeals are pending. Based on the percentage of merchants that opted out of the amended class settlement, \$700 million has been returned to the defendants from the settlement escrow in accordance with the settlement agreement. The injunctive class action continues separately, and in September 2021, the District Court granted plaintiffs' motion for class certification in part, and denied the motion in part.
Of the merchants who opted out of the amended damages class settlement, certain merchants filed individual actions raising similar allegations against Visa and Mastercard, as well as against the Firm and other banks. While some of those actions remain pending, the defendants have reached settlements with the merchants who opted out representing over half of the combined Mastercard-branded and Visabranded payment card sales volume.
Jeffrey Epstein Litigation. JPMorgan Chase Bank, N.A. is named as a defendant in two lawsuits filed in the United States District Court for the Southern District of New York which allege that JPMorgan Chase Bank, N.A. knowingly facilitated Jeffrey Epstein's sex trafficking and other unlawful conduct by providing banking services to Epstein until 2013. One case, which was filed in November 2022, is a putative class action filed by an alleged sex-trafficking victim of Epstein, and the other case, which was filed in December 2022, was brought on behalf of the government of the United States Virgin Islands and also alleges certain Virgin Islands statutory claims. JPMorgan Chase Bank, N.A. has moved to dismiss both complaints.

LIBOR and Other Benchmark Rate Investigations and Litigation. JPMorgan Chase has responded to inquiries from various governmental agencies and entities around the world relating primarily to the British Bankers Association's ("BBA") London Interbank Offered Rate ("LIBOR") for various currencies and the European Banking Federation's Euro Interbank Offered Rate ("EURIBOR"). The Swiss Competition Commission's investigation relating to EURIBOR, to which the Firm and one other bank remain subject, continues. In December 2016, the European Commission issued a decision against the Firm and other banks finding an infringement of European antitrust rules relating to EURIBOR. The Firm has filed an appeal of that
decision with the European General Court, and that appeal is pending.

In addition, the Firm has been named as a defendant along with other banks in various individual and putative class actions related to benchmark rates, including U.S. dollar LIBOR. In actions related to U.S. dollar LIBOR during the period that it was administered by the BBA, the Firm has obtained dismissal of certain actions and resolved certain other actions, and others are in various stages of litigation. The United States District Court for the Southern District of New York has granted class certification of antitrust claims related to bonds and interest rate swaps sold directly by the defendants, including the Firm. A consolidated putative class action related to the period that U.S. dollar LIBOR was administered by ICE Benchmark Administration has been dismissed. In addition, a group of individual plaintiffs filed a lawsuit asserting antitrust claims, alleging that the Firm and other defendants were engaged in an unlawful agreement to set U.S. dollar LIBOR and conspired to monopolize the market for LIBOR-based consumer loans and credit cards. In September 2022, the Court dismissed plaintiffs' complaint in its entirety, and plaintiffs filed an amended complaint asserting similar antitrust claims, which defendants have moved to dismiss. The Firm's settlements of putative class actions related to the Singapore Interbank Offered Rate and the Singapore Swap Offer Rate, and the Australian Bank Bill Swap Reference Rate received final court approval in November 2022, while the settlement related to Swiss franc LIBOR remains subject to court approval.

Securities Lending Antitrust Litigation. JPMorgan Chase Bank, N.A., J.P. Morgan Securities LLC, J.P. Morgan Prime, Inc., and J.P. Morgan Strategic Securities Lending Corp. are named as defendants in a putative class action filed in the United States District Court for the Southern District of New York. The complaint asserts violations of federal antitrust law and New York State common law in connection with an alleged conspiracy to prevent the emergence of anonymous exchange trading for securities lending transactions. Defendants' motion to dismiss the complaint was denied. Plaintiffs have moved to certify a class in this action, which defendants are opposing.

Shareholder Litigation. Several shareholder putative class actions, as well as shareholder derivative actions purporting to act on behalf of the Firm, have been filed against the Firm, its Board of Directors and certain of its current and former officers.

Certain of these shareholder suits relate to historical trading practices by former employees in the precious metals and U.S. treasuries markets and related conduct which were the subject of the Firm's resolutions with the DOJ, CFTC and SEC in September 2020, and fiduciary activities that were separately the subject of a resolution between JPMorgan Chase Bank, N.A. and the OCC in November 2020. One of these shareholder derivative suits was filed in the Supreme Court of the State of New York in May 2022, asserting breach of fiduciary duty and unjust
enrichment claims relating to the historical trading practices and related conduct and fiduciary activities which were the subject of the resolutions described above. In December 2022, the court granted defendants’ motion to dismiss this action in full. A second shareholder derivative action was filed in the United States District Court for the Eastern District of New York in December 2022 relating to the historical trading practices and related conduct, which asserts breach of fiduciary duty and contribution claims and alleges that the shareholder is excused from making a demand to commence litigation because such a demand would have been futile. In addition, a consolidated putative class action is pending in the United States District Court for the Eastern District of New York on behalf of shareholders who acquired shares of JPMorgan Chase common stock during the putative class period, alleging that certain SEC filings of the Firm were materially false or misleading because they did not disclose certain information relating to the historical trading practices and conduct. Defendants have moved to dismiss the amended complaint in this action.

A separate shareholder derivative suit was filed in March 2022 in the United States District Court for the Eastern District of New York asserting breaches of fiduciary duty and violations of federal securities laws based on the alleged failure of the Board of Directors to exercise adequate oversight over the Firm's compliance with records preservation requirements which were the subject of resolutions between certain of the Firm's subsidiaries and the SEC and the CFTC. Defendants' motion to dismiss the amended complaint is pending.

In addition to the various legal proceedings discussed above, JPMorgan Chase and its subsidiaries are named as defendants or are otherwise involved in a substantial number of other legal proceedings. The Firm believes it has meritorious defenses to the claims asserted against it in its currently outstanding legal proceedings and it intends to defend itself vigorously. Additional legal proceedings may be initiated from time to time in the future.

The Firm has established reserves for several hundred of its currently outstanding legal proceedings. In accordance with the provisions of U.S. GAAP for contingencies, the Firm accrues for a litigation-related liability when it is probable that such a liability has been incurred and the amount of the loss can be reasonably estimated. The Firm evaluates its outstanding legal proceedings each quarter to assess its litigation reserves, and makes adjustments in such reserves, upward or downward, as appropriate, based on management's best judgment after consultation with counsel. The Firm's legal expense was $\$ 266$ million, $\$ 426$ million and $\$ 1.1$ billion for the years ended December 31, 2022, 2021 and 2020, respectively. There is no assurance that the Firm's litigation reserves will not need to be adjusted in the future.

## Notes to consolidated financial statements

In view of the inherent difficulty of predicting the outcome of legal proceedings, particularly where the claimants seek very large or indeterminate damages, or where the matters present novel legal theories, involve a large number of parties or are in early stages of discovery, the Firm cannot state with confidence what will be the eventual outcomes of the currently pending matters, the timing of their ultimate resolution or the eventual losses, fines, penalties or consequences related to those matters. JPMorgan Chase believes, based upon its current knowledge and after consultation with counsel, consideration of the material legal proceedings described above and after taking into account its current litigation reserves and its estimated aggregate range of possible losses, that the other legal proceedings currently pending against it should not have a material adverse effect on the Firm's consolidated financial condition. The Firm notes, however, that in light of the uncertainties involved in such proceedings, there is no assurance that the ultimate resolution of these matters will not significantly exceed the reserves it has currently accrued or that a matter will not have material reputational consequences. As a result, the outcome of a particular matter may be material to JPMorgan Chase's operating results for a particular period, depending on, among other factors, the size of the loss or liability imposed and the level of JPMorgan Chase's income for that period.

## Note 31 - International operations

The following table presents income statement and balance sheet-related information for JPMorgan Chase by major international geographic area. The Firm defines international activities for purposes of this footnote presentation as business transactions that involve clients residing outside of the U.S., and the information presented below is based predominantly on the domicile of the client, the location from which the client relationship is managed, booking location or the location of the trading desk. However, many of the Firm's U.S. operations serve international businesses.

As the Firm's operations are highly integrated, estimates and subjective assumptions have been made to apportion revenue and expense between U.S. and international operations. These estimates and assumptions are consistent with the allocations used for the Firm's segment reporting as set forth in Note 32.

The Firm's long-lived assets for the periods presented are not considered by management to be significant in relation to total assets. The majority of the Firm's long-lived assets are located in the U.S.

| As of or for the year ended December 31, (in millions) | Revenue ${ }^{(b)}$ |  | Expense ${ }^{(c)}$ |  | Income before income tax expense |  | Net income |  | Total assets |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2022 |  |  |  |  |  |  |  |  |  |  |  |
| Europe/Middle East/Africa | \$ | 18,765 | \$ | 11,754 | \$ | 7,011 | \$ | 5,158 | \$ | 558,430 | (d) |
| Asia-Pacific |  | 10,025 |  | 6,763 |  | 3,262 |  | 2,119 |  | 281,479 |  |
| Latin America/Caribbean |  | 3,178 |  | 1,697 |  | 1,481 |  | 1,156 |  | 78,673 |  |
| Total international |  | 31,968 |  | 20,214 |  | 11,754 |  | 8,433 |  | 918,582 |  |
| North America ${ }^{(a)}$ |  | 96,727 |  | 62,315 |  | 34,412 |  | 29,243 |  | 2,747,161 |  |
| Total | \$ | 128,695 | \$ | 82,529 | \$ | 46,166 | \$ | 37,676 | \$ | 3,665,743 |  |
| 2021 |  |  |  |  |  |  |  |  |  |  |  |
| Europe/Middle East/Africa | \$ | 16,561 | \$ | 10,833 | \$ | 5,728 | \$ | 4,202 | \$ | 517,904 | (d) |
| Asia-Pacific |  | 9,654 |  | 6,372 |  | 3,282 |  | 2,300 |  | 277,897 |  |
| Latin America/Caribbean |  | 2,756 |  | 1,589 |  | 1,167 |  | 878 |  | 65,040 | (e) |
| Total international |  | 28,971 |  | 18,794 |  | 10,177 |  | 7,380 |  | 860,841 |  |
| North America ${ }^{\left({ }^{(2)}\right.}$ |  | 92,678 |  | 43,293 |  | 49,385 |  | 40,954 |  | 2,882,726 | (e) |
| Total | \$ | 121,649 | \$ | 62,087 | \$ | 59,562 | \$ | 48,334 | \$ | 3,743,567 |  |
| 2020 |  |  |  |  |  |  |  |  |  |  |  |
| Europe/Middle East/Africa | \$ | 16,566 | \$ | 10,987 | \$ | 5,579 | \$ | 3,868 | \$ | 530,687 | (d) |
| Asia-Pacific |  | 9,289 |  | 5,558 |  | 3,731 |  | 2,630 |  | 252,553 |  |
| Latin America/Caribbean |  | 2,740 |  | 1,590 |  | 1,150 |  | 837 |  | 63,853 | (e) |
| Total international |  | 28,595 |  | 18,135 |  | 10,460 |  | 7,335 |  | 847,093 |  |
| North America ${ }^{\left({ }^{(2)}\right.}$ |  | 91,356 |  | 66,001 |  | 25,355 |  | 21,796 |  | 2,537,664 | (e) |
| Total | \$ | 119,951 | \$ | 84,136 | \$ | 35,815 | \$ | 29,131 | \$ | 3,384,757 |  |

(a) Substantially reflects the U.S.
(b) Revenue is composed of net interest income and noninterest revenue.
(c) Expense is composed of noninterest expense and the provision for credit losses.
(d) Total assets for the U.K. were approximately $\$ 357$ billion, $\$ 365$ billion and $\$ 353$ billion at December 31, 2022, 2021 and 2020, respectively.
(e) Prior-period amounts have been revised to conform with the current presentation.

## Notes to consolidated financial statements

## Note 32 - Business segments

The Firm is managed on an LOB basis. There are four major reportable business segments - Consumer \& Community Banking, Corporate \& Investment Bank, Commercial Banking and Asset \& Wealth Management. In addition, there is a Corporate segment. The business segments are determined based on the products and services provided, or the type of customer served, and they reflect the manner in which financial information is evaluated by the Firm's Operating Committee. Segment results are presented on a managed basis. Refer to Segment results of this footnote for a further discussion of JPMorgan Chase's business segments.

The following is a description of each of the Firm's business segments, and the products and services they provide to their respective client bases.

## Consumer \& Community Banking

Consumer \& Community Banking offers products and services to consumers and small businesses through bank branches, ATMs, digital (including mobile and online) and telephone banking. CCB is organized into Banking \& Wealth Management (including Consumer Banking, J.P. Morgan Wealth Management and Business Banking), Home Lending (including Home Lending Production, Home Lending Servicing and Real Estate Portfolios) and Card Services \& Auto. Banking \& Wealth Management offers deposit, investment and lending products, cash management, payments and services. Home Lending includes mortgage origination and servicing activities, as well as portfolios consisting of residential mortgages and home equity loans. Card Services issues credit cards and offers travel services. Auto originates and services auto loans and leases.

## Corporate \& Investment Bank

The Corporate \& Investment Bank, which consists of Banking and Markets \& Securities Services, offers a broad suite of investment banking, market-making, prime brokerage, lending, and treasury and securities products and services to a global client base of corporations, investors, financial institutions, merchants, government and municipal entities. Banking offers a full range of investment banking products and services in all major capital markets, including advising on corporate strategy and structure, capital-raising in equity and debt markets, as well as loan origination and syndication. Banking also includes Payments, which provides payments services enabling clients to manage payments and receipts globally, and cross-border financing. Markets \& Securities Services includes Markets, a global market-maker across products, including cash and derivative instruments, which also offers sophisticated risk management solutions, prime brokerage, and research. Markets \& Securities Services also includes

Securities Services, a leading global custodian which provides custody, fund accounting and administration, and securities lending products principally for asset managers, insurance companies and public and private investment funds.

## Commercial Banking

Commercial Banking provides comprehensive financial solutions, including lending, payments, investment banking and asset management products across three primary client segments: Middle Market Banking, Corporate Client Banking and Commercial Real Estate Banking. Other includes amounts not aligned with a primary client segment.
Middle Market Banking covers small and midsized companies, local governments and nonprofit clients. Corporate Client Banking covers large corporations. Commercial Real Estate Banking covers investors, developers, and owners of multifamily, office, retail, industrial and affordable housing properties.

Asset \& Wealth Management
Asset \& Wealth Management, with client assets of \$4.0 trillion, is a global leader in investment and wealth management.
Asset Management
Offers multi-asset investment management solutions across equities, fixed income, alternatives and money market funds to institutional and retail investors providing for a broad range of clients' investment needs.
Global Private Bank
Provides retirement products and services, brokerage, custody, estate planning, lending, deposits and investment management to high net worth clients.
The majority of AWM's client assets are in actively managed portfolios.

## Corporate

The Corporate segment consists of Treasury and Chief Investment Office ("CIO") and Other Corporate. Treasury and CIO is predominantly responsible for measuring, monitoring, reporting and managing the Firm's liquidity, funding, capital, structural interest rate and foreign exchange risks.

Other Corporate includes staff functions and expense that is centrally managed as well as certain Firm initiatives and activities not aligned to a specific LOB. The major Other Corporate functions include Real Estate, Technology, Legal, Corporate Finance, Human Resources, Internal Audit, Risk Management, Compliance, Control Management, Corporate Responsibility and various Other Corporate groups.

## Segment results

The following table provides a summary of the Firm's segment results as of or for the years ended December 31, 2022, 2021 and 2020, on a managed basis. The Firm's definition of managed basis starts with the reported U.S. GAAP results and includes certain reclassifications to present total net revenue for the Firm (and each of the reportable business segments) on an FTE basis.
Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented in the managed results on a basis comparable to taxable investments and securities. This allows management to assess the comparability of revenue from year-to-year arising from both taxable and tax-exempt sources. The corresponding income tax impact related to tax-exempt items is recorded within income tax expense/(benefit). These adjustments have no impact on net income as reported by the Firm as a whole or by the LOBs.

## Capital allocation

Each business segment is allocated capital by taking into consideration a variety of factors including capital levels of similarly rated peers and applicable regulatory capital requirements. ROE is measured and internal targets for expected returns are established as key measures of a business segment's performance.

The Firm's allocation methodology incorporates Basel III Standardized RWA, Basel III Advanced RWA, the GSIB surcharge, and a simulation of capital in a severe stress environment. At least annually, the assumptions, judgments and methodologies used to allocate capital are reassessed and, as a result, the capital allocated to the LOBs may change.

Segment results and reconciliation ${ }^{(a)}$

| As of or for the year | Consumer \& Community Banking |  |  | Corporate \& Investment Bank |  |  | Commercial Banking |  |  | Asset \& Wealth Management |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| December 31, (in millions, except ratios) | 2022 | 2021 | 2020 | 2022 | 2021 | 2020 | 2022 | 2021 | 2020 | 2022 | 2021 | 2020 |
| Noninterest revenue | \$ 15,089 | \$17,286 | \$17,740 | \$35,999 | \$ 38,209 | \$35,120 | \$3,336 | \$3,929 | \$ 3,067 | \$12,507 | \$13,071 | \$10,822 |
| Net interest income | 39,928 | 32,787 | 33,528 | 11,900 | 13,540 | 14,164 | 8,197 | 6,079 | 6,246 | 5,241 | 3,886 | 3,418 |
| Total net revenue | 55,017 | 50,073 | 51,268 | 47,899 | 51,749 | 49,284 | 11,533 | 10,008 | 9,313 | 17,748 | 16,957 | 14,240 |
| Provision for credit losses | 3,813 | $(6,989)$ | 12,312 | 1,158 | $(1,174)$ | 2,726 | 1,268 | (947) | 2,113 | 128 | (227) | 263 |
| Noninterest expense | 31,471 | 29,256 | 27,990 | 27,087 | 25,325 | 23,538 | 4,719 | 4,041 | 3,798 | 11,829 | 10,919 | 9,957 |
| Income/(loss) before income tax expense/ (benefit) | 19,733 | 27,806 | 10,966 | 19,654 | 27,598 | 23,020 | 5,546 | 6,914 | 3,402 | 5,791 | 6,265 | 4,020 |
| Income tax expense/ (benefit) | 4,862 | 6,876 | 2,749 | 4,684 | 6,464 | 5,926 | 1,333 | 1,668 | 824 | 1,426 | 1,528 | 1,028 |
| Net income/(loss) | \$ 14,871 | \$20,930 | \$ 8,217 | \$14,970 | \$ 21,134 | \$ 17,094 | \$4,213 | \$5,246 | \$2,578 | \$4,365 | \$4,737 | \$ 2,992 |
| Average equity | \$ 50,000 | \$50,000 | \$52,000 | \$103,000 | \$83,000 | \$80,000 | \$25,000 | \$24,000 | \$22,000 | \$17,000 | \$14,000 | \$10,500 |
| Total assets | 514,085 | 500,370 | 496,705 | 1,334,296 | 1,259,896 | 1,095,926 | 257,106 | 230,776 | 228,911 | 232,037 | 234,425 | 203,384 |
| Return on equity | 29 \% | 41 \% | 15 \% | 14 \% | 25 \% | 20 \% | 16 \% | 21 \% | 11 \% | 25 \% | 33 \% | 28 \% |
| Overhead ratio | 57 | 58 | 55 | 57 | 49 | 48 | 41 | 40 | 41 | 67 | 64 | 70 |


|  | Corporate |  |  |  |  |  | Reconciling Items ${ }^{\text {(a) }}$ |  |  |  |  |  | Total |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (in millions, except ratios) | 2022 |  | 2021 |  | 2020 |  | 2022 |  | 2021 |  | 2020 |  | 2022 |  | 2021 |  | 2020 |  |
| Noninterest revenue | \$ | $(1,798)$ | \$ | 68 | \$ | 1,199 | \$ | $(3,148)$ | \$ | $(3,225)$ | \$ | $(2,560)$ | \$ | 61,985 | \$ | 69,338 | \$ | 65,388 |
| Net interest income |  | 1,878 |  | $(3,551)$ |  | $(2,375)$ |  | (434) |  | (430) |  | (418) |  | 66,710 |  | 52,311 |  | 54,563 |
| Total net revenue |  | 80 |  | $(3,483)$ |  | $(1,176)$ |  | $(3,582)$ |  | $(3,655)$ |  | $(2,978)$ |  | 128,695 |  | 121,649 |  | 119,951 |
| Provision for credit losses |  | 22 |  | 81 |  | 66 |  | - |  | - |  | - |  | 6,389 |  | $(9,256)$ |  | 17,480 |
| Noninterest expense |  | 1,034 |  | 1,802 |  | 1,373 |  | - |  | - |  | - |  | 76,140 |  | 71,343 |  | 66,656 |
| Income/(loss) before income tax expense/(benefit) |  | (976) |  | $(5,366)$ |  | $(2,615)$ |  | $(3,582)$ |  | $(3,655)$ |  | $(2,978)$ |  | 46,166 |  | 59,562 |  | 35,815 |
| Income tax expense/(benefit) |  | (233) |  | $(1,653)$ |  | (865) |  | $(3,582)$ |  | $(3,655)$ |  | $(2,978)$ |  | 8,490 |  | 11,228 |  | 6,684 |
| Net income/(loss) | \$ | (743) | \$ | $(3,713)$ | \$ | $(1,750)$ | \$ | - | \$ | - | \$ | - | \$ | 37,676 | \$ | 48,334 | \$ | 29,131 |
| Average equity | \$ | 58,068 | \$ | 79,968 | \$ | 72,365 | \$ | - | \$ | - | \$ | - | \$ | 253,068 | \$ | 250,968 | \$ | 236,865 |
| Total assets |  | 1,328,219 |  | 1,518,100 |  | 1,359,831 |  | NA |  | NA |  | NA |  | 3,665,743 |  | 3,743,567 |  | ,384,757 |
| Return on equity |  | NM |  | NM |  | NM |  | NM |  | NM |  | NM |  | 14 \% |  | 19 \% |  | 12 \% |
| Overhead ratio |  | NM |  | NM |  | NM |  | NM |  | NM |  | NM |  | 59 |  | 59 |  | 56 |

(a) Segment results on a managed basis reflect revenue on a FTE basis with the corresponding income tax impact recorded within income tax expense/ (benefit). These adjustments are eliminated in reconciling items to arrive at the Firm's reported U.S. GAAP results.

## Note 33 - Parent Company

The following tables present Parent Company-only financial statements.


Statements of cash flows

| Year ended December 31, (in millions) |  | 2022 | 2021 |  | 2020 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Operating activities |  |  |  |  |  |
| Net income | \$ | 37,676 | \$ 48,334 |  | 29,131 |
| Less: Net income of subsidiaries and affiliates |  | 44,699 | 51,252 |  | 33,631 |
| Parent company net loss |  | $(7,023)$ | $(2,918)$ |  | $(4,500)$ |
| Cash dividends from subsidiaries and affiliates |  | 40,500 | 10,000 |  | 6,000 |
| Other operating adjustments |  | $(23,747)$ | $(12,677)$ |  | 15,357 |
| Net cash provided by/(used in) operating activities |  | 9,730 | $(5,595)$ |  | 16,857 |
| Investing activities |  |  |  |  |  |
| Net change in: |  |  |  |  |  |
| Advances to and investments in subsidiaries and affiliates, net |  | - | $(3,000)$ |  | $(2,663)$ |
| All other investing activities, net |  | 31 | 31 |  | 24 |
| Net cash provided by/(used in) investing activities |  | 31 | $(2,969)$ |  | $(2,639)$ |
| Financing activities |  |  |  |  |  |
| Net change in: |  |  |  |  |  |
| Borrowings from subsidiaries and affiliates |  | $(4,491)$ | 2,647 |  | 1,425 |
| Short-term borrowings |  | - | - |  | (20) |
| Proceeds from long-term borrowings |  | 41,389 | 49,169 |  | 37,312 |
| Payments of long-term borrowings |  | $(18,294)$ | $(15,543)$ |  | $(34,194)$ |
| Proceeds from issuance of preferred stock |  | - | 7,350 |  | 4,500 |
| Redemption of preferred stock |  | $(7,434)$ | $(2,575)$ |  | $(1,430)$ |
| Treasury stock repurchased |  | $(3,162)$ | $(18,408)$ |  | $(6,517)$ |
| Dividends paid |  | $(13,562)$ | $(12,858)$ |  | $(12,690)$ |
| All other financing activities, net |  | $(1,205)$ | $(1,238)$ |  | $(1,080)$ |
| Net cash provided by/(used in) financing activities |  | $(6,759)$ | 8,544 |  | $(12,694)$ |
| Net increase/(decrease) in cash and due from banks and deposits with banking subsidiaries |  | 3,002 | (20) |  | 1,524 |
| Cash and due from banks and deposits with banking subsidiaries at the beginning of the year |  |  |  |  |  |
| Cash and due from banks and deposits with banking subsidiaries at the end of the year |  |  |  |  |  |
| Cash interest paid | \$ | 7,462 | \$ 4,065 | \$ | 5,445 |
| Cash income taxes paid, net ${ }^{(d)}$ |  | 6,941 | 15,259 |  | 5,366 |

(a) Includes interest expense for intercompany derivative hedges on the Firm's LTD and related fair value adjustments, which is predominantly offset by related amounts in Other interest expense/(income).
(b) At December 31, 2022, long-term debt that contractually matures in 2023 through 2027 totaled $\$ 9.4$ billion, $\$ 23.5$ billion, $\$ 26.8$ billion, $\$ 28.2$ billion, and $\$ 17.5$ billion, respectively.
(c) Refer to Notes 20 and 28 for information regarding the Parent Company's guarantees of its subsidiaries' obligations.
(d) Represents payments, net of refunds, made by the Parent Company to various taxing authorities and includes taxes paid on behalf of certain of its subsidiaries that are subsequently reimbursed. The reimbursements were $\$ 11.3$ billion, $\$ 13.9$ billion, and $\$ 8.3$ billion for the years ended December 31, 2022, 2021 and 2020, respectively.

## Supplementary Information: Distribution of assets, liabilities and stockholders' equity; interest rates and interest differentials

Consolidated average balance sheets, interest and rates Provided below is a summary of JPMorgan Chase's consolidated average balances, interest and rates on a taxable-equivalent basis for the years 2020 through 2022. Income computed on a taxable-equivalent basis is the income reported in the Consolidated statements of income, adjusted to present interest income and rates earned on
assets exempt from income taxes (i.e., federal taxes) on a basis comparable with other taxable investments. The incremental tax rate used for calculating the taxableequivalent adjustment was approximately $24 \%$ in 2022, 2021 and 2020.

(a) Represents securities that are tax-exempt for U.S. federal income tax purposes.
(b) Includes brokerage-related held-for-investment customer receivables, which are classified in accrued interest and accounts receivable, and all other interest-earning assets, which are classified in other assets on the Consolidated Balance Sheets.
(c) Includes commercial paper.
(d) All other interest-bearing liabilities include brokerage-related customer payables.

Within the Consolidated average balance sheets, interest and rates summary, the principal amounts of nonaccrual loans have been included in the average loan balances used to determine the average interest rate earned on loans. Refer to Note 12 for additional information on nonaccrual loans, including interest accrued.
(Table continued from previous page)


(e) The combined balance of trading liabilities - debt and equity instruments was $\$ 138.1$ billion, $\$ 128.2$ billion and $\$ 106.5$ billion for the years ended December 31, 2022, 2021 and 2020, respectively.
(f) The ratio of average stockholders' equity to average assets was $7.4 \%, 7.6 \%$ and $8.3 \%$ for the years ended December 31, 2022,2021 and 2020, respectively. The return on average stockholders' equity, based on net income, was $13.2 \%, 17.0 \%$ and $10.9 \%$ for the years ended December 31,2022 , 2021 and 2020, respectively.
(g) Interest includes the effect of related hedging derivatives. Taxable-equivalent amounts are used where applicable.
(h) Fees and commissions on loans included in loan interest amounted to $\$ 1.8$ billion, $\$ 1.9$ billion and $\$ 1.0$ billion for the years ended December 31, 2022, 2021 and 2020.
(i) The annualized rate for securities based on amortized cost was $1.75 \%, 1.33 \%$ and $1.85 \%$ for the years ended December 31, 2022,2021 and 2020 , respectively, and does not give effect to changes in fair value that are reflected in AOCI.
(j) Negative interest and rates reflect the net impact of interest earned offset by fees paid on client-driven prime brokerage securities borrowed transactions.
(k) Prior-period amounts have been revised to conform with the current presentation.

Interest rates and interest differential analysis of net interest income - U.S. and non-U.S.

Presented below is a summary of interest and rates segregated between U.S. and non-U.S. operations for the years 2020 through 2022. The segregation of U.S. and non-U.S. components is based on the location of the office recording the transaction.
(Table continued on next page)

(a) Negative interest and rates reflect the net impact of interest earned offset by fees paid on client-driven prime brokerage securities borrowed transactions.
(b) Includes commercial paper.
(c) Represents the amount of noninterest-bearing liabilities funding interest-earning assets.

Refer to the "Net interest income" discussion in Consolidated Results of Operations on pages 51-54 for further information.


## Changes in net interest income, volume and rate analysis

The table below presents an attribution of net interest income between volume and rate. The attribution between volume and rate is calculated using annual average balances for each category of assets and liabilities shown in the table and the corresponding annual rates (refer to pages 292-296 for more information on average balances and rates). In this analysis, when the change cannot be isolated to either volume or rate, it has been allocated to volume. The annual rates include the impact of changes in market rates, as well as the impact of any change in composition of the various products within each category of asset or liability. This analysis is calculated separately for each category without consideration of the relationship between categories (for example, the net spread between the rates earned on assets and the rates paid on liabilities that fund those assets). As a result, changes in the granularity or groupings considered in this analysis would produce a different attribution result, and due to the complexities involved, precise allocation of changes in interest rates between volume and rates is inherently complex and judgmental.

| (Unaudited) | 2022 versus 2021 |  |  |  |  |  | 2021 versus 2020 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Increase/(decrease) due to change in: |  |  |  | Net change |  | Increase/(decrease) due to change in: |  |  |  | Net change |  |
| Year ended December 31, (On a taxable-equivalent basis; in millions) |  | olume |  | Rate |  |  |  | Volume |  | Rate |  |  |
| Interest-earning assets |  |  |  |  |  |  |  |  |  |  |  |  |
| Deposits with banks: |  |  |  |  |  |  |  |  |  |  |  |  |
| U.S. | \$ | $(1,185)$ | \$ | 7,910 | \$ | 6,725 | \$ | 308 | \$ | (383) | \$ | (75) |
| Non-U.S. |  | 166 |  | 1,636 |  | 1,802 |  | (42) |  | (120) |  | (162) |
| Federal funds sold and securities purchased under resale agreements: |  |  |  |  |  |  |  |  |  |  |  |  |
| U.S. |  | 267 |  | 1,625 |  | 1,892 |  | (66) |  | (976) |  | $(1,042)$ |
| Non-U.S. |  | 311 |  | 1,471 |  | 1,782 |  | 75 |  | (511) |  | (436) |
| Securities borrowed: ${ }^{\text {a }}$ |  |  |  |  |  |  |  |  |  |  |  |  |
| U.S. |  | 64 |  | 2,066 |  | 2,130 |  | (84) |  | 70 |  | (14) |
| Non-U.S. |  | 69 |  | 423 |  | 492 |  | (13) |  | (56) |  | (69) |
| Trading assets - debt instruments: |  |  |  |  |  |  |  |  |  |  |  |  |
| U.S. |  | 375 |  | 1,509 |  | 1,884 |  | $(1,267)$ |  | (259) |  | $(1,526)$ |
| Non-U.S. |  | (418) |  | 775 |  | 357 |  | 481 |  | 32 |  | 513 |
| Investment securities: |  |  |  |  |  |  |  |  |  |  |  |  |
| U.S. |  | 1,061 |  | 2,534 |  | 3,595 |  | 1,170 |  | $(2,474)$ |  | $(1,304)$ |
| Non-U.S. |  | (2) |  | 207 |  | 205 |  | (44) |  | (136) |  | (180) |
| Loans: |  |  |  |  |  |  |  |  |  |  |  |  |
| U.S. |  | 2,988 |  | 6,750 |  | 9,738 |  | 600 |  | $(3,093)$ |  | $(2,493)$ |
| Non-U.S. |  | 148 |  | 1,328 |  | 1,476 |  | 355 |  | (85) |  | 270 |
| All other interest-earning assets, predominantly U.S. |  | 161 |  | 2,708 |  | 2,869 |  | 320 |  | (449) |  | (129) |
| Change in interest income |  | 4,005 |  | 30,942 |  | 34,947 |  | 1,793 |  | $(8,440)$ |  | $(6,647)$ |
| Interest-bearing liabilities |  |  |  |  |  |  |  |  |  |  |  |  |
| Interest-bearing deposits: |  |  |  |  |  |  |  |  |  |  |  |  |
| U.S. |  | 268 |  | 5,857 |  | 6,125 |  | 109 |  | $(1,496)$ |  | $(1,387)$ |
| Non-U.S. |  | 161 |  | 3,265 |  | 3,426 |  | (55) |  | (384) |  | (439) |
| Federal funds purchased and securities loaned or sold under repurchase agreements: |  |  |  |  |  |  |  |  |  |  |  |  |
| U.S. |  | (466) |  | 3,327 |  | 2,861 |  | (6) |  | (635) |  | (641) |
| Non-U.S. |  | 93 |  | 493 |  | 586 |  | 8 |  | (151) |  | (143) |
| Trading liabilities - debt, short-term and all other interest-bearing liabilities:(b) |  |  |  |  |  |  |  |  |  |  |  |  |
| U.S. |  | 206 |  | 2,523 |  | 2,729 |  | (43) |  | (272) |  | (315) |
| Non-U.S. |  | 125 |  | 756 |  | 881 |  | 112 |  | 19 |  | 131 |
| Beneficial interests issued by consolidated VIEs, predominantly U.S. |  | (69) |  | 212 |  | 143 |  | (27) |  | (104) |  | (131) |
| Long-term debt: |  |  |  |  |  |  |  |  |  |  |  |  |
| U.S. |  | 75 |  | 3,722 |  | 3,797 |  | (64) |  | $(1,411)$ |  | $(1,475)$ |
| Non-U.S. |  | (31) |  | 27 |  | (4) |  | (12) |  | 5 |  | (7) |
| Change in interest expense |  | 362 |  | 20,182 |  | 20,544 |  | 22 |  | $(4,429)$ |  | $(4,407)$ |
| Change in net interest income | \$ | 3,643 | \$ | 10,760 | \$ | 14,403 | \$ | 1,771 | \$ | $(4,011)$ | \$ | $(2,240)$ |

[^140]
## Glossary of Terms and Acronyms

2022 Form 10-K: Annual report on Form 10-K for the year ended December 31, 2022, filed with the U.S. Securities and Exchange Commission.

ABS: Asset-backed securities
AFS: Available-for-sale
ALCO: Asset Liability Committee
Amortized cost: Amount at which a financing receivable or investment is originated or acquired, adjusted for accretion or amortization of premium, discount, and net deferred fees or costs, collection of cash, charge-offs, foreign exchange, and fair value hedge accounting adjustments. For AFS securities, amortized cost is also reduced by any impairment losses recognized in earnings. Amortized cost is not reduced by the allowance for credit losses, except where explicitly presented net.

AOCI: Accumulated other comprehensive income/(loss)
ARM: Adjustable rate mortgage(s)

## AUC: Assets under custody

AUM: "Assets under management": Represent assets managed by AWM on behalf of its Private Banking, Institutional and Retail clients. Includes "Committed capital not Called."

Auto loan and lease origination volume: Dollar amount of auto loans and leases originated.

AWM: Asset \& Wealth Management
Beneficial interests issued by consolidated VIEs:
Represents the interest of third-party holders of debt, equity securities, or other obligations, issued by VIEs that JPMorgan Chase consolidates.

Benefit obligation: Refers to the projected benefit obligation for pension plans and the accumulated postretirement benefit obligation for OPEB plans.

BHC: Bank holding company
BWM: Banking \& Wealth Management
CB: Commercial Banking
CCAR: Comprehensive Capital Analysis and Review
CCB: Consumer \& Community Banking
CCO: Chief Compliance Officer
CCP: "Central counterparty" is a clearing house that interposes itself between counterparties to contracts traded in one or more financial markets, becoming the buyer to every seller and the seller to every buyer and thereby ensuring the future performance of open contracts. A CCP becomes a counterparty to trades with market participants through novation, an open offer system, or another legally binding arrangement.

CDS: Credit default swaps
CECL: Current Expected Credit Losses

CEO: Chief Executive Officer
CET1 Capital: Common equity Tier 1 capital
CFO: Chief Financial Officer
CFP: Contingency funding plan
CFTC: Commodity Futures Trading Commission
Chase Bank USA, N.A.: Chase Bank USA, National Association

CIB: Corporate \& Investment Bank
CIO: Chief Investment Office
Client assets: Represent assets under management as well as custody, brokerage, administration and deposit accounts.

Client deposits and other third-party liabilities: Deposits, as well as deposits that are swept to on-balance sheet liabilities (e.g., commercial paper, federal funds purchased and securities loaned or sold under repurchase agreements) as part of client cash management programs.

Client investment assets: Represent assets under management as well as custody, brokerage and annuity accounts, and deposits held in investment accounts.

CLO: Collateralized Ioan obligations
CLTV: Combined Ioan-to-value
CMT: Constant Maturity Treasury
Collateral-dependent: A loan is considered to be collateraldependent when repayment of the loan is expected to be provided substantially through the operation or sale of the collateral when the borrower is experiencing financial difficulty, including when foreclosure is deemed probable based on borrower delinquency.

Commercial Card: provides a wide range of payment services to corporate and public sector clients worldwide through the commercial card products. Services include procurement, corporate travel and entertainment, expense management services, and business-to-business payment solutions.

Credit derivatives: Financial instruments whose value is derived from the credit risk associated with the debt of a third-party issuer (the reference entity) which allow one party (the protection purchaser) to transfer that risk to another party (the protection seller). Upon the occurrence of a credit event by the reference entity, which may include, among other events, the bankruptcy or failure to pay its obligations, or certain restructurings of the debt of the reference entity, neither party has recourse to the reference entity. The protection purchaser has recourse to the protection seller for the difference between the face value of the CDS contract and the fair value at the time of settling the credit derivative contract. The determination as to whether a credit event has occurred is generally made by the relevant International Swaps and Derivatives Association ("ISDA") Determinations Committee.

## Glossary of Terms and Acronyms

Criticized: Criticized loans, lending-related commitments and derivative receivables that are classified as special mention, substandard and doubtful categories for regulatory purposes.

CRO: Chief Risk Officer
CRR: Capital Requirements Regulation
CTC: CIO, Treasury and Corporate
Custom lending: Loans to AWM's Global Private Bank clients, including loans to private investment funds and loans that are collateralized by nontraditional asset types, such as art work, aircraft, etc.

CVA: Credit valuation adjustment
Debit and credit card sales volume: Dollar amount of card member purchases, net of returns.

Deposit margin/deposit spread: Represents net interest income expressed as a percentage of average deposits.
Distributed denial-of-service attack: The use of a large number of remote computer systems to electronically send a high volume of traffic to a target website to create a service outage at the target. This is a form of cyberattack.

Dodd-Frank Act: Wall Street Reform and Consumer Protection Act

DVA: Debit valuation adjustment
EC: European Commission
Eligible HQLA: Eligible high-quality liquid assets, for purposes of calculating the LCR, is the amount of unencumbered HQLA that satisfy certain operational considerations as defined in the LCR rule.

Eligible LTD: Long-term debt satisfying certain eligibility criteria

Embedded derivatives: are implicit or explicit terms or features of a financial instrument that affect some or all of the cash flows or the value of the instrument in a manner similar to a derivative. An instrument containing such terms or features is referred to as a "hybrid." The component of the hybrid that is the non-derivative instrument is referred to as the "host." For example, callable debt is a hybrid instrument that contains a plain vanilla debt instrument (i.e., the host) and an embedded option that allows the issuer to redeem the debt issue at a specified date for a specified amount (i.e., the embedded derivative). However, a floating rate instrument is not a hybrid composed of a fixed-rate instrument and an interest rate swap.

EPS: Earnings per share
ERISA: Employee Retirement Income Security Act of 1974
ETD: "Exchange-traded derivatives": Derivative contracts that are executed on an exchange and settled via a central clearing house.

EU: European Union

## Expense categories:

- Volume- and/or revenue-related expenses generally correlate with changes in the related business/ transaction volume or revenue. Examples include commissions and incentive compensation within the LOBS, depreciation expense related to operating lease assets, and brokerage expense related to trading transaction volume.
- Investments in the business include expenses associated with supporting medium- to longer-term strategic plans of the Firm. Examples include front office growth, market expansion, initiatives in technology (including related compensation), marketing, and acquisitions.
- Structural expenses are those associated with the day-today cost of running the Firm and are expenses not included in the above two categories. Examples include employee salaries and benefits, certain other incentive compensation, and costs related to real estate.

Fannie Mae: Federal National Mortgage Association
FASB: Financial Accounting Standards Board
FCA: Financial Conduct Authority
FCC: Firmwide Control Committee
FDIC: Federal Deposit Insurance Corporation
Federal Reserve: The Board of the Governors of the Federal Reserve System

FFIEC: Federal Financial Institutions Examination Council
FHA: Federal Housing Administration
FHLB: Federal Home Loan Bank
FICC: The Fixed Income Clearing Corporation
FICO score: A measure of consumer credit risk provided by credit bureaus, typically produced from statistical models by Fair Isaac Corporation utilizing data collected by the credit bureaus.

FINRA: Financial Industry Regulatory Authority
Firm: JPMorgan Chase \& Co.
Forward points: Represents the interest rate differential between two currencies, which is either added to or subtracted from the current exchange rate (i.e., "spot rate") to determine the forward exchange rate.

FRC: Firmwide Risk Committee
Freddie Mac: Federal Home Loan Mortgage Corporation
Free standing derivatives: a derivative contract entered into either separate and apart from any of the Firm's other financial instruments or equity transactions. Or, in conjunction with some other transaction and is legally detachable and separately exercisable.

FSB: Financial Stability Board
FTE: Fully taxable equivalent

## Glossary of Terms and Acronyms

FVA: Funding valuation adjustment

## FX: Foreign exchange

G7: Group of Seven nations: Countries in the G7 are Canada, France, Germany, Italy, Japan, the U.K. and the U.S.

G7 government bonds: Bonds issued by the government of one of the G7 nations.

Ginnie Mae: Government National Mortgage Association
GSIB: Global systemically important banks
HELOC: Home equity line of credit
Home equity - senior lien: Represents loans and commitments where JPMorgan Chase holds the first security interest on the property.

Home equity - junior lien: Represents loans and commitments where JPMorgan Chase holds a security interest that is subordinate in rank to other liens.

Households: A household is a collection of individuals or entities aggregated together by name, address, tax identifier and phone number.

HQLA: "High-quality liquid assets" consist of cash and certain high-quality liquid securities as defined in the LCR rule.

HTM: Held-to-maturity
IBOR: Interbank Offered Rate
ICAAP: Internal capital adequacy assessment process
IDI: Insured depository institutions
IHC: JPMorgan Chase Holdings LLC, an intermediate holding company

Investment-grade: An indication of credit quality based on JPMorgan Chase's internal risk assessment. The Firm considers ratings of BBB-/Baa3 or higher as investmentgrade.

IPO: Initial public offering
ISDA: International Swaps and Derivatives Association
JPMorgan Chase: JPMorgan Chase \& Co.
JPMorgan Chase Bank, N.A.: JPMorgan Chase Bank, National Association

JPMorgan Chase Foundation or the Firm's Foundation: A not-for-profit organization that makes contributions for charitable and educational purposes.

JPMorgan Securities: J.P. Morgan Securities LLC
JPMSE: J.P. Morgan SE
LCR: Liquidity coverage ratio
LDA: Loss Distribution Approach
LGD: Loss given default
LIBOR: London Interbank Offered Rate

LLC: Limited Liability Company
LOB: Line of business
LOB CROs: Line of Business and CTC Chief Risk Officers
LTIP: Long-term incentive plan
LTV: "Loan-to-value": For residential real estate loans, the relationship, expressed as a percentage, between the principal amount of a loan and the appraised value of the collateral (i.e., residential real estate) securing the loan.

Origination date LTV ratio
The LTV ratio at the origination date of the loan. Origination date LTV ratios are calculated based on the actual appraised values of collateral (i.e., loan-level data) at the origination date.

## Current estimated LTV ratio

An estimate of the LTV as of a certain date. The current estimated LTV ratios are calculated using estimated collateral values derived from a nationally recognized home price index measured at the metropolitan statistical area ("MSA") level. These MSA-level home price indices consist of actual data to the extent available and forecasted data where actual data is not available. As a result, the estimated collateral values used to calculate these ratios do not represent actual appraised loan-level collateral values; as such, the resulting LTV ratios are necessarily imprecise and should therefore be viewed as estimates.

## Combined LTV ratio

The LTV ratio considering all available lien positions, as well as unused lines, related to the property. Combined LTV ratios are used for junior lien home equity products.

Macro businesses: the macro businesses include Rates, Currencies and Emerging Markets, Fixed Income Financing and Commodities in CIB's Fixed Income Markets.

Managed basis: A non-GAAP presentation of Firmwide financial results that includes reclassifications to present revenue on a fully taxable-equivalent basis. Management also uses this financial measure at the segment level, because it believes this provides information to enable investors to understand the underlying operational performance and trends of the particular business segment and facilitates a comparison of the business segment with the performance of competitors.

Markets: consists of CIB's Fixed Income Markets and Equity Markets businesses.

Master netting agreement: A single agreement with a counterparty that permits multiple transactions governed by that agreement to be terminated or accelerated and settled through a single payment in a single currency in the event of a default (e.g., bankruptcy, failure to make a required payment or securities transfer or deliver collateral or margin when due).

MBS: Mortgage-backed securities
MD\&A: Management's discussion and analysis

## Glossary of Terms and Acronyms

Measurement alternative: Measures equity securities without readily determinable fair values at cost less impairment (if any), plus or minus observable price changes from an identical or similar investment of the same issuer.

Merchant Services: offers merchants payment processing capabilities, fraud and risk management, data and analytics, and other payments services. Through Merchant Services, merchants of all sizes can accept payments via credit and debit cards and payments in multiple currencies.

## MEV: Macroeconomic variable

Moody's: Moody's Investor Services
Mortgage origination channels:
Retail - Borrowers who buy or refinance a home through direct contact with a mortgage banker employed by the Firm using a branch office, the Internet or by phone. Borrowers are frequently referred to a mortgage banker by a banker in a Chase branch, real estate brokers, home builders or other third parties.

Correspondent - Banks, thrifts, other mortgage banks and other financial institutions that sell closed loans to the Firm.

## Mortgage product types:

Alt-A
Alt-A loans are generally higher in credit quality than subprime loans but have characteristics that would disqualify the borrower from a traditional prime Ioan. Alt-A lending characteristics may include one or more of the following: (i) limited documentation; (ii) a high CLTV ratio; (iii) loans secured by non-owner occupied properties; or (iv) a debt-to-income ratio above normal limits. A substantial proportion of the Firm's Alt-A loans are those where a borrower does not provide complete documentation of his or her assets or the amount or source of his or her income.

## Option ARMs

The option ARM real estate loan product is an adjustablerate mortgage loan that provides the borrower with the option each month to make a fully amortizing, interest-only or minimum payment. The minimum payment on an option ARM Ioan is based on the interest rate charged during the introductory period. This introductory rate is usually significantly below the fully indexed rate. The fully indexed rate is calculated using an index rate plus a margin. Once the introductory period ends, the contractual interest rate charged on the loan increases to the fully indexed rate and adjusts monthly to reflect movements in the index. The minimum payment is typically insufficient to cover interest accrued in the prior month, and any unpaid interest is deferred and added to the principal balance of the Ioan. Option ARM loans are subject to payment recast, which converts the Ioan to a variable-rate fully amortizing loan upon meeting specified loan balance and anniversary date triggers.

## Prime

Prime mortgage loans are made to borrowers with good credit records who meet specific underwriting
requirements, including prescriptive requirements related to income and overall debt levels. New prime mortgage borrowers provide full documentation and generally have reliable payment histories.

## Subprime

Subprime Ioans are loans that, prior to mid-2008, were offered to certain customers with one or more high risk characteristics, including but not limited to: (i) unreliable or poor payment histories; (ii) a high LTV ratio of greater than 80\% (without borrower-paid mortgage insurance); (iii) a high debt-to-income ratio; (iv) an occupancy type for the Ioan is other than the borrower's primary residence; or (v) a history of delinquencies or late payments on the loan.

MREL: Minimum requirements for own funds and eligible liabilities

MSA: Metropolitan statistical areas
MSR: Mortgage servicing rights
Multi-asset: Any fund or account that allocates assets under management to more than one asset class.

NA: Data is not applicable or available for the period presented.

## NAV: Net Asset Value

Net Capital Rule: Rule 15c3-1 under the Securities Exchange Act of 1934.

Net charge-off/(recovery) rate: Represents net chargeoffs/(recoveries) (annualized) divided by average retained loans for the reporting period.

Net interchange income includes the following components:

- Interchange income: Fees earned by credit and debit card issuers on sales transactions.
- Reward costs: The cost to the Firm for points earned by cardholders enrolled in credit card rewards programs generally tied to sales transactions.
- Partner payments: Payments to co-brand credit card partners based on the cost of loyalty program rewards earned by cardholders on credit card transactions.

Net mortgage servicing revenue: Includes operating revenue earned from servicing third-party mortgage loans, which is recognized over the period in which the service is provided; changes in the fair value of MSRs; the impact of risk management activities associated with MSRs; and gains and losses on securitization of excess mortgage servicing. Net mortgage servicing revenue also includes gains and losses on sales and lower of cost or fair value adjustments of certain repurchased loans insured by U.S. government agencies.

Net revenue rate: Represents Card Services net revenue (annualized) expressed as a percentage of average loans for the period.

## Glossary of Terms and Acronyms

Net yield on interest-earning assets: The average rate for interest-earning assets less the average rate paid for all sources of funds.

NFA: National Futures Association
NM: Not meaningful
NOL: Net operating loss
Nonaccrual loans: Loans for which interest income is not recognized on an accrual basis. Loans (other than credit card loans and certain consumer loans insured by U.S. government agencies) are placed on nonaccrual status when full payment of principal and interest is not expected, regardless of delinquency status, or when principal and interest have been in default for a period of 90 days or more unless the loan is both well-secured and in the process of collection. Collateral-dependent loans are typically maintained on nonaccrual status.

Nonperforming assets: Nonperforming assets include nonaccrual loans, nonperforming derivatives and certain assets acquired in Ioan satisfaction, predominantly real estate owned and other commercial and personal property.

NOW: Negotiable Order of Withdrawal
NSFR: Net Stable Funding Ratio
OAS: Option-adjusted spread
OCC: Office of the Comptroller of the Currency
OCI: Other comprehensive income/(loss)
OPEB: Other postretirement employee benefit
Over-the-counter ("OTC") derivatives: Derivative contracts that are negotiated, executed and settled bilaterally between two derivative counterparties, where one or both counterparties is a derivatives dealer.

Over-the-counter cleared ("OTC-cleared") derivatives: Derivative contracts that are negotiated and executed bilaterally, but subsequently settled via a central clearing house, such that each derivative counterparty is only exposed to the default of that clearing house.

Overhead ratio: Noninterest expense as a percentage of total net revenue.

Parent Company: JPMorgan Chase \& Co.
Participating securities: Represents unvested share-based compensation awards containing nonforfeitable rights to dividends or dividend equivalents (collectively, "dividends"), which are included in the earnings per share calculation using the two-class method. JPMorgan Chase grants RSUs to certain employees under its share-based compensation programs, which entitle the recipients to receive nonforfeitable dividends during the vesting period on a basis equivalent to the dividends paid to holders of common stock. These unvested awards meet the definition of participating securities. Under the two-class method, all earnings (distributed and undistributed) are allocated to
each class of common stock and participating securities, based on their respective rights to receive dividends.

PCA: Prompt corrective action
PCAOB: Public Company Accounting Oversight Board
PCD: "Purchased credit deteriorated" assets represent acquired financial assets that as of the date of acquisition have experienced a more-than-insignificant deterioration in credit quality since origination, as determined by the Firm.

## PD: Probability of default

Pillar 1: The Basel framework consists of a three "Pillar" approach. Pillar 1 establishes minimum capital requirements, defines eligible capital instruments, and prescribes rules for calculating RWA.
Pillar 3: The Basel framework consists of a three "Pillar" approach. Pillar 3 encourages market discipline through disclosure requirements which allow market participants to assess the risk and capital profiles of banks.

PPP: Paycheck Protection Program under the Small Business Association ("SBA")
PRA: Prudential Regulation Authority
Pre-provision profit/(loss): Represents total net revenue less noninterest expense. The Firm believes that this financial measure is useful in assessing the ability of a lending institution to generate income in excess of its provision for credit losses.

Pre-tax margin: Represents income before income tax expense divided by total net revenue, which is, in management's view, a comprehensive measure of pretax performance derived by measuring earnings after all costs are taken into consideration. It is one basis upon which management evaluates the performance of AWM against the performance of their respective competitors.

Principal transactions revenue: Principal transactions revenue is driven by many factors, including:

- the bid-offer spread, which is the difference between the price at which a market participant is willing and able to sell an instrument to the Firm and the price at which another market participant is willing and able to buy it from the Firm, and vice versa; and
- realized and unrealized gains and losses on financial instruments and commodities transactions, including those accounted for under the fair value option, primarily used in client-driven market-making activities, and on private equity investments.
- Realized gains and losses result from the sale of instruments, closing out or termination of transactions, or interim cash payments.
- Unrealized gains and losses result from changes in valuation.
In connection with its client-driven market-making activities, the Firm transacts in debt and equity instruments, derivatives and commodities, including


## Glossary of Terms and Acronyms

physical commodities inventories and financial instruments that reference commodities.
Principal transactions revenue also includes realized and unrealized gains and losses related to:

- derivatives designated in qualifying hedge accounting relationships, primarily fair value hedges of commodity and foreign exchange risk;
- derivatives used for specific risk management purposes, primarily to mitigate credit, foreign exchange and interest rate risks.

Production revenue: Includes fees and income recognized as earned on mortgage loans originated with the intent to sell, and the impact of risk management activities associated with the mortgage pipeline and warehouse loans. Production revenue also includes gains and losses on sales and lower of cost or fair value adjustments on mortgage loans held-for-sale (excluding certain repurchased loans insured by U.S. government agencies), and changes in the fair value of financial instruments measured under the fair value option.

PSUs: Performance share units
Regulatory VaR: Daily aggregated VaR calculated in accordance with regulatory rules.

REO: Real estate owned
Reported basis: Financial statements prepared under U.S. GAAP, which excludes the impact of taxable-equivalent adjustments.

Retained loans: Loans that are held-for-investment (i.e., excludes loans held-for-sale and loans at fair value).

Revenue wallet: Proportion of fee revenue based on estimates of investment banking fees generated across the industry (i.e., the revenue wallet) from investment banking transactions in M\&A, equity and debt underwriting, and loan syndications. Source: Dealogic, a third-party provider of investment banking competitive analysis and volume-based league tables for the above noted industry products.

RHS: Rural Housing Service of the U.S. Department of Agriculture

ROA: Return on assets
ROE: Return on equity
ROTCE: Return on tangible common equity
ROU assets: Right-of-use assets
RSU(s): Restricted stock units
RWA: "Risk-weighted assets": Basel III establishes two comprehensive approaches for calculating RWA (a Standardized approach and an Advanced approach) which include capital requirements for credit risk, market risk, and in the case of Basel III Advanced, also operational risk. Key differences in the calculation of credit risk RWA between the Standardized and Advanced approaches are that for Basel III Advanced, credit risk RWA is based on risk-sensitive
approaches which largely rely on the use of internal credit models and parameters, whereas for Basel III Standardized, credit risk RWA is generally based on supervisory riskweightings which vary primarily by counterparty type and asset class. Market risk RWA is calculated on a generally consistent basis between Basel III Standardized and Basel III Advanced.

S\&P: Standard and Poor's 500 Index
SA-CCR: Standardized Approach for Counterparty Credit Risk

SAR as it pertains to Hong Kong: Special Administrative Region

SAR(s) as it pertains to employee stock awards: Stock appreciation rights

SCB: Stress Capital Buffer
Scored portfolios: Consumer loan portfolios that predominantly include residential real estate loans, credit card loans, auto loans to individuals and certain small business loans.

## SEC: Securities and Exchange Commission

Securities financing agreements: Include resale, repurchase, securities borrowed and securities loaned agreements

Seed capital: Initial JPMorgan capital invested in products, such as mutual funds, with the intention of ensuring the fund is of sufficient size to represent a viable offering to clients, enabling pricing of its shares, and allowing the manager to develop a track record. After these goals are achieved, the intent is to remove the Firm's capital from the investment.

Shelf securities: Securities registered with the SEC under a shelf registration statement that have not been issued, offered or sold. These securities are not included in league tables until they have actually been issued.
Single-name: Single reference-entities
SLR: Supplementary leverage ratio
SMBS: Stripped mortgage-backed securities
SOFR: Secured Overnight Financing Rate
SPEs: Special purpose entities
Structural interest rate risk: Represents interest rate risk of the non-trading assets and liabilities of the Firm.

Structured notes: Structured notes are financial instruments whose cash flows are linked to the movement in one or more indexes, interest rates, foreign exchange rates, commodities prices, prepayment rates, underlying reference pool of loans or other market variables. The notes typically contain embedded (but not separable or detachable) derivatives. Contractual cash flows for principal, interest, or both can vary in amount and timing throughout the life of the note based on non-traditional

## Glossary of Terms and Acronyms

indexes or non-traditional uses of traditional interest rates or indexes.

Taxable-equivalent basis: In presenting results on a managed basis, the total net revenue for each of the business segments and the Firm is presented on a taxequivalent basis. Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented in managed basis results on a level comparable to taxable investments and securities; the corresponding income tax impact related to tax-exempt items is recorded within income tax expense.

TBVPS: Tangible book value per share
TCE: Tangible common equity
TDR: "Troubled debt restructuring" is deemed to occur when the Firm modifies the original terms of a loan agreement by granting a concession to a borrower that is experiencing financial difficulty. Loans with short-term and other insignificant modifications that are not considered concessions are not TDRs.

TLAC: Total loss-absorbing capacity

## U.K.: United Kingdom

Unaudited: Financial statements and/or information that have not been subject to auditing procedures by an independent registered public accounting firm.
U.S.: United States of America
U.S. GAAP: Accounting principles generally accepted in the U.S.
U.S. government agencies: U.S. government agencies include, but are not limited to, agencies such as Ginnie Mae and FHA, and do not include Fannie Mae and Freddie Mac which are U.S. government-sponsored enterprises ("U.S. GSEs"). In general, obligations of U.S. government agencies are fully and explicitly guaranteed as to the timely payment of principal and interest by the full faith and credit of the U.S. government in the event of a default.
U.S. GSE(s): "U.S. government-sponsored enterprises" are quasi-governmental, privately-held entities established or chartered by the U.S. government to serve public purposes as specified by the U.S. Congress to improve the flow of credit to specific sectors of the economy and provide certain essential services to the public. U.S. GSEs include Fannie Mae and Freddie Mac, but do not include Ginnie Mae or FHA. U.S. GSE obligations are not explicitly guaranteed as to the timely payment of principal and interest by the full faith and credit of the U.S. government.
U.S. Treasury: U.S. Department of the Treasury

VA: U.S. Department of Veterans Affairs
VaR: "Value-at-risk" is a measure of the dollar amount of potential loss from adverse market moves in an ordinary market environment.

VCG: Valuation Control Group

VGF: Valuation Governance Forum
VIEs: Variable interest entities
Warehouse loans: Consist of prime mortgages originated with the intent to sell that are accounted for at fair value and classified as loans.

## Signatures

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on behalf of the undersigned, thereunto duly authorized.

JPMorgan Chase \& Co.
(Registrant)
By:/s/JAMES DIMON
(James Dimon
Chairman and Chief Executive Officer)
February 21, 2023

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacity and on the date indicated. JPMorgan Chase \& Co. does not exercise the power of attorney to sign on behalf of any Director.

## Capacity

Date

| /s/ JAMES DIMON | Director, Chairman and Chief Executive Officer (Principal Executive Officer) |
| :---: | :---: |
| (James Dimon) |  |
| /s/ LINDA B. BAMMANN | Director |
| (Linda B. Bammann) |  |
| /s/ STEPHEN B. BURKE | Director |
| (Stephen B. Burke) |  |
| /s/ TODD A. COMBS | Director |
| (Todd A. Combs) |  |
| /s/ JAMES S. CROWN | Director |
| (James S. Crown) |  |
| /s/ TIMOTHY P. FLYNN | Director |
| (Timothy P. Flynn) |  |
| /s/ ALEX GORSKY | Director |
| (Alex Gorsky) |  |
| /s/ MELLODY HOBSON | Director |
| (Mellody Hobson) |  |
| /s/ MICHAEL A. NEAL | Director |
| (Michael A. Neal) |  |
| /s/ PHEBE N. NOVAKOVIC | Director |
| (Phebe N. Novakovic) |  |
| /s/ VIRGINIA M. ROMETTY | Director |
| (Virginia M. Rometty) |  |
| /s/ JEREMY BARNUM | Executive Vice President and Chief Financial Officer (Principal Financial Officer) |
| (Jeremy Barnum) |  |
| /s/ ELENA KORABLINA | Managing Director and Firmwide Controller |
| (Elena Korablina) | (Principal Accounting Officer) |

## Exhibit 4.6

## DESCRIPTION OF SECURITIES OF JPMORGAN CHASE \& CO. Registered pursuant to section 12 OF the SECURITIES EXCHANGE ACT OF 1934

As of the filing date of the Annual Report on Form 10-K to which this Exhibit is attached (the "Form 10-K"), the following outstanding securities issued by JPMorgan Chase \& Co. are registered pursuant to Section 12 of the Securities Exchange Act of 1934: (i) common stock; (ii) six series of preferred stock represented by depositary shares; (iii) the Alerian MLP Index ETN due May 24, 2024; and (iv) JPMorgan Chase \& Co.'s guarantee of the Callable Fixed Rate Notes due June 10, 2032 issued by JPMorgan Chase Financial Company LLC. All references herein to "JPMorgan Chase," "we" or "us" are to JPMorgan Chase \& Co.

## DESCRIPTION OF COMMON STOCK

The following summary is not complete. You should refer to the applicable provisions of our Restated Certificate of Incorporation and our By-laws, each of which are incorporated by reference as Exhibits to the Form 10-K, and to the Delaware General Corporation Law ("DGCL"), for a complete statement of the terms and rights of our common stock, par value $\$ 1.00$ per share, which we refer to herein as common stock. We encourage you to read our Restated Certificate of Incorporation, which we refer to herein as our certificate of incorporation, By-laws and the relevant provisions of the DGCL for additional information.

## Authorized Shares

We are authorized to issue up to $9,000,000,000$ shares of common stock.

## Dividends

Holders of common stock are entitled to receive dividends if, as and when declared by our board of directors out of funds legally available for payment, subject to the rights of holders of our preferred stock.

## Voting Rights

Each holder of common stock is entitled to one vote per share. Subject to the rights, if any, of the holders of any series of preferred stock under its applicable certificate of designations and applicable law, all voting rights are vested in the holders of shares of our common stock. Holders of shares of our common stock have noncumulative voting rights, which means that the holders of more than $50 \%$ of the shares voting for the election of directors can elect $100 \%$ of the directors and the holders of the remaining shares will not be able to elect any directors.

## Rights Upon Liquidation

In the event of our voluntary or involuntary liquidation, dissolution or winding-up, the holders of our common stock will be entitled to share equally in any of our assets available for distribution after we have paid in full all of our debts and after the holders of all series of our outstanding preferred stock have received their liquidation preferences in full.

## Miscellaneous

The issued and outstanding shares of common stock are fully paid and nonassessable. Holders of shares of our common stock are not entitled to preemptive rights or to the benefit of any sinking funds. Our common stock is not convertible into shares of any other class of our capital stock. Computershare Inc. is the transfer agent, registrar and dividend disbursement agent for our common stock.

## Listing

Our common stock is listed on the New York Stock Exchange ("NYSE") under the trading symbol "JPM".

## DESCRIPTION OF LISTED PREFERRED STOCK

The following summary is not complete. You should refer to our certificate of incorporation and to the Certificate of Designations, Powers, Preferences and Rights relating to each series of Listed Preferred Stock (as defined below), which we refer to herein as a certificate of designations, for the complete terms of that series of preferred stock. Copies of our certificate of incorporation and the certificate of designations for each series of Listed Preferred Stock are incorporated by reference as Exhibits to the Form 10-K. We encourage you to read our certificate of incorporation and the relevant certificates of designations for additional information.

## Authorized Shares

Under our certificate of incorporation, our board of directors is authorized, without further stockholder action, to issue up to $200,000,000$ shares of preferred stock, $\$ 1$ par value per share, which we refer herein to as preferred stock, in one or more series, and to determine the voting powers and the designations, preferences and relative, participating, optional or other special rights, and qualifications, limitations or restrictions of each series. We may amend our certificate of incorporation to increase or decrease the number of authorized shares of preferred stock in a manner permitted by our certificate of incorporation and the DGCL.

## Outstanding Preferred Stock

As of the filing date of the Form 10-K, we have 18 series of preferred stock issued and outstanding. The shares of each series of our preferred stock are represented by depositary shares, with each depositary share representing a fractional interest in a share of preferred stock of the relevant series. Of the 18 series of our issued and outstanding preferred stock, depositary shares representing the following six series of preferred stock are registered pursuant to Section 12 of the Securities Exchange Act of 1934, with each depositary share representing a $1 / 400$ th interest in a share of preferred stock of the relevant series:
a. $\quad 5.75 \%$ Non-Cumulative Preferred Stock, Series DD;
b. $\quad 6.00 \%$ Non-Cumulative Preferred Stock, Series EE;
c. 4.75 Non-Cumulative Preferred Stock, Series GG;
d. $4.55 \%$ Non-Cumulative Preferred Stock, Series JJ;
e. $\quad 4.625 \%$ Non-Cumulative Preferred Stock, Series LL; and
f. $4.20 \%$ Non-Cumulative Preferred Stock, Series MM.

We refer to the above six series of preferred stock herein collectively as the "Listed Preferred Stock".
The Listed Preferred Stock is fully paid and nonassessable.
The terms of the depositary shares are summarized below under "Description of Depositary Shares".

## Ranking

The Listed Preferred Stock ranks, as to payment of dividends and distribution of assets upon our liquidation, dissolution or windingup, on a parity with any series of preferred stock ranking on a parity with the Listed Preferred Stock and senior to our common stock and to any series of preferred stock ranking junior to the Listed Preferred Stock. The Listed Preferred Stock is subordinate to our existing and future indebtedness.

## Dividend Rights

Holders of the Listed Preferred Stock are entitled to receive, when, as and if declared by our board of directors or any duly authorized committee of our board, cash dividends at the rates and on the dates described below under "Specific Terms of Listed Preferred Stock". We will pay each dividend to the holders of record as they appear on our stock register on record dates determined by our board of directors or a duly authorized committee of our board. Dividends on the Listed Preferred Stock are noncumulative. If a dividend is not declared on any series of Listed Preferred Stock, because the dividends are noncumulative, then the right of holders of that series to receive that dividend will be lost, and we will have no obligation to pay the dividend for that dividend period, whether or not dividends are declared for any future dividend period.
We may not declare or pay or set aside for payment full dividends on any series of preferred stock ranking, as to dividends, equally with or junior to a series of Listed Preferred Stock unless we have previously declared and paid or set aside for payment, or we contemporaneously declare and pay or set aside for payment, full dividends on that series of Listed Preferred Stock for the most recently completed dividend period. When dividends are not paid in full on a particular series of Listed Preferred Stock and any other series of preferred stock ranking on a parity as to dividends with that series, all dividends declared and paid upon the shares of that series of Listed Preferred Stock and any other series of preferred stock ranking on a parity as to dividends with the that series will be declared and paid pro rata. For purposes of calculating the pro rata allocation of partial dividend payments, we will allocate dividend payments based on the ratio between the then-current dividends due on shares of that Listed Preferred Stock and (i) in the case of any series of non-cumulative preferred stock ranking on a parity as to dividends with that Listed Preferred Stock, the aggregate of the current and unpaid dividends due on such series of preferred stock and (ii) in the case of any series of cumulative preferred stock ranking on a parity as to dividends with that Listed Preferred Stock, the aggregate of the current and accumulated and unpaid dividends due on such series of preferred stock.
In addition, unless full dividends on all outstanding shares of the Listed Preferred Stock have been declared and paid or a sum sufficient for the payment thereof set aside for such payment in respect of the applicable most recently completed dividend period, with respect to a particular series of Listed Preferred Stock:
a. no dividend (other than a dividend in common stock or in any other capital stock ranking junior to that Listed Preferred Stock as to dividends and upon liquidation, dissolution or winding-up) will be declared or paid or a sum sufficient for the payment thereof set aside for such payment or other distribution declared or made upon our common stock or upon any other capital stock ranking junior to that Listed Preferred Stock as to dividends or upon liquidation, dissolution or windingup, and
b. no common stock or other capital stock ranking junior or equally with that Listed Preferred Stock as to dividends or upon liquidation, dissolution or winding-up will be redeemed, purchased or otherwise acquired for any consideration (or any moneys be paid to or made available for a sinking fund for the redemption of any shares of any such capital stock) by us, except:
i. by conversion into or exchange for capital stock ranking junior to that Listed Preferred Stock;
ii. as a result of reclassification into capital stock ranking junior to that Listed Preferred Stock;
iii. through the use of the proceeds of a substantially contemporaneous sale of shares of capital stock ranking junior to that Listed Preferred Stock or, in the case of capital stock ranking on a parity with that Listed Preferred Stock,
through the use of the proceeds of a substantially contemporaneous sale of other shares of capital stock ranking on a parity with that Listed Preferred Stock;
iv. in the case of capital stock ranking on a parity with that Listed Preferred Stock, pursuant to pro rata offers to purchase all or a pro rata portion of the shares of that Listed Preferred Stock and such capital stock ranking on a parity with that Listed Preferred Stock;
v. in connection with the satisfaction of our obligations pursuant to any contract entered into in the ordinary course prior to the beginning of the most recently completed dividend period; or
vi. any purchase, redemption or other acquisition of capital stock ranking junior to that Listed Preferred Stock pursuant to any of our or our subsidiaries' employee, consultant or director incentive or benefit plans or arrangements (including any employment, severance or consulting arrangements) adopted before or after the issuance of that Listed Preferred Stock).
However, the foregoing will not restrict our ability or the ability of any of our affiliates to engage in underwriting, stabilization, market-making or similar transactions in our capital stock in the ordinary course of business. Subject to the conditions described above, and not otherwise, dividends (payable in cash, capital stock, or otherwise), as may be determined by our board of directors or a duly authorized committee of our board, may be declared and paid on our common stock and any other capital stock ranking junior to or on a parity with the Listed Preferred Stock from time to time out of any assets legally available for such payment, and the holders of the Listed Preferred Stock will not be entitled to participate in those dividends.
As used herein, "junior to a series of Listed Preferred Stock" and like terms refer to our common stock and any other class or series of our capital stock over which the Listed Preferred Stock has preference or priority, either as to dividends or upon liquidation, dissolution or winding-up, or both, as the context may require; "parity preferred stock" and "on a parity with a series of Listed Preferred Stock" and like terms refer to any class or series of our capital stock that ranks on a parity with the shares of a particular series of Listed Preferred Stock, either as to dividends or upon liquidation, dissolution or winding-up, or both, as the context may require; and "senior to a series of Listed Preferred Stock" and like terms refer to any class or series of our capital stock that ranks senior to a particular series of Listed Preferred Stock, either as to dividends or upon liquidation, dissolution or winding-up, or both, as the context may require.
We will compute the amount of dividends payable by annualizing the applicable dividend rate and dividing by the number of dividend periods in a year, except that the amount of dividends payable for any period greater or less than a full dividend period, other than the initial dividend period, will be computed on the basis of a 360-day year consisting of twelve 30-day months and, for any period less than a full month, the actual number of days elapsed in the period. Dollar amounts resulting from that calculation will be rounded to the nearest cent, with one-half cent being rounded upward.

## Rights Upon Liquidation

In the event of our voluntary or involuntary liquidation, dissolution or winding-up, holders of each series of Listed Preferred Stock will be entitled to receive and to be paid out of our assets legally available for distribution to our stockholders the amount of $\$ 10,000$ per share, plus any declared and unpaid dividends, without accumulation of undeclared dividends, before we make any distribution of assets to the holders of our common stock or any other class or series of shares ranking junior to the Listed Preferred Stock of such series. After the payment to such holders of the full preferential amounts to which they are entitled, such holders will have no right or claim to any of our remaining assets.

If, upon our voluntary or involuntary liquidation, dissolution or winding-up, we fail to pay in full the amounts payable with respect to a particular series of Listed Preferred Stock, and any stock having the same rank as that series, the holders of that series and of that other stock will share ratably in any such distribution of our assets in proportion to the full respective distributions to which they are entitled. For any series of Listed Preferred Stock, neither the sale of all or substantially all of our property or business, nor our merger or consolidation into or with any other entity will be considered a liquidation, dissolution or winding-up, voluntary of or involuntary, of us.
Because we are a holding company, our rights and the rights of our creditors and our stockholders, including the holders of the Listed Preferred Stock, to participate in the assets of any of our subsidiaries upon that subsidiary's liquidation, dissolution, winding-up or recapitalization may be subject to the prior claims of that subsidiary's creditors, except to the extent that we are a creditor with recognized claims against the subsidiary.
Holders of the Listed Preferred Stock are subordinate to all of our indebtedness and to other non-equity claims on us and our assets, including in the event that we enter into a receivership, insolvency, liquidation or similar proceeding. In addition, holders of the Listed Preferred Stock may be fully subordinated to interests held by the U.S. government in the event that we enter into a receivership, insolvency, liquidation or similar proceeding.

## Redemption

We may redeem each series of Listed Preferred Stock on the dates and at the redemption prices set forth below under "Specific Terms of Listed Preferred Stock". In addition, we may redeem each series of Listed Preferred Stock in whole, but not in part, at a redemption price equal to $\$ 10,000$ per share (equivalent to $\$ 25$ per depositary share), plus any declared and unpaid dividends,
following the occurrence of a capital treatment event. For these purposes, "capital treatment event" means the good faith determination by JPMorgan Chase that, as a result of any:
a. amendment to, or change or any announced prospective change in, the laws or regulations of the United States or any political subdivision of or in the United States that is enacted or becomes effective after the initial issuance of any shares of such series of Listed Preferred Stock;
b. proposed change in those laws or regulations that is announced or becomes effective after the initial issuance of any shares of such series of Listed Preferred Stock; or
c. official administrative decision or judicial decision or administrative action or other official pronouncement interpreting or applying those laws or regulations that is announced or becomes effective after the initial issuance of any shares of such series of Listed Preferred Stock,
there is more than an insubstantial risk that JPMorgan Chase will not be entitled to treat an amount equal to the full liquidation amount of all shares of such series of Listed Preferred Stock then outstanding as "additional Tier 1 capital" (or its equivalent) for purposes of the capital adequacy guidelines or regulations of the appropriate federal banking agency, as then in effect and applicable, for as long as any share of such series of Listed Preferred Stock is outstanding. Redemption of any Listed Preferred Stock may be subject to our receipt of any required approvals from the Federal Reserve Board or any other regulatory authority. If we elect to redeem shares of a series of Listed Preferred Stock, we will provide notice by first class mail, postage prepaid, addressed to the holders of record of such shares to be redeemed. Such mailing will be at least 30 days and not more than 60 days before the date fixed for redemption. Any notice so mailed will be conclusively presumed to have been duly given, whether or not the holder receives such notice, but failure to duly give such notice by mail, or any defect in such notice or in the mailing thereof, to any holder of shares of the series designated for redemption will not affect the validity of the proceedings for the redemption of any other shares of that series. Each notice of redemption will state:
a. the redemption date;
b. the number of shares of the series of Listed Preferred Stock to be redeemed and, if fewer than all the shares held by such holder are to be redeemed, the number of such shares to be redeemed from such holder;
c. the redemption price;
d. the place or places where the certificates representing such shares are to be surrendered for payment of the redemption price; and
e. that dividends on the shares to be redeemed will cease to accrue on the redemption date.

Notwithstanding the foregoing, if the series of Listed Preferred Stock is held in book-entry form through The Depository Trust Company, or "DTC", we may give such notice in any manner permitted or required by DTC. For each series of Listed Preferred Stock, neither the holders of a series nor the holders of the related depositary shares have the right to require redemption of such series of Listed Preferred Stock.
In the case of any redemption of only part of the shares a series of Listed Preferred Stock at the time outstanding, the shares of the series to be redeemed will be selected either pro rata from the holders of record of that series in proportion to the number of shares held by such holders or by lot. From and after the redemption date, dividends will cease to accumulate on the shares of Listed Preferred Stock called for redemption up to the redemption date and all rights of the holders of those shares, except the right to receive the redemption price, will cease.
In the event that we fail to pay full dividends, including accumulated but unpaid dividends, if any, on any series of Listed Preferred Stock, we may not redeem that series in part and we may not purchase or acquire any shares of that series, except by a purchase or exchange offer made on the same terms to all holders of that series.

## Preemptive and Conversion Rights

The Listed Preferred Stock is not subject to any preemptive rights and is not convertible into property or shares of any other class or series of our capital stock.

## Depositary, Transfer Agent, and Registrar

Computershare Inc. is the depositary, transfer agent and registrar for each series of the Listed Preferred Stock and the related depositary shares.

## Voting Rights

Except as indicated below or except as expressly required by applicable law, the holders of the Listed Preferred Stock are not entitled to vote. Each share of Listed Preferred Stock a series is entitled to one vote on matters on which holders of that series are entitled to vote. The voting power of each series of Listed Preferred Stock depends on the number of shares in that series, and not on the aggregate liquidation preference or initial offering price of the shares of that series.

If, at any time or times, the equivalent of an aggregate of six quarterly dividends, whether or not consecutive, for any series of Listed Preferred Stock has not been paid, the number of directors constituting our board of directors will be automatically increased by two and the holders of each outstanding series of Listed Preferred Stock with such voting rights, together with holders of such other shares of any other class or series of parity preferred stock outstanding at the time upon which like voting rights have been conferred
and are exercisable, which we refer to as "voting parity stock," voting together as a class, will be entitled to elect those additional two directors, which we refer to as "preferred directors," at that annual meeting and at each subsequent annual meeting of stockholders until full dividends have been paid for at least four quarterly consecutive dividend periods. At that time such right will terminate, except as expressly provided in the applicable certificate of designations or by law, subject to revesting. Upon any termination of the right of the holders of the Listed Preferred Stock and voting parity stock as a class to vote for directors as provided above, the preferred directors will cease to be qualified as directors, the term of office of all preferred directors then in office will terminate immediately and the authorized number of directors will be reduced by the number of preferred directors elected. Any preferred director may be removed and replaced at any time, with cause as provided by law or without cause by the affirmative vote of the holders of shares of the Listed Preferred Stock, voting together as a class with the holders of shares of voting parity stock, to the extent the voting rights of such holders described above are then exercisable. Any vacancy created by removal with or without cause may be filled only as described in the preceding sentence. If the office of any preferred director becomes vacant for any reason other than removal, the remaining preferred director may choose a successor who will hold office for the unexpired term in respect of which such vacancy occurred.

So long as any shares of a particular series of Listed Preferred Stock remains outstanding, we will not, without the affirmative vote of the holders of at least $662 / 3 \%$ in voting power of that series and any voting parity stock, voting together as a class, authorize, create or issue any capital stock ranking senior to that series as to dividends or upon liquidation, dissolution or winding-up, or reclassify any authorized capital stock into any such shares of such capital stock or issue any obligation or security convertible into or evidencing the right to purchase any such shares of capital stock. So long as any shares of a particular series of Listed Preferred Stock remain outstanding, we will not, without the affirmative vote of the holders of at least $662 / 3 \%$ in voting power of that series, amend, alter or repeal any provision of the applicable certificate of designations or our certificate of incorporation, including by merger, consolidation or otherwise, so as to adversely affect the powers, preferences or special rights of that series.

Notwithstanding the foregoing, none of the following will be deemed to adversely affect the powers, preferences or special rights of any series of Listed Preferred Stock:
a. any increase in the amount of authorized common stock or authorized preferred stock, or any increase or decrease in the number of shares of any series of preferred stock, or the authorization, creation and issuance of other classes or series of capital stock, in each case ranking on a parity with or junior to that series of Listed Preferred Stock as to dividends or upon liquidation, dissolution or winding-up;
b. a merger or consolidation of JPMorgan Chase with or into another entity in which the shares of that series remain outstanding; and
c. a merger or consolidation of JPMorgan Chase with or into another entity in which the shares of the that series are converted into or exchanged for preference securities of the surviving entity or any entity, directly or indirectly, controlling such surviving entity and such new preference securities have powers, preferences and special rights that are not materially less favorable than that series;
provided that if the amendment would adversely affect such series but not any other series of preferred stock outstanding, then the amendment will only need to be approved by holders of at least two-thirds of the shares of the series of Listed Preferred Stock adversely affected.

In exercising the voting rights described above or when otherwise granted voting rights by operation of law or by us, each share of Listed Preferred Stock with respect to a series will be entitled to one vote (equivalent to $1 / 400^{\text {th }}$ of a vote per relevant depositary share).

If we redeem or call for redemption all outstanding shares of a series of Listed Preferred Stock and irrevocably deposit in trust sufficient funds to effect such redemption, at or prior to the time when the act with respect to which such vote would otherwise be required or upon which the holders of such series will be entitled to vote will be effected, the voting provisions described above will not apply.

Our board of directors may also from time to time, without notice to or consent of holders of a series of Listed Preferred Stock, issue additional shares of such series. Delaware law provides that the holders of preferred stock will have the right to vote separately as a class on any amendment to our certificate of incorporation (including any certificate of designations) that would increase or decrease the aggregate number of authorized shares of such class, increase or decrease the par value of such class or adversely affect the powers, preferences and special rights of the shares of preferred stock. Notwithstanding the foregoing, as permitted by law, our certificate of incorporation provides that any increase or decrease in our authorized capital stock may be adopted by the affirmative vote of holders of capital stock representing not less than a majority of the voting power represented by the outstanding shares of our capital stock entitled to vote. If any proposed amendment would alter or change the powers, preferences or special rights of one or more series of preferred stock so as to affect them adversely, but would not so affect the entire class of preferred stock, only the shares of the series so affected will be considered a separate class for purposes of this vote on the amendment. This right is in addition to any voting rights that may be provided for in our certificate of incorporation (including any certificate of designations).

Under regulations adopted by the Federal Reserve Board, if the holders of any series of our preferred stock become entitled to vote for the election of directors because dividends on that series are in arrears, that series may then be deemed a "class of voting securities." In such a case, a holder of $25 \%$ or more of the series, or a holder of $5 \%$ or more if that holder would also be considered to exercise a "controlling influence" over JPMorgan Chase, may then be subject to regulation as a bank holding company in accordance with the Bank Holding Company Act. In addition, (1) any other bank holding company may be required to obtain the prior approval of the Federal Reserve Board to acquire or retain 5\% or more of that series, and (2) any person other than a bank holding company may be required to provide notice to the Federal Reserve Board prior to acquiring or retaining 10\% or more of that series.

## Description of Depositary Shares

The following summary of the terms of the depositary shares representing each series of the Listed Preferred Stock is not complete. You should refer to each of the deposit agreements among us, the depositary, and the holders from time to time of the depositary receipts evidencing the depositary shares relating to each series of the Listed Preferred Stock for the complete terms of those depositary shares. Each of those deposit agreements has been filed as an exhibit to a Current Report on Form 8-K filed in connection with the issuance of the depositary shares representing each series of the Listed Preferred Stock.
General. Each depositary share represents a $1 / 400^{\text {th }}$ interest in a share of the relevant series of Listed Preferred Stock, and is evidenced by depositary receipts. In connection with the issuance of each series of Listed Preferred Stock, we deposited shares of that series of Listed Preferred Stock with Computershare Inc., as depositary under the deposit agreement relating to that series of Listed Preferred Stock. Subject to the terms of each deposit agreement, the depositary shares are entitled to all the powers, preferences and special rights of the relevant series of Listed Preferred Stock, as applicable, in proportion to the applicable fraction of a share of Listed Preferred Stock those depositary shares represent.

Dividends and Other Distributions. Each dividend payable on a depositary share will be in an amount equal to $1 / 400^{\text {th }}$ of the dividend declared and payable on the related share of the Listed Preferred Stock.

The depositary will distribute all dividends and other cash distributions received on the relevant series of Listed Preferred Stock to the holders of record of the related depositary receipts in proportion to the number of depositary shares held by each holder. In the event of a distribution other than in cash, the depositary will distribute property received by it to the holders of record of the depositary receipts as nearly as practicable in proportion to the number of depositary shares held by each holder, unless the depositary determines that this distribution is not feasible, in which case the depositary may, with our approval, adopt a method of distribution that it deems practicable, including the sale of the property and distribution of the net proceeds of that sale to the holders of the depositary receipts.

Record dates for the payment of dividends and other matters relating to the depositary shares will be the same as the corresponding record dates for the related shares of Listed Preferred Stock.

The amount paid as dividends or otherwise distributable by the depositary with respect to the depositary shares or the underlying Listed Preferred Stock will be reduced by any amounts required to be withheld by us or the depositary on account of taxes or other governmental charges.

Redemption of Depositary Shares. If we redeem a series of Listed Preferred Stock, in whole or from time to time in part, the corresponding depositary shares also will be redeemed with the proceeds received by the depositary from the redemption of the Listed Preferred Stock held by the depositary. The redemption price per depositary share will be $1 / 400^{\text {th }}$ of the redemption price per share payable with respect to the Listed Preferred Stock, plus any declared and unpaid dividends, without accumulation of undeclared dividends.

If we redeem shares of a series of Listed Preferred Stock held by the depositary, the depositary will redeem, as of the same redemption date, the number of depositary shares representing those shares of the Listed Preferred Stock so redeemed. If we redeem less than all of the outstanding depositary shares, the depositary will select pro rata or by lot those depositary shares to be redeemed. The depositary will mail notice of redemption to record holders of the depositary receipts not less than 30 and not more than 60 days prior to the date fixed for redemption of the Listed Preferred Stock and the related depositary shares. The redemption of depositary shares that are held in book-entry form through DTC will be effected in accordance with the applicable procedures of DTC.

Voting the Listed Preferred Stock. Because each depositary share represents a $1 / 400^{\text {th }}$ interest in a share of Listed Preferred Stock, holders of depositary receipts will be entitled to $1 / 400^{\text {th }}$ of a vote per depositary share under those limited circumstances in which holders of the Listed Preferred Stock are entitled to a vote.
When the depositary receives notice of any meeting at which the holders of a series of Listed Preferred Stock are entitled to vote, the depositary will mail the information contained in the notice to the record holders of the depositary shares relating to that Listed Preferred Stock. Each record holder of the depositary shares on the record date, which will be the same date as the record date for
the applicable Listed Preferred Stock, may instruct the depositary to vote the amount of the Listed Preferred Stock represented by the holder's depositary shares. To the extent practicable, the depositary will vote the amount of the Listed Preferred Stock represented by depositary shares in accordance with the instructions it receives. We will agree to take all actions that the depositary determines are necessary to enable the depositary to vote as instructed. If the depositary does not receive specific instructions from the holders of any depositary shares representing the Listed Preferred Stock, it will abstain from voting with respect to such shares.

Withdrawal of Listed Preferred Stock. Underlying shares of Listed Preferred Stock may be withdrawn from the depositary arrangement upon surrender of depositary receipts at the depositary's office and upon payment of the taxes, charges and fees provided for in the deposit agreement. Subject to the terms of the relevant deposit agreement, the holder of depositary receipts will receive the appropriate number of shares of Listed Preferred Stock represented by such depositary shares. Only whole shares of Listed Preferred Stock may be withdrawn; if a holder holds an amount other than a whole multiple of 400 depositary shares, the depositary will deliver along with the withdrawn shares of Listed Preferred Stock a new depositary receipt evidencing the excess number of depositary shares. Holders of withdrawn shares of Listed Preferred Stock will not be entitled to redeposit such shares or to receive depositary shares.

Form and Notices. Each series of Listed Preferred Stock was issued in registered form to the depositary, and the depositary shares representing that Listed Preferred Stock were issued in book-entry only form through DTC. The depositary will forward to the holders of depositary shares all reports, notices, and communications from us that are delivered to the depositary and that we are required to furnish to the holders of the Listed Preferred Stock.

Amendment and Termination of the Deposit Agreement. We and the depositary may amend any form of depositary receipt evidencing depositary shares and any provision of any deposit agreement at any time regarding any depositary shares. However, any amendment that materially and adversely alters the rights of the holders of depositary shares representing a particular series of Listed Preferred Stock or would be materially and adversely inconsistent with the rights granted to holders of that underlying Listed Preferred Stock pursuant to our certificate of incorporation will not be effective unless the amendment has been approved by the holders of at least a majority of the related depositary shares then outstanding. The deposit agreement relating to the depositary shares representing a particular series of Listed Preferred Stock may be terminated by us or by the depositary only if:
a. all such outstanding depositary shares have been redeemed; or
b. there has been a final distribution of the relevant underlying Listed Preferred Stock in connection with our liquidation, dissolution or winding up and the preferred stock has been distributed to the holders of depositary receipts.

Charges of Depositary. We will pay all transfer and other taxes and governmental charges arising solely from the existence of the depositary arrangements regarding any depositary shares. We also pay charges of the depositary in connection with the initial deposit of each series of Listed Preferred Stock and any redemption of the Listed Preferred Stock. Holders of depositary receipts will pay transfer and other taxes and governmental charges and other charges with respect to their depositary receipts as expressly provided in the deposit agreement.

Resignation and Removal of Depositary. With respect to the depositary shares representing each series of Listed Preferred Stock, the depositary may resign at any time by delivering a notice to us of its election to do so. We may remove the depositary at any time. Any such resignation or removal will take effect upon the appointment of a successor depositary and its acceptance of its appointment. We must appoint a successor depositary within 60 days after delivery of the notice of resignation or removal.

Miscellaneous. The depositary will forward to holders of applicable depositary receipts all reports and communications from us that we deliver to the depositary and that we are required to furnish to the holders of the relevant Listed Preferred Stock.

Neither we nor the depositary will be liable if either of us is prevented or delayed by law or any circumstance beyond our control in performing our respective obligations under any deposit agreement. Our obligations and those of the depositary will be limited to performing in good faith our respective duties under any deposit agreement. Neither we nor the depositary will be obligated to prosecute or defend any legal proceeding relating to any depositary shares or Listed Preferred Stock unless satisfactory indemnity is furnished. We and the depositary may rely upon written advice of counsel or accountants, or upon information provided by persons presenting preferred stock for deposit, holders of depositary receipts or other persons we believe to be competent, and on documents we believe to be genuine.

## Specific Terms of Listed Preferred Stock

### 5.75\% Non-Cumulative Preferred Stock, Series DD

On September 21, 2018, we issued an aggregate of 169,625 shares of $5.75 \%$ Non-Cumulative Preferred Stock, Series DD, \$1 par value, with a liquidation preference of $\$ 10,000$ per share (the "Series DD Preferred Stock"). Shares of the Series DD Preferred Stock are represented by depositary shares, each representing a $1 / 400$ th interest in a share of preferred stock of the series.

Dividends. Dividends on the Series DD Preferred Stock are payable when, as, and if declared by our board of directors or a duly authorized committee of our board, at a rate of $5.75 \%$ per annum, payable quarterly in arrears, on March 1, June 1, September 1 and December 1 of each year, beginning on December 1, 2018. Dividends on the Series DD Preferred Stock are neither mandatory nor cumulative.

Redemption. The Series DD Preferred Stock may be redeemed on any dividend payment date on or after December 1, 2023, in whole or from time to time in part, at a redemption price equal to $\$ 10,000$ per share (equivalent to $\$ 25$ per depositary share), plus any declared and unpaid dividends. We may also redeem the Series DD Preferred Stock following the occurrence of a "capital treatment event," as described above.

Listing. The depositary shares representing the Series DD Preferred Stock are listed on the NYSE under the trading symbol "JPM PR D".

### 6.00\% Non-Cumulative Preferred Stock, Series EE

On January 24, 2019, we issued an aggregate of 185,000 shares of $6.00 \%$ Non-Cumulative Preferred Stock, Series EE, $\$ 1$ par value, with a liquidation preference of $\$ 10,000$ per share (the "Series EE Preferred Stock"). Shares of the Series EE Preferred Stock are represented by depositary shares, each representing a $1 / 400$ th interest in a share of preferred stock of the series.
Dividends. Dividends on the Series EE Preferred Stock are payable when, as, and if declared by our board of directors or a duly authorized committee of our board, at a rate of $6.00 \%$ per annum, payable quarterly in arrears, on March 1 , June 1 , September 1 and December 1 of each year, beginning on June 1, 2019. Dividends on the Series EE Preferred Stock are neither mandatory nor cumulative.

Redemption. The Series EE Preferred Stock may be redeemed on any dividend payment date on or after March 1, 2024, in whole or from time to time in part, at a redemption price equal to $\$ 10,000$ per share (equivalent to $\$ 25$ per depositary share), plus any declared and unpaid dividends. We may also redeem the Series EE Preferred Stock following the occurrence of a "capital treatment event," as described above.
Listing. The depositary shares representing the Series EE Preferred Stock are listed on the NYSE under the trading symbol "JPM PR C".

### 4.75\% Non-Cumulative Preferred Stock, Series GG

On November 7, 2019, we issued an aggregate of 90,000 shares of $4.75 \%$ Non-Cumulative Preferred Stock, Series GG, $\$ 1$ par value, with a liquidation preference of $\$ 10,000$ per share (the "Series GG Preferred Stock"). Shares of the Series GG Preferred Stock are represented by depositary shares, each representing a $1 / 400$ th interest in a share of preferred stock of the series.
Dividends. Dividends on the Series GG Preferred Stock are payable when, as, and if declared by our board of directors or a duly authorized committee of our board, at a rate of $4.75 \%$ per annum, payable quarterly in arrears, on March 1, June 1, September 1 and December 1 of each year, beginning on March 1, 2020. Dividends on the Series GG Preferred Stock are neither mandatory nor cumulative.

Redemption. The Series GG Preferred Stock may be redeemed on any dividend payment date on or after December 1, 2024, in whole or from time to time in part, at a redemption price equal to $\$ 10,000$ per share (equivalent to $\$ 25$ per depositary share), plus any declared and unpaid dividends. We may also redeem the Series GG Preferred Stock following the occurrence of a "capital treatment event," as described above.

Listing. The depositary shares representing the Series GG Preferred Stock are listed on the NYSE under the trading symbol "JPM PR J".

### 4.55\% Non-Cumulative Preferred Stock, Series JJ;

On March 17, 2021, we issued an aggregate of 150,000 shares of $4.55 \%$ Non-Cumulative Preferred Stock, Series JJ, \$1 par value, with a liquidation preference of $\$ 10,000$ per share (the "Series JJ Preferred Stock"). Shares of the Series JJ Preferred Stock are represented by depositary shares, each representing a $1 / 400$ th interest in a share of preferred stock of the series.
Dividends. Dividends on the Series JJ Preferred Stock are payable when, as, and if declared by our board of directors or a duly authorized committee of our board, at a rate of $4.55 \%$ per annum, payable quarterly in arrears, on March 1, June 1, September 1 and December 1 of each year, beginning on June 1, 2021. Dividends on the Series JJ Preferred Stock are neither mandatory nor cumulative.

Redemption. The Series JJ Preferred Stock may be redeemed on any dividend payment date on or after June 1, 2026, in whole or from time to time in part, at a redemption price equal to $\$ 10,000$ per share (equivalent to $\$ 25$ per depositary share), plus any declared and unpaid dividends. We may also redeem the Series JJ Preferred Stock following the occurrence of a "capital treatment event," as described above.

Listing. The depositary shares representing the Series JJ Preferred Stock are listed on the NYSE under the trading symbol "JPM PR K".

### 4.625\% Non-Cumulative Preferred Stock, Series LL

On May 20, 2021, we issued an aggregate of 185,000 shares of $4.625 \%$ Non-Cumulative Preferred Stock, Series LL, $\$ 1$ par value, with a liquidation preference of $\$ 10,000$ per share (the "Series LL Preferred Stock"). Shares of the Series LL Preferred Stock are represented by depositary shares, each representing a $1 / 400$ th interest in a share of preferred stock of the series.

Dividends. Dividends on the Series LL Preferred Stock are payable when, as, and if declared by our board of directors or a duly authorized committee of our board, at a rate of $4.625 \%$ per annum, payable quarterly in arrears, on March 1, June 1, September 1 and December 1 of each year, beginning on September 1, 2021. Dividends on the Series LL Preferred Stock are neither mandatory nor cumulative.

Redemption. The Series LL Preferred Stock may be redeemed on any dividend payment date on or after June 1, 2026, in whole or from time to time in part, at a redemption price equal to $\$ 10,000$ per share (equivalent to $\$ 25$ per depositary share), plus any declared and unpaid dividends. We may also redeem the Series LL Preferred Stock following the occurrence of a "capital treatment event," as described above.
Listing. The depositary shares representing the Series LL Preferred Stock are listed on the NYSE under the trading symbol "JPM PR L".

### 4.20\% Non-Cumulative Preferred Stock, Series MM

On July 29, 2021, we issued an aggregate of 200,000 shares of $4.20 \%$ Non-Cumulative Preferred Stock, Series MM, $\$ 1$ par value, with a liquidation preference of $\$ 10,000$ per share (the "Series MM Preferred Stock"). Shares of the Series MM Preferred Stock are represented by depositary shares, each representing a $1 / 400$ th interest in a share of preferred stock of the series.

Dividends. Dividends on the Series MM Preferred Stock are payable when, as, and if declared by our board of directors or a duly authorized committee of our board, at a rate of $4.20 \%$ per annum, payable quarterly in arrears, on March 1, June 1, September 1 and December 1 of each year, beginning on December 1, 2021. Dividends on the Series MM Preferred Stock are neither mandatory nor cumulative.

Redemption. The Series MM Preferred Stock may be redeemed on any dividend payment date on or after September 1, 2026, in whole or from time to time in part, at a redemption price equal to $\$ 10,000$ per share (equivalent to $\$ 25$ per depositary share), plus any declared and unpaid dividends. We may also redeem the Series MM Preferred Stock following the occurrence of a "capital treatment event," as described above.

Listing. The depositary shares representing the Series MM Preferred Stock are listed on the NYSE under the trading symbol "JPM PR M".

## DESCRIPTION OF THE ALERIAN MLP INDEX ETNS DUE MAY 24, 2024

The following description of our Alerian MLP Index ETNs due May 24, 2024 (the "Alerian ETNs") is a summary and does not purport to be complete. It is subject to and qualified in its entirety by reference to the indenture dated May 25, 2001 (as may be amended or supplemented from time to time, the "2001 Indenture"), between JPMorgan Chase, as issuer, and Deutsche Bank Trust Company Americas (formerly known as Bankers Trust Company), as trustee (the "Trustee"), which is incorporated by reference as an Exhibit to the Form 10-K. We encourage you to read the 2001 Indenture for additional information.

## General

In June 2012, the maximum number of Alerian ETNs authorized for issuance was set at $129,000,000$, resulting in a maximum aggregate principal amount of $\$ 2,455,722,690$. All of the Alerian ETNs authorized for issuance were issued as of June 2012. 10,000,000 Alerian ETNs were retired on December 16, 2015. Accordingly, since the retirement of these notes, the maximum number of Alerian ETNs authorized for issuance is $119,000,000$ with an aggregate principal amount of $\$ 2,265,356,590$, all of which has been issued and remain outstanding as of December 31, 2019.
The Alerian ETNs are linked to the Alerian MLP Index (the "Index") and are our unsecured and unsubordinated obligations and will rank pari passu with all of our other unsecured and unsubordinated obligations. The Alerian ETNs do not guarantee any return of principal at, or prior to, maturity or upon early repurchase. Any payment on the Alerian ETNs is subject to the credit risk of

## JPMorgan Chase \& Co.

The Alerian ETNs are part of a series of our debt securities entitled "Global Medium-Term Notes, Series E" (the "Series E Notes") that we may issue under the 2001 Indenture from time to time. For more information about the Series E Notes, please see the section titled "General Terms of the Series E Notes" below.

The Alerian ETNs are not bank deposits and are not insured by the Federal Deposit Insurance Corporation or by any other governmental agency, nor are they obligations of, or guaranteed by, a bank.

Unless otherwise specified, references herein to "holders" mean those in whose names the Alerian ETNs are registered on the books that we or the Trustee, or any successor trustee, as applicable, maintain for this purpose, and not those who own beneficial interests in the Alerian ETNs (registered in street name or otherwise).

Please see "Certain Defined Terms" below for an explanation of any capitalized terms used herein that are not otherwise defined.

## The Index

The return of the Alerian ETNs is linked to the performance of the Index. The Index measures the composite performance of energyoriented Master Limited Partnerships, or MLPs, and is calculated and maintained by S\&P Dow Jones Indices LLC (the "Index Calculation Agent"), in consultation with GKD Index Partners, LLC (the "Index Sponsor"), using a float-adjusted, market capitalization methodology. MLPs are limited partnerships primarily engaged in the exploration, marketing, mining, processing, production, refining, storage, or transportation of any mineral or natural resource.

## Denominations

The Alerian ETNs are denominated in U.S. dollars in minimum denominations equal to the $\$ 19.03661$ per note (the "Principal Amount"), which is the amount equal to the Initial VWAP Level (defined below), divided by ten.

## Coupon Payments and the Accrued Tracking Fee

For each Alerian ETN a holder holds on the applicable Coupon Record Date, holders will receive on each Coupon Payment Date the "Coupon Amount," which is an amount in cash equal to the difference between (a) the Reference Distribution Amount (defined below), calculated as of the corresponding Coupon Valuation Date and (b) the Accrued Tracking Fee (defined below), calculated as of the corresponding Coupon Valuation Date.

The Accrued Tracking Fee accrues on a daily basis at a rate of $0.85 \%$ per annum, applied to the Daily Note Value as of the Index Business Day immediately preceding the corresponding Coupon Valuation Date. The Daily Note Value reflects the cumulative performance of the VWAP Level of the Index since April 1, 2009, which we refer to as the Inception Date. If the Daily Note Value increases, the Accrued Tracking Fee will increase, and if the Daily Note Value decreases, the Accrued Tracking Fee will decrease. The Daily Note Value is published on the Bloomberg Professional service ("Bloomberg") under the ticker symbol "AMJIVWAP" and on Bloomberg.com under the ticker symbol "AMJIVWAP:IND."

On any Index Business Day, the VWAP Level reflects the weighted VWAPs of the Index Components, and the VWAP of each Index Component is the volume-weighted average price of one share of that Index Component as determined by the VWAP Calculation Agent based on the Primary Exchange for that Index Component.

To the extent the Reference Distribution Amount on any Coupon Valuation Date is less than the Accrued Tracking Fee on the corresponding Coupon Valuation Date, there will be no coupon payment made on the corresponding Coupon Payment Date, and an amount equal to the difference between the Accrued Tracking Fee and the Reference Distribution Amount (the "Tracking Fee Shortfall") will be included in the Accrued Tracking Fee for the next Coupon Valuation Date. This will be in addition to the accrual at a rate of $0.85 \%$ per annum over the quarter that has elapsed since the previous date of determination. This process will be repeated to the extent necessary until the Reference Distribution Amount for a Coupon Valuation Date is greater than the Accrued Tracking Fee for the corresponding Coupon Valuation Date (which includes the accumulated Tracking Fee Shortfall from all prior quarters). This process may also restart as necessary on a subsequent Coupon Valuation Date. Coupon payments on the Alerian ETNs will be payable quarterly in arrears on the fifteenth Index Business Day following each Coupon Valuation Date, provided that the final Coupon Payment Date will be the Maturity Date. The final Coupon Amount will be included in the Cash Settlement Amount.

Holders will receive no coupon payment on a Coupon Payment Date if the Reference Distribution Amount on the relevant Coupon Valuation Date is less than the Accrued Tracking Fee on the relevant Coupon Valuation Date.

On each Index Business Day, the Note Calculation Agent will calculate the value of the Coupon Amount as of the immediately preceding Index Business Day (treating that immediately preceding Index Business Day as if it were a Coupon Valuation Date), which we refer to as the interim accrued Coupon Amount, and will publish the interim accrued Coupon Amount on Bloomberg under the ticker symbol "AMJEU" and on Bloomberg.com under the ticker symbol "AMJEU:IND." While the interim accrued Coupon Amount is calculated and published in connection with each such Index Business Day, the actual Coupon Amount will be calculated and paid only once each quarter.

## Payment Upon Early Repurchase

Subject to a holder's compliance with the procedures and the potential postponements and adjustments as described under "Market Disruption Events" below, that holder may submit a request once a week (generally on or before 11:00 a.m., New York City time, on Thursday) during the term of the Alerian ETNs to have us repurchase that holder's Alerian ETNs, provided that holder requests that
we repurchase a minimum of 50,000 Alerian ETNs. If a holder requests that we repurchase that holder's Alerian ETNs, subject to the notification requirements and the other terms and conditions set forth under "Repurchase Requirements" below, for each Alerian ETN that holder will receive a cash payment on the relevant Repurchase Date equal to the Repurchase Amount. If the Repurchase Amount is $\$ 0$ or less, the payment upon early repurchase will be $\$ 0$. Because the Repurchase Amount is based on the value of the Index at the end of a five-day measurement period that begins after a repurchase request is received, holders will not know the Repurchase Amount they will receive at the time they elect to request that we repurchase their Alerian ETNs.

The Repurchase Amount is calculated by adjusting the Principal Amount to reflect:
a. the return of the Index from the Initial VWAP Level to the Final VWAP Level;
b. the deduction of the Accrued Tracking Fee;
c. the deduction of the Repurchase Fee;
d. the addition of other adjustments representing accrued but unpaid coupons, which include the following:
a. the Coupon Amount with respect to the Coupon Valuation Date immediately preceding the applicable Repurchase Valuation Date (generally the last Index Business Day of the week in which a repurchase is requested) if, on the last Index Business Day in the Repurchase Measurement Period the Coupon Ex-Date with respect to that Coupon Amount has not yet occurred. The Repurchase Measurement Period is a five-Index Business Day period commencing on the Repurchase Valuation Date during which the Final VWAP Level will be determined;
b. an Adjusted Coupon Amount, if any, that reflects certain cash distributions on the Index Components with ex-dividend dates from and excluding the immediately preceding Coupon Valuation Date to and including the applicable Repurchase Valuation Date, less the Accrued Tracking Fee; and
c. certain cash distributions on the Index Components with ex-dividend dates during the Repurchase Measurement Period.

For purposes of determining the Cash Settlement Amount, the Final VWAP Level will be the arithmetic mean of the VWAP Levels measured on each Index Business Day in the Repurchase Measurement Period, as calculated by the VWAP Calculation Agent.

The Repurchase Fee Amount is equal to $0.125 \%$ of the Principal Amount, adjusted to reflect:
a. the return of the Index from the Initial VWAP Level to the Final VWAP Level;
b. the deduction of the Accrued Tracking Fee; and
c. the addition of certain cash distributions on the Index Components with ex-dividend dates during the Repurchase Measurement Period.

Accordingly, the Repurchase Fee Amount will vary based on the performance of the Index, the Accrued Tracking Fee and certain cash distributions on the Index Components with ex-dividend dates during the Repurchase Measurement Period.

Holders may lose some or all of their investment upon early repurchase. Because the Accrued Tracking Fee reduces their final payment, holders will likely lose some or all of their principal amount upon early repurchase if the Final VWAP Level is less than the Initial VWAP Level or if the Final VWAP Level is not greater than the Initial VWAP Level by an amount that is sufficient to offset the negative effect of the Accrued Tracking Fee and the Repurchase Fee.

## Repurchase Requirements

To exercise the right to have us repurchase a holder's Alerian ETNs on a weekly basis, that holder must instruct that holder's broker or other person through whom that holder holds the Alerian ETNs to take the following steps:
a. Send a notice of repurchase, substantially in the specified form (a "Repurchase Notice"), to us via email at ETN_Repurchase@jpmorgan.com by no later than 11:00 a.m., New York City time, during the term of the Alerian ETNs, each week on the Business Day immediately preceding the applicable Repurchase Valuation Date (generally Thursday);
b. If we receive that holder's Repurchase Notice by the time specified in the preceding bullet point, we will respond by sending that holder a confirmation of repurchase, substantially in the specified form (a "Repurchase Confirmation");
c. Deliver the signed Repurchase Confirmation, in the specified form, to us via facsimile to (917) 456-3471, by 4:00 p.m., New York City time, on the Business Day on which that holder submitted that holder's Repurchase Notice. We or our affiliate must acknowledge receipt in order for that holder's Repurchase Confirmation to be effective;
d. Instruct DTC custodian for that holder to book a delivery versus payment trade with respect to that holder's Alerian ETNs on the relevant Repurchase Valuation Date at a price equal to the applicable Repurchase Amount; and
e. Cause that holder's DTC custodian to deliver the trade as booked for settlement via DTC at or prior to 10:00 a.m. New York City time on the relevant Repurchase Date.

Different brokerage firms may have different deadlines for accepting instructions from their customers. Accordingly, holders should consult the brokerage firm through which they own their interest in the offered Alerian ETNs in respect of such deadlines. If we do not receive a holder's Repurchase Notice by 11:00 a.m., or a holder's Repurchase Confirmation by 4:00 p.m., on the Business Day
immediately preceding the applicable Repurchase Valuation Date, that holder's Repurchase Notice will not be effective and we will not repurchase that holder's Alerian ETNs on the relevant Repurchase Date.

The Note Calculation Agent will, in its sole discretion, resolve any questions that may arise as to the validity of a Repurchase Notice and the timing of receipt of a Repurchase Notice or as to whether and when the required deliveries have been made. Once given, a Repurchase Notice may not be revoked.

## Expiration of Repurchase Rights

If we do not receive a holder's Repurchase Notice by 11:00 a.m., New York City time (as described under the first bullet point in "Repurchase Requirements" above), or a holder's Repurchase Confirmation by 4:00 p.m., New York City time (as described under the third bullet point in "Repurchase Requirements" above) on the Business Day immediately preceding the applicable Repurchase Valuation Date (generally Thursday), that holder's Repurchase Notice will not be effective and we will not repurchase that holder's Alerian ETNs on the relevant Repurchase Date. Any Repurchase Notice for which we (or our affiliate) receive a valid Repurchase Confirmation in accordance with the procedures described above will be irrevocable.

## Payment at Maturity

For each Alerian ETN, unless earlier repurchased, holders will receive at maturity a cash payment equal to the Cash Settlement Amount. If the Cash Settlement Amount is $\$ 0$ or less, the payment at maturity will be $\$ 0$.

The Cash Settlement Amount is calculated by adjusting the Principal Amount to reflect:
a. the return of the Index from the Initial VWAP Level to the Final VWAP Level;
b. the addition of the final Coupon Amount, if any,
c. the deduction of the Accrued Tracking Fee; and
d. the addition of certain cash distributions on the Index Components with ex-dividend dates during the Final Measurement Period.

The Final Measurement Period is a five Index Business Day period near the Maturity Date of the Alerian ETNs during which the Final VWAP Level will be determined.

For purposes of determining the Cash Settlement Amount, the Final VWAP Level will be the arithmetic mean of the VWAP Levels measured on each Index Business Day in the Final Measurement Period, as calculated by the VWAP Calculation Agent. The Initial VWAP Level is the arithmetic mean of the VWAP Levels measured on each Index Business Day over a three Index Business Day period ending on the Inception Date, as calculated by the VWAP Calculation Agent.

Holders may lose some or all of their investment at maturity. Because the Accrued Tracking Fee reduces their final payment, holders will likely lose some or all of their principal amount at maturity if the Final VWAP Level is less than the Initial VWAP Level or if the Final VWAP Level is not greater than the Initial VWAP Level by an amount that is sufficient to offset the negative effects of the Accrued Tracking Fee.

## Note Calculation Agent

J.P. Morgan Securities LLC, or JPMS (the "Note Calculation Agent"), will make all necessary calculations and determinations in connection with the Alerian ETNs, including calculations and determinations relating to any payments on the Alerian ETNS, other those to be made by the VWAP Calculation Agent described below.

## vWAP Calculation Agent

The JPMorgan Global Index Research Group (the "VWAP Calculation Agent"), one of our affiliates, will on each day that is not a Disrupted Day (as defined below) act as the VWAP Calculation Agent. The VWAP Calculation Agent will determine the VWAP of any Index Component, the VWAP Level and the Final VWAP Level on any Index Business Day on which such VWAP, VWAP Level and Final VWAP Level are to be determined during the term of the Alerian ETNs.

## Market Disruption Events

To the extent a Disrupted Day (as defined below) exists with respect to an Index Component on an Averaging Date (as defined below), the VWAP and published share weighting with respect to such Index Component (and only with respect to such Index Component) for such Averaging Date will be determined by the Note Calculation Agent or one of its affiliates on the first succeeding Index Business Day that is not a Disrupted Day (the "Deferred Averaging Date") with respect to such Index Component irrespective of whether pursuant to such determination, the Deferred Averaging Date would fall on a date originally scheduled to be an Averaging Date. For the avoidance of doubt, if the postponement described in the preceding sentence results in the VWAP of a particular Index Component being calculated on a day originally scheduled to be an Averaging Date, for purposes of determining the VWAP Levels on the Index Business Days during the Final Measurement Period or during the Repurchase Measurement Period, as applicable, the Note

Calculation Agent or one of its affiliates, as the case may be, will apply the VWAP and the published share weighting with respect to such Index Component for such Deferred Averaging Date to the calculation of the VWAP Level (i) on the date(s) of the original disruption with respect to such Index Component and (ii) such Averaging Date.

In no event, however, will any postponement pursuant to the immediately preceding paragraph result in the final Averaging Date with respect to any Index Component occurring more than three Index Business Days following the day originally scheduled to be the final Averaging Date. If the third Index Business Day following the date originally scheduled to be the final Averaging Date is not an Index Business Day or is a Disrupted Day with respect to such Index Component, the Note Calculation Agent or one of its affiliates, will determine the VWAP and share weighting with respect to any Index Component required to be determined for the purpose of calculating the applicable VWAP Level based on its good faith estimate of the VWAP and share weighting of each such Index Component that would have prevailed on the Primary Exchange on such third Index Business Day but for such suspension or limitation.

An "Averaging Date" means each of the Index Business Days during the Final Measurement Period or the Repurchase Measurement Period, as applicable, subject to adjustment as described herein.

A "Disrupted Day" with respect to any Index Component is any Index Business Day on which the Primary Exchange or any Related Exchange fails to open for trading during its regular trading session or on which a Market Disruption Event has occurred and is continuing, and, in both cases, the occurrence of which is determined by the Note Calculation Agent to have a material effect on the VWAP Level.

With respect to an Index Component, a "Market Disruption Event," means:
(a) the occurrence or existence of a condition specified below:
(i) any suspension, absence or limitation of trading on the Primary Exchange for trading in the Index Component, whether by reason of movements in price exceeding limits permitted by the Primary Exchange or otherwise;
(ii) any suspension, absence or limitation of trading on the Related Exchange for trading in futures or options contracts related to the Index Component, whether by reason of movements in price exceeding limits permitted by such Related Exchange or otherwise; or
(iii) any event (other than an event described in (b) below) that disrupts or impairs (as determined by the Note Calculation Agent) the ability of market participants in general (A) to effect transactions in, or obtain market values for the relevant Index Component or $(B)$ to effect transactions in, or obtain market values for, futures or options contracts relating to the relevant Index Component; or
(b) the closure on any Index Business Day of the Primary Exchange or any Related Exchange prior to its Scheduled Closing Time unless such earlier closing time is announced by the Primary Exchange or such Related Exchange at least one hour prior to the earlier of (i) the actual closing time for the regular trading session on the Primary Exchange or such Related Exchange on such Index Business Day and (ii) the submission deadline for orders to be entered into the Primary Exchange or such Related Exchange system for execution at the close of trading on such Index Business Day;
in each case determined by the Note Calculation Agent in its sole discretion; and
(c) a determination by the Note Calculation Agent in its sole discretion that the applicable event described above materially interfered with our ability or the ability of any of our affiliates to adjust or unwind all or a material portion of any hedge with respect to the Alerian ETNs.

For purposes of the above definition:
(a) a limitation on the hours or number of days of trading will not constitute a Market Disruption Event if it results from an announced change in the regular business hours of the Primary Exchange or Related Exchange, and
(b) for purposes of clause (a) above, limitations pursuant to the rules of any Primary Exchange or Related Exchange similar to NYSE Rule 80B or Nasdaq Rule 4120 (or any applicable rule or regulation enacted or promulgated by any other self-regulatory organization or any government agency of scope similar to NYSE Rule 80B or Nasdaq Rule 4120 as determined by the Note Calculation Agent) on trading during significant market fluctuations will constitute a suspension, absence or material limitation of trading.
"Scheduled Closing Time" means, with respect to the Primary Exchange or the Related Exchange, on any Index Business Day, the scheduled weekday closing time of the Primary Exchange or such Related Exchange on such Index Business Day, without regard to after hours or any other trading outside of the regular trading session hours.

## Discontinuation of the Index; Alteration of Method of Calculation

If the Index Calculation Agent discontinues publication of or otherwise fails to publish the Index, or the Index Calculation Agent does not make the Index Components, their share weighting and/or the Index Divisor available to the VWAP Calculation Agent, and the Index Sponsor, the Index Calculation Agent or another entity publishes a successor or substitute index that the Note Calculation Agent determines to be comparable to the discontinued Index and for which the Index Components, their share weighting, and/or the Index Divisor are available to the VWAP Calculation Agent (such index being referred to herein as a "successor index"), then the VWAP Level for such successor index will be determined by the VWAP Calculation Agent by reference to the sum of the products of the VWAPs of the components underlying such successor index on the Primary Exchanges and each such component's respective weighting within the successor index (which sum will be adjusted by any index divisor used by such successor index) on the dates and at the times as of which the VWAP Levels for such successor index are to be determined.

Upon any selection by the Note Calculation Agent of a successor Index, the Note Calculation Agent will cause written notice thereof to be furnished to the Trustee, to us and to the holders of the Alerian ETNs.

If the Index Calculation Agent discontinues publication of the Index or does not make the Index Components, their share weightings and/or Index Divisor available to the VWAP Calculation Agent prior to, and such discontinuation or unavailability is continuing on the Calculation Date or any Index Business Day during the Final Measurement Period or during the Repurchase Measurement Period, as applicable, or any other relevant date on which the VWAP Level is to be determined and the Note Calculation Agent determines that no successor index is available at such time, or the Note Calculation Agent has previously selected a successor index and publication of such successor index is discontinued prior to, and such discontinuation is continuing on the Calculation Date or any Index Business Day during the Final Measurement Period or during the Repurchase Measurement Period, as applicable, or any other relevant date on which the VWAP Level is to be determined, then the Note Calculation Agent will determine the relevant VWAP Levels using the VWAP and published share weighting of each Index Component included in the Index or successor index, as applicable, immediately prior to such discontinuation or unavailability, as adjusted for certain corporate actions. In such event, the Note Calculation Agent will cause notice thereof to be furnished to the Trustee, to us and to the holders of the Alerian ETNs.

Notwithstanding these alternative arrangements, discontinuation of the publication of the Index or successor index, as applicable, may adversely affect the value of the Alerian ETNs.

If at any time the method of calculating the Index or a successor index, or the value thereof, is changed in a material respect, or if the Index or a successor index is in any other way modified so that the VWAP Level of the Index or such successor index does not, in the opinion of the Note Calculation Agent, fairly represent the VWAP Level of the Index or such successor index had such changes or modifications not been made, then the Note Calculation Agent will make such calculations and adjustments as, in the good faith judgment of the Note Calculation Agent, may be necessary in order to arrive at a VWAP level of an index comparable to the Index or such successor index, as the case may be, as if such changes or modifications had not been made, and the Note Calculation Agent will calculate the VWAP Levels for the Index or such successor index with reference to the Index or such successor index, as adjusted. The Note Calculation Agent will accordingly calculate any values that reference the VWAP Levels based on the relevant VWAP Levels calculated by the Note Calculation Agent, as adjusted. Accordingly, if the method of calculating the Index or a successor index is modified so that the level of the Index or such successor index is a fraction of what it would have been if there had been no such modification (e.g., due to a split in the index), which, in turn, causes the VWAP Level of the Index or such successor index to be a fraction of what it would have been if there had been no such modification, then the Note Calculation Agent will make such calculations and adjustments in order to arrive at a VWAP Level for the Index or such successor index as if it had not been modified (e.g., as if such split had not occurred).

## Payment upon an Event of Default

In case an event of default with respect to the Alerian ETNs shall have occurred and be continuing, the amount declared due and payable per Alerian ETN upon any acceleration of the Alerian ETNs will be determined by the Note Calculation Agent and will be an amount in cash equal to the Repurchase Amount, calculated as if the date of acceleration were the first Index Business Day in the Repurchase Measurement Period and the four Index Business Days immediately succeeding the date of acceleration were the corresponding Index Business Days in the accelerated Repurchase Measurement Period. For purposes of this calculation the Repurchase Fee Amount shall be zero.
If the maturity of the Alerian ETNs is accelerated because of an event of default as described above, we will, or will cause the Note Calculation Agent to, provide written notice to the Trustee at its New York office, on which notice the Trustee may conclusively rely, and to DTC, as holder of the Alerian ETNs, of the cash amount due with respect to the Alerian ETNs as promptly as possible and in no event later than two Business Days after the date of acceleration.

## Listing

The Alerian ETNs have been listed on the NYSE Arca under the ticker symbol "AMJ." No assurance can be given as to the continued listing of the Alerian ETNs for their term or of the liquidity or trading market for the Alerian ETNs.

## Book-Entry Only Issuance - The Depository Trust Company

DTC will act as securities depositary for the Alerian ETNs. The Alerian ETNs have been issued only as fully registered securities registered in the name of Cede \& Co. (DTC's nominee). One or more fully registered global note certificates, representing the total aggregate principal amount of the Alerian ETNs, have been issued and have been deposited with DTC. We will not issue definitive notes in exchange for the global notes except in limited circumstances.

## Registrar, Transfer Agent and Paying Agent

The Bank of New York Mellon or one of its affiliates will act as registrar and transfer agent for the Alerian ETNs. The Bank of New York Mellon will also act as paying agent and may designate additional paying agents.

## Reissuances or Reopening Issuances

We may in our sole discretion, "reopen" or reissue the Alerian ETNs based upon market conditions and VWAP Levels at that time. These further issuances, if any, will be consolidated to form a single sub-series with the originally issued Alerian ETNs and will have the same CUSIP number and will trade interchangeably with the Alerian ETNs immediately upon settlement. Any Alerian ETNs bearing the same CUSIP number that are issued pursuant to any future additional issuances of Alerian ETNs bearing the same CUSIP number will increase the aggregate principal amount of the outstanding Alerian ETNs. The price of any additional offering will be determined at the time of pricing of that offering.

## Certain Defined Terms

Key Defined Terms
A "Business Day" means any day other than a day on which the banking institutions in The City of New York are authorized or required by law, regulation or executive order to close or a day on which transactions in dollars are not conducted.

The "Calculation Date" is May 15, 2024, unless such day is not an Index Business Day, in which case the Calculation Date will be the next Index Business Day, subject to adjustments and subject to postponement in the event of a Market Disruption Event as described under "Market Disruption Events."

The "Daily Note Value" means, as of any date of determination, an amount per Alerian ETN equal to the product of:
a. the Principal Amount; and
b. a fraction, the numerator of which is equal to the VWAP Level as of such date and the denominator of which is equal to the Initial VWAP Level.

An "ex-dividend date" means, with respect to a distribution on an Index Component, the first Business Day on which transactions in such Index Component trade on the Primary Exchange without the right to receive such distribution.

An "Exchange Business Day" means any day on which the primary exchange or market for trading of the Alerian ETNs is scheduled to be open for trading.

The "Final Measurement Period" means the five Index Business Days from and including the Calculation Date, subject to adjustments and subject to postponement in the event of a Market Disruption Event as described under "Market Disruption Events."

The "Final VWAP Level" is the arithmetic mean of the VWAP Levels measured on each Index Business Day in the Final Measurement Period or during any applicable Repurchase Measurement Period, as applicable, as calculated by the VWAP Calculation Agent.

An "Index Business Day" means any day on which each Primary Exchange and each Related Exchange are scheduled to be open for trading.

An "Index Component" means each energy-oriented Master Limited Partnership included in the Index (collectively, the "Index Components").

The "Index Divisor," as of any date of determination, is the divisor used by the Index Calculation Agent to calculate the level of the Index.

The "Initial Issue Date," is April 6, 2009.
The "Initial VWAP Level" is 190.36605 , which is the arithmetic mean of the VWAP Levels measured on each Index Business Day during the period from and including March 30, 2009 to and including April 1, 2009, as calculated by the VWAP Calculation Agent. The "Maturity Date" is May 24, 2024, subject to postponement in the event of a Market Disruption Event as described under "Market Disruption Events."

A "Primary Exchange" means, with respect to each Index Component, the primary exchange or market of trading of such Index Component.

The "Quarterly Tracking Fee" means, as of any date of determination, an amount per Alerian ETN equal to the product of:
a. $0.2125 \%$ (equivalent to $0.85 \%$ per annum) and
b. the Daily Note Value as of the immediately preceding Index Business Day.

A "record date" means, with respect to a distribution on an Index Component, the date on which a holder of the Index Component must be registered as a unitholder of such Index Component in order to be entitled to receive such distribution.

A "Related Exchange" means, with respect to each Index Component, each exchange or quotation system where trading has a material effect (as determined by the Note Calculation Agent) on the overall market for futures or options contracts relating to such Index Component.

## Additional Key Coupon Payment Terms

The "Coupon Ex-Date" means, with respect to a Coupon Amount, the first Exchange Business Day on which the Alerian ETNs trade without the right to receive such Coupon Amount. Under current NYSE Arca practice, the Coupon Ex-Date will generally be the Exchange Business Day immediately preceding the applicable Coupon Record Date.

The "Coupon Payment Date" means the 15th Index Business Day following each Coupon Valuation Date, provided that the final Coupon Payment Date will be the Maturity Date.

The "Coupon Record Date" means the 9th Index Business Day following each Coupon Valuation Date.
The "Coupon Valuation Date" means the 15th of February, May, August and November of each calendar year during the term of the Alerian ETNs or if such date is not an Index Business Day, then the first Index Business Day following such date, beginning on May 15, 2009, provided that the final Coupon Valuation Date will be the Calculation Date.

The "Reference Distribution Amount" means:
a. as of the first Coupon Valuation Date, an amount equal to the gross cash distributions that a Reference Holder would have been entitled to receive in respect of the Index Components held by such Reference Holder on the record date with respect to any Index Component, for those cash distributions whose ex-dividend date occurs during the period from and excluding the Initial Issue Date to and including the first Coupon Valuation Date; and
b. as of any other Coupon Valuation Date, an amount equal to the gross cash distributions that a Reference Holder would have been entitled to receive in respect of the Index Components held by such Reference Holder on the record date with respect to any Index Component for those cash distributions whose ex-dividend date occurs during the period from and excluding the immediately preceding Coupon Valuation Date to and including such Coupon Valuation Date.

Notwithstanding the foregoing, with respect to cash distributions for an Index Component which is scheduled to be paid prior to the applicable Coupon Ex-Date, if, and only if, the issuer of such Index Component fails to pay the distribution to holders of such Index Component by the scheduled payment date for such distribution, such distribution will be assumed to be zero for the purposes of calculating the applicable Reference Distribution Amount.

The "Reference Holder" means, as of any date of determination, a hypothetical holder of a number of shares of each Index Component equal to:
a. the published share weighting of that Index Component as of that date, divided by
b. the product of:
a. the Index Divisor as of that date, and
b. ten.

## Additional Key Early Repurchase Terms

The "Adjusted Coupon Amount" means, with respect to any applicable Repurchase Valuation Date, a coupon payment, if any, in an amount in cash equal to the difference between:
a. the Adjusted Reference Distribution Amount, calculated as of the applicable Repurchase Valuation Date; and
b. the Adjusted Tracking Fee, calculated as of such Repurchase Valuation Date.

The "Adjusted Reference Distribution Amount" means, as of any applicable Repurchase Valuation Date, an amount equal to the gross cash distributions that a Reference Holder would have been entitled to receive in respect of the Index Components held by such Reference Holder on the record date with respect to any Index Component, for cash distributions with the applicable ex-dividend date
occurring during the period from and excluding the immediately preceding Coupon Valuation Date (or if the Repurchase Valuation Date occurs prior to the first Coupon Valuation Date, the period from and excluding the Initial Issue Date) to and including the applicable Repurchase Valuation Date.

The "Adjusted Tracking Fee" means, as of any applicable Repurchase Valuation Date, an amount equal to:
a. the Tracking Fee Shortfall as of the immediately preceding Coupon Valuation Date plus
b. the product of:
a. the Quarterly Tracking Fee as of such Repurchase Valuation Date; and
b. a fraction, the numerator of which is the total number of calendar days from and excluding the immediately preceding Coupon Valuation Date (or if the Repurchase Valuation Date occurs prior to the first Coupon Valuation Date, the period from and excluding the Initial Issue Date) to and including such Repurchase Valuation Date, and the denominator of which is 90.

The "Repurchase Date" means the third Calculation Date following the last Index Business Day in any applicable Repurchase Measurement Period, subject to postponement in the event of a Market Disruption Event as described under "Market Disruption Events."

The "Repurchase Fee" is equal to $0.125 \%$.
The "Repurchase Valuation Date" means the last Index Business Day of each week, generally Friday. This day is also the first Index Business Day following the date that the applicable Repurchase Notice and Repurchase Confirmation are delivered. Any applicable Repurchase Valuation Date is subject to adjustments as described under "Market Disruption Events."

## General Terms of the Series E Notes

In this "General Terms of the Series E Notes" section, all references to the "debt securities" refer to Series E Notes issued by JPMorgan Chase.

The following description of the terms of the debt securities contains certain general terms that may apply to the debt securities, including the Alerian ETNs.

We have summarized below the material provisions of the 2001 Indenture and the debt securities issued under the 2001 Indenture. These descriptions are only summaries, and each investor should refer to the 2001 Indenture, which describes completely the terms and definitions summarized below and contains additional information regarding the debt securities issued under it. Where appropriate, we use parentheses to refer you to the particular sections of the 2001 Indenture. Any reference to particular sections or defined terms of the 2001 Indenture in any statement under this heading qualifies the entire statement and incorporates by reference the applicable section or definition into that statement.

The debt securities will be our direct, unsecured general obligations and will have the same rank in liquidation as all of our other unsecured and unsubordinated debt.

We are a holding company and conduct substantially all of our operations through subsidiaries. As a result, claims of the holders of the debt securities will generally have a junior position to claims of creditors of our subsidiaries, except to the extent that JPMorgan Chase \& Co. may be recognized, and receives payment, as a creditor of those subsidiaries. Claims of our subsidiaries' creditors other than JPMorgan Chase \& Co. include substantial amounts of long-term debt, deposit liabilities, federal funds purchased, securities loaned or sold under repurchase agreements, commercial paper and other borrowed funds.

## Events of Default and Waivers

An "Event of Default" with respect to a series of debt securities issued under the 2001 Indenture is defined in the 2001 Indenture as:
a. default for 30 days in the payment of interest on any debt securities of that series;
b. default in the payment of principal or other amounts payable on any debt securities of that series when due, at maturity, upon redemption, by declaration, or otherwise;
c. failure by us for 90 days to perform any other covenants or warranties contained in the 2001 Indenture applicable to that series after written notice has been given by the trustee to us or given by holders of at least $25 \%$ in aggregate principal amount of the outstanding securities of all series affected thereby to us and the trustee;
d. specified events of our bankruptcy, insolvency, winding up or liquidation, whether voluntary or involuntary; or
e. any other event of default provided in the applicable supplemental indentures to the 2001 Indenture or form of security. (Section 5.01)

If a default in the payment of principal, interest or other amounts payable on the debt securities, or a failure in the performance of any covenant or agreement, or any other Event of Default provided in the applicable supplemental indentures to the 2001 Indenture or form of security, with respect to one or more (but in the case of a default in performance of a covenant or agreement, or in a manner provided in a supplemental indenture or form of security, less than all) series of debt securities occurs and is continuing, either the Trustee or the holders of not less than $25 \%$ in aggregate principal amount of the debt securities of such series then outstanding, treated as one class, by written notice, may declare the principal of all outstanding debt securities of such series and any interest accrued thereon, to be due and payable immediately. If a default in the performance of any covenant or agreement with respect to all series of debt securities, or in a manner provided in a supplemental indenture or form of security with respect to all series of debt securities, or due to specified events of our bankruptcy, insolvency, winding up or liquidation, occurs and is continuing, either the Trustee or the holders of not less than $25 \%$ in aggregate principal amount of all debt securities then outstanding, treated as one class, by written notice, may declare the principal of all outstanding debt securities and any interest accrued thereon, to be due and payable immediately. Subject to certain conditions such declarations may be annulled and past defaults may be waived by the holders of a majority in aggregate principal amount of the outstanding debt securities of the series affected. (Sections 5.01 and 5.10)

An Event of Default with respect to one series of debt securities does not necessarily constitute an Event of Default with respect to any other series of debt securities. The 2001 Indenture requires the Trustee to provide notice of default with respect to the debt securities within 90 days, unless the default is cured, but provides that the Trustee may withhold notice to the holders of the debt securities of any default if the board of directors, the executive committee, or a trust committee of directors or Trustees and/or responsible officers of the Trustee determines in good faith that it is in the interest of the holders of the debt securities of the applicable series to do so. The Trustee may not withhold notice of a default in the payment of principal of, interest on or any other amounts due under, such debt securities. (Section 5.11)

The 2001 Indenture provides that the holders of a majority in aggregate principal amount of outstanding debt securities of each series affected, with all such series voting as a single class, may direct the time, method, and place of conducting any proceeding for any remedy available to the Trustee, or exercising any trust or power conferred on the Trustee. The Trustee may decline to act if the direction is contrary to law and in certain other circumstances set forth in the 2001 Indenture. (Section 5.09) The Trustee is not obligated to exercise any of its rights or powers under the 2001 Indenture at the request or direction of the holders of debt securities unless the holders offer the Trustee security or indemnity satisfactory to it against the costs, expenses and liabilities incurred therein or thereby. (Section 6.02(d))

No holder of any debt security of any affected series has the right to institute any action for remedy unless such holder has previously given to the Trustee written notice of default, the Trustee has failed to take action for 60 days after the holders of not less than $25 \%$ in aggregate principal amount of the debt securities of each affected series make written request upon the Trustee to institute such action and have offered reasonable indemnity in connection with the same and the holders of a majority in aggregate principal amount of the debt securities of each affected series (voting as a single class) have not given direction to the Trustee that is inconsistent with the written request referred to above. (Section 5.06)

However, the right of any holder of a debt security or coupon to receive payment of the principal of and interest on that debt security or coupon on or after its due date, or to institute suit for the enforcement of any such payment, may not be impaired or affected without the consent of that holder. (Section 5.07)

The 2001 Indenture requires us to file annually with the Trustee a written statement as to whether or not we have knowledge of a default. (Section 3.05)

## Covenant Breach

Under the 2001 Indenture, a "Covenant Breach" would occur with respect to a series of debt securities if we fail to perform or breach any of the covenants contained in the 2001 Indenture (other than a failure to pay principal or interest on the debt securities) and that failure or breach continues for 90 days after the Trustee or the holders of at least $25 \%$ in aggregate principal amount of the outstanding debt securities give written notice of that failure or breach. Neither the Trustee nor the holders of the debt securities will be entitled to accelerate the maturity of the debt securities as a result of any Covenant Breach.

If a Covenant Breach or Event of Default with respect to the debt securities occurs and is continuing, the Trustee may in its discretion proceed to protect and enforce its rights and the rights of the holders of the debt securities by such appropriate judicial proceedings as the Trustee deems most effectual to protect and enforce any such rights, whether for the specific enforcement of any covenant or agreement in the 2001 Indenture or in aid of the exercise of any power granted in the 2001 Indenture, or to enforce any other proper remedy.

## Modification of the 2001 Indenture

The 2001 Indenture contains provisions permitting us and the Trustee to modify the 2001 Indenture or the rights of the holders of debt securities with the consent of the holders of not less than a majority in aggregate principal amount of each outstanding series of debt securities affected by the modification. Each holder of an affected debt security must consent to a modification that would:
a. extend the final maturity date of the principal of, or of any interest on, or other amounts payable under any debt security;
b. reduce the principal amount of, rate of interest on, or any other amounts due under any debt security;
c. change the currency or currency unit of payment of any debt security or certain provisions of the 2001 Indenture applicable to debt securities in foreign currencies;
d. change the method in which amounts of payments of principal, interest or other amounts are determined on any debt security;
e. reduce any amount payable upon redemption of any debt security;
f. adversely affect the terms on which debt securities are convertible into or exchangeable or payable in other securities, instruments, contracts, currencies, commodities or other forms of property;
g. impair the right of a holder to institute suit for the payment of a debt security or, if the debt securities provide, any right of repurchase at the option of the holder of a debt security; or
h. reduce the percentage of debt securities of any series, the consent of the holders of which is required for any modification. (Section 8.02)

The 2001 Indenture also permits us and the Trustee to amend the 2001 Indenture in certain circumstances without the consent of the holders of debt securities to evidence our merger or the replacement of the Trustee, to cure any ambiguity or to correct or supplement any defective or inconsistent provision, to make any change to the 2001 Indenture or our debt securities that we deem necessary or desirable and that does not materially and adversely affect the interests of holders of the debt securities and for certain other purposes. (Section 8.01)

## Consolidations, Mergers and Sales of Assets

We may not merge or consolidate with any other entity or sell, convey or transfer all or substantially all of our assets to any other entity (other than the sale, conveyance or transfer of all or substantially all of our assets to one or more of our direct or indirect subsidiaries), unless:
a. either we are the continuing corporation or the successor entity or the entity to whom those assets are sold, conveyed or transferred is a United States corporation or limited liability company that expressly assumes the due and punctual payment of the principal of, any interest on, or any other amounts due under the debt securities issued under the 2001 Indenture and the due and punctual performance and observance of all the covenants and conditions of the 2001 Indenture binding upon us, and
b. we or the successor entity will not, immediately after the merger or consolidation, sale, conveyance or transfer, be in default in the performance of any covenant or condition of the 2001 Indenture binding on us. (Section 9.01)

There are no covenants or other provisions in the 2001 Indenture that would afford holders of debt securities additional protection in the event of a recapitalization transaction, a change of control of JPMorgan Chase \& Co. or a highly leveraged transaction. The merger covenant described above would apply only if the recapitalization transaction, change of control or highly leveraged transaction were structured to include a merger or consolidation of JPMorgan Chase \& Co. or a sale or conveyance of all or substantially all of our assets. However, we may provide specific protections, such as a put right or increased interest, for particular debt securities, which we would describe in the applicable prospectus supplement.

## Concerning the Trustee, Paying Agent, Registrar and Transfer Agent

Our subsidiaries and we have a wide range of banking relationships with Deutsche Bank Trust Company Americas, The Bank of New York Mellon and The Bank of New York Mellon, London Branch. The Bank of New York Mellon and, for notes settled through Euroclear Bank SA/NV or Clearstream Banking, S.A., Luxembourg, The Bank of New York Mellon, London Branch, will be the paying agents, registrars, authenticating agents and transfer agents for debt securities issued under the 2001 Indenture.

Deutsche Bank Trust Company Americas is initially serving as the trustee for other securities issued by us or JPMorgan Financial, including the debt securities issued under the 2001 Indenture, the debt securities issued under JPMorgan Financial's indenture for debt securities, to which we are a guarantor, and the warrants issued under JPMorgan Financial's warrant indenture, to which we are a guarantor. Consequently, if an actual or potential event of default occurs with respect to any of these securities, the Trustee may be considered to have a conflicting interest for purposes of the Trust Indenture Act of 1939, as amended. In that case, the Trustee may be required to resign under the 2001 Indenture, and we would be required to appoint a successor trustee. For this purpose, a "potential" event of default means an event that would be an event of default if the requirements for giving us default notice or for the default having to exist for a specific period of time were disregarded.

## Governing Law and Judgments

The debt securities and the 2001 Indenture will be governed by, and construed in accordance with, the laws of the State of New York. (Section 11.08)

## DESCRIPTION OF JPMORGAN CHASE FINANCIAL COMPANY LLC'S CALLABLE FIXED RATE NOTES DUE JUNE 10, 2032, FULLY AND UNCONDITIONALLY GUARANTEED BY JPMORGAN CHASE \& CO.

The following description of the Callable Fixed Rate Notes due June 10, 2032 (the "Callable Notes") is a summary and does not purport to be complete. It is subject to and qualified in its entirety by reference to the indenture dated February 19, 2016 (as may be amended or supplemented from time to time, the "2016 Indenture"), among JPMorgan Chase Financial Company LLC, as issuer ("JPMorgan Financial" or the "Issuer"), JPMorgan Chase, as guarantor (the "Guarantor"), and Deutsche Bank Trust Company Americas, as trustee (the "Trustee"), which is incorporated by reference as an Exhibit to the Form 10-K. We encourage you to read the 2016 Indenture for additional information.

## General

As of December 31, 2022, \$5,000,000 aggregate principal amount of the Callable Notes were outstanding.
The Callable Notes are unsecured and unsubordinated obligations of JPMorgan Financial, the payment of which is fully and unconditionally guaranteed by JPMorgan Chase \& Co. The Callable Notes will rank pari passu with all of the Issuer's other unsecured and unsubordinated obligations. JPMorgan Chase \& Co.'s guarantee of the Callable Notes will rank pari passu with all of JPMorgan Chase \& Co.'s other unsecured and unsubordinated obligations. Any payment on the Callable Notes issued by JPMorgan Financial is subject to the credit risk of JPMorgan Finance Callable Notes, and the credit risk of JPMorgan Chase \& Co., as guarantor of the Callable Notes.

The Callable Notes are part of a series of the Issuer's debt securities entitled "Global Medium-Term Notes, Series A" (the "Series A Notes") that the Issuer may issue under the 2016 Indenture from time to time. For more information about the Series A Notes, please see the section titled "- General Terms of the Series A Notes" below.

The Callable Notes are not bank deposits and are not insured by the Federal Deposit Insurance Corporation or by any other governmental agency, nor are they obligations of, or guaranteed by, a bank.

Unless otherwise specified, references herein to "holders" mean those in whose names the Callable Notes are registered on the books that the Issuer or the Trustee, or any successor trustee, as applicable, maintain for this purpose, and not those who own beneficial interests in the Callable Notes (registered in street name or otherwise).

## Key Terms of the Callable Notes

We issued the Callable Notes on June 10, 2021, in minimum denominations of $\$ 1,000$ and in integral multiples of $\$ 1,000$ thereafter. The Maturity Date of the Callable Notes is June 10, 2032. Interest on the Callable Notes is payable semiannually on June 10th and December 10th of each year, beginning on December 10, 2021 to and including the Maturity Date (each, an "Interest Payment Date"), subject to any earlier redemption, at the Interest Rate of $2.60 \%$ per annum.

On June 10, 2031 (the "Redemption Date"), the Issuer may redeem the holders' Callable Notes, in whole but not in part, at a price equal to the principal amount being redeemed plus any accrued and unpaid interest. Any accrued and unpaid interest on the Callable Notes redeemed will be paid to the person who is the holder of record on such Callable Notes at the close of business one (1) business day prior to the Redemption Date. To redeem the Callable Notes, the Issuer will deliver notice to DTC, as holder of the Callable Notes, at least 5 business days and not more than 15 business days prior to the Redemption Date.

## Calculation Agent

JPMS (the "Calculation Agent") will make all necessary calculations and determinations in connection with the Callable Notes, including calculations and determinations relating to any payments on the Callable Notes.

## Payment upon an Event of Default

In case an event of default with respect to the Callable Notes shall have occurred and be continuing, the amount declared due and payable per $\$ 1,000$ principal amount note upon any acceleration of the Callable Notes will be determined by the Calculation Agent and will be an amount in cash equal to $\$ 1,000$ per $\$ 1,000$ principal amount note plus accrued and unpaid interest, calculated as if the date of acceleration were the Maturity Date. In such case, interest will be calculated on the basis of a 360-day year and the actual number of days in such adjusted Interest Period and will be based on the Interest Rate on the applicable date immediately preceding such adjusted Interest Period.

If the maturity of the Callable Notes is accelerated because of an event of default as described above, the Issuer will, or will cause the Calculation Agent to, provide written notice to the Trustee at its New York office, on which notice the Trustee may conclusively rely, and to DTC of the cash amount due with respect to the Callable Notes as promptly as possible and in no event later than two business days after the date of acceleration.

## Listing

The Callable Notes are listed and admitted to trading on the NYSE under the trading symbol "JPM/32." No assurance can be given as to the continued listing for the term of the Callable Notes, or the liquidity or trading market for the Callable Notes.

## Book-Entry Only Issuance - The Depository Trust Company

DTC will act as securities depositary for the Callable Notes. The Callable Notes have been issued only as fully registered securities registered in the name of Cede \& Co. (DTC's nominee). One or more fully registered global note certificates, representing the total aggregate principal amount of the Callable Notes, have been issued and have been deposited with DTC. We will not issue definitive notes in exchange for the global notes except in limited circumstances.

## Registrar, Transfer Agent and Paying Agent

The Bank of New York Mellon or one of its affiliates will act as registrar and transfer agent for the Callable Notes. The Bank of New York Mellon will also act as paying agent for the Callable Notes and may designate additional paying agents.

## Reopening Issuances

The Issuer may, in its sole discretion, "reopen" the Callable Notes based upon market conditions at that time. These further issuances, if any, will be consolidated with, have the same CUSIP number as and trade interchangeably with the respective originally issued Callable Notes immediately upon settlement and, consequently, will increase the aggregate principal amount of such outstanding Callable Notes. The price of any additional offering will be determined at the time of pricing of that offering.

## General Terms of the Series A Notes

In this "General Terms of the Series A Notes" section, all references to the "debt securities" refer to Series A Notes issued by JPMorgan Chase Financial Company LLC.

The following description of the terms of the debt securities contains certain general terms that may apply to the debt securities, including the Callable Notes.

We have summarized below the material provisions of the 2016 Indenture and the debt securities and guarantees issued under the 2016 Indenture.

These descriptions are only summaries, and each investor should refer to the 2016 Indenture, which describes completely the terms and definitions summarized below and contains additional information regarding the debt securities issued under it. Where appropriate, we use parentheses to refer you to the particular sections of the 2016 Indenture. Any reference to particular sections or defined terms of the 2016 Indenture in any statement under this heading qualifies the entire statement and incorporates by reference the applicable section or definition into that statement.

The debt securities will be the Issuer's direct, unsecured general obligations, the payment on which is fully and unconditionally guaranteed by the Guarantor, and will have the same rank in liquidation as all of the Issuer's other unsecured and unsubordinated debt.

The Guarantor is a holding company and conducts substantially all of its operations through subsidiaries. As a result, claims of the holders of the debt securities against the Guarantor under the guarantee will generally have a junior position to claims of creditors of the Guarantor's subsidiaries, except to the extent that the Guarantor may be recognized, and receives payment, as a creditor of those subsidiaries. Claims of the Guarantor's subsidiaries' creditors other than the Guarantor include substantial amounts of long-term debt, deposit liabilities, federal funds purchased, securities loaned or sold under repurchase agreements, commercial paper and other borrowed funds.

## Events of Default and Waivers

An "Event of Default" with respect to a series of debt securities issued under the 2016 Indenture is defined in the 2016 Indenture as:
a. default in the payment of interest on any debt securities of that series and continuance of such default for 30 days;
b. default in the payment of principal or other amounts payable on any debt securities of that series when due, at maturity, upon redemption, by declaration, or otherwise;
c. default in the performance, or breach, of any other covenants or warranties applicable to the Issuer contained in the 2016 Indenture applicable to that series, and continuation of such default or breach for 90 days after written notice has been
given by the Trustee to the Issuer and the Guarantor or given by holders of at least $25 \%$ in aggregate principal amount of the outstanding securities of all series affected thereby to the Issuer, the Guarantor and the Trustee;
d. certain events of the Issuer's bankruptcy, insolvency, receivership, winding up or liquidation, whether voluntary or involuntary;
e. the guarantee ceases to be in full force and effect, other than in accordance with the 2016 Indenture, or the Guarantor denies or disaffirms its obligations under the guarantee, provided that no Event of Default with respect to the guarantee will occur as a result of, or because it is related directly or indirectly to, the insolvency of the Guarantor or the commencement of proceedings under Title 11 of the United States Code, or the appointment of a receiver for the Guarantor under Title II of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, or the Federal Deposit Insurance Corporation having separately repudiated the Guarantee in receivership, or the commencement of or certain other events of the Guarantor's bankruptcy, insolvency, resolution, receivership, winding up or liquidation; or
f. any other event of default provided in the applicable supplemental indentures to the 2016 Indenture or form of security. (Section 5.01)

If an Event of Default occurs and is continuing because of a default in the payment of principal, interest or other amounts payable on the debt securities, a failure in the performance, or breach, of any covenant or agreement applicable to the Issuer, the guarantee ceasing to be in full force and effect, or any other event of default provided in the applicable supplemental indentures to the 2016 Indenture or form of security, either the Trustee or the holders of not less than 25\% in aggregate principal amount of the debt securities of such series then outstanding, treated as one class, by written notice to the Issuer and the Guarantor, may declare the principal of all outstanding debt securities of such series and any interest accrued thereon, to be due and payable immediately. If a default due to specified events of the Issuer's bankruptcy, insolvency, receivership, winding up or liquidation, occurs and is continuing, the principal of all outstanding debt securities and any interest accrued thereon will automatically, and without any declaration or other action on the part of the Trustee or any holder, become immediately due and payable. Subject to certain conditions such declarations may be annulled and past defaults may be waived by the holders of a majority in aggregate principal amount of the outstanding debt securities of the series affected. (Sections 5.01 and 5.10)

Events of bankruptcy, insolvency, resolution, receivership, winding up or liquidation relating to the Guarantor will not constitute an Event of Default with respect to any series of debt securities. In addition, failure by the Guarantor to perform any of its covenants or warranties (other than a payment default) will not constitute an Event of Default with respect to any series of debt securities. Therefore, events of bankruptcy, resolution, receivership, insolvency, winding up or liquidation relating to the Guarantor (in the absence of any such event occurring with respect to the Issuer) will not permit any of the debt securities to be declared due and payable and the Trustee is not authorized to exercise any remedy against the Issuer or the Guarantor upon the occurrence or continuation of these events with respect to the Guarantor. Instead, even if an event of bankruptcy, insolvency, resolution, receivership, winding up or liquidation relating to the Guarantor has occurred, the Trustee and the holders of debt securities of a series will not be able to declare the relevant debt securities to be immediately due and payable unless there is an Event of Default with respect to that series as described above, such as the Issuer's bankruptcy, insolvency, receivership, winding up or liquidation or a payment default by the Issuer or the Guarantor on the relevant debt securities. The value holders receive on any series of debt securities may be significantly less than what holders would have otherwise received had the Issuer's debt securities been declared due and payable immediately or the Trustee been authorized to exercise any remedy against the Issuer or the Guarantor upon the occurrence or continuation of these events with respect to the Guarantor.

An Event of Default with respect to one series of debt securities does not necessarily constitute an Event of Default with respect to any other series of debt securities. The 2016 Indenture requires the Trustee to provide notice of default with respect to the debt securities within 90 days, unless the default is cured, but provides that the Trustee may withhold notice to the holders of the debt securities of any default if the board of directors, the executive committee, or a trust committee of directors or Trustees and/or responsible officers of the Trustee determines in good faith that it is in the interest of the holders of the debt securities of the applicable series to do so. The Trustee may not withhold notice of a default in the payment of principal of, interest on or any other amounts due under, such debt securities. (Section 5.11)

The 2016 Indenture provides that the holders of a majority in aggregate principal amount of outstanding debt securities of each series affected, with all such series voting as a single class, may direct the time, method, and place of conducting any proceeding for any remedy available to the Trustee, or exercising any trust or power conferred on the Trustee. The Trustee may decline to act if the direction is contrary to law and in certain other circumstances set forth in the 2016 Indenture. (Section 5.09) The Trustee is not obligated to exercise any of its rights or powers under the 2016 Indenture at the request or direction of the holders of debt securities unless the holders offer the Trustee security or indemnity satisfactory to it against the costs, expenses and liabilities incurred therein or thereby. (Section 6.02(d))

No holder of any debt security of any affected series has the right to institute any action for remedy unless such holder has previously given to the Trustee written notice of default, the Trustee has failed to take action for 60 days after the holders of not less than $25 \%$
in aggregate principal amount of the debt securities of each affected series make written request upon the Trustee to institute such action and have offered reasonable indemnity in connection with the same and the holders of a majority in aggregate principal amount of the debt securities of each affected series (voting as a single class) have not given direction to the Trustee that is inconsistent with the written request referred to above. (Section 5.06)
However, the right of any holder of a debt security or coupon to receive payment of the principal of and interest on that debt security or coupon on or after its due date, or to institute suit for the enforcement of any such payment, may not be impaired or affected without the consent of that holder. (Section 5.07)

The 2016 Indenture requires the Issuer and the Guarantor to file annually with the Trustee a written statement as to whether or not the Issuer or the Guarantor, as the case may be, has knowledge of a default. (Section 3.05)

## Modification of the 2016 Indenture

The 2016 Indenture contains provisions permitting the Issuer, the Guarantor and the Trustee to modify the 2016 Indenture or the rights of the holders of debt securities with the consent of the holders of not less than a majority in aggregate principal amount of each outstanding series of debt securities affected by the modification. Each holder of an affected debt security must consent to a modification that would:
a. extend the final maturity date of the principal of, or of any interest on, or other amounts payable under any debt security;
b. reduce the principal amount of, rate of interest on, or any other amounts due under any debt security;
c. change the currency or currency unit of payment of any debt security or certain provisions of the 2016 Indenture applicable to debt securities in foreign currencies;
d. change the method in which amounts of payments of principal, interest or other amounts are determined on any debt security;
e. reduce any amount payable upon redemption of any debt security;
f. impair the right of a holder to institute suit for the payment of a debt security or, if the debt securities provide, any right of repurchase at the option of the holder of a debt security;
g. reduce the percentage of debt securities of any series, the consent of the holders of which is required for any modification; or
h. make any change in the guarantee that would adversely affect the holders of the debt securities of such series or release the Guarantor from the guarantee other than pursuant to the terms of the 2016 Indenture. (Section 8.02)

The 2016 Indenture also permits the Issuer, the Guarantor and the Trustee to amend the 2016 Indenture in certain circumstances without the consent of the holders of debt securities to evidence the Issuer's or the Guarantor's merger or the replacement of the Trustee, to cure any ambiguity or to correct or supplement any defective or inconsistent provision, to make any change to the 2016 Indenture or the Issuer's debt securities that the Issuer deems necessary or desirable and that does not materially and adversely affect the interests of holders of the debt securities and for certain other purposes. (Section 8.01)

## Consolidations, Mergers, Sales and Transfers of Assets

Neither the Issuer nor the Guarantor may merge or consolidate with any other entity or sell, convey or transfer all or substantially all of their respective assets to any other entity, unless:
a. with respect to the Issuer:
a. either the Issuer is the continuing company in the case of a merger or consolidation or the successor entity in the case of a merger or consolidation (including an affiliate of the Guarantor) or the entity to whom those assets are sold, conveyed or transferred in the case of a sale, conveyance or transfer is a United States corporation or limited liability company that expressly assumes the due and punctual payment of the principal of, any interest on, or any other amounts due under the debt securities and the due and punctual performance and observance of all the covenants and conditions of the 2016 Indenture binding upon the Issuer, and
b. no Event of Default and no event which, with notice or lapse of time or both, would become an Event of Default has occurred or would be continuing, immediately after the merger or consolidation, or the sale, conveyance or transfer, and
a. with respect to the Guarantor:
a. either the Guarantor is the continuing corporation in the case of a merger or consolidation or the successor corporation in the case of a merger or consolidation or the entity to whom those assets are sold, conveyed or transferred in the case of a sale, conveyance or transfer is a United States corporation that expressly assumes the full and unconditional guarantee of the full and punctual payment of the principal of, any interest on, or any other amounts due under the debt securities and the due and punctual performance and observance of all the covenants and conditions of the 2016 Indenture binding upon the Guarantor, and
b. no Event of Default and no event which, with notice or lapse of time or both, would become an Event of Default has occurred or would be continuing, immediately after the merger or consolidation, or the sale, conveyance or transfer. (Sections 9.01 and 9.02)

Any transfer of material assets of the Guarantor to any other entity that occurs as a result of, or because it is related directly or indirectly to, any proceedings relative to the Guarantor under Title 11 of the United States Code or under a receivership under Title II of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 or under any other applicable federal or state bankruptcy, insolvency, resolution or other similar law will be deemed to be a sale, conveyance or transfer of all or substantially all of the Guarantor's assets.

There are no covenants or other provisions in the 2016 Indenture that would afford holders of debt securities additional protection in the event of a recapitalization transaction involving the Issuer or the Guarantor, a change of control of the Issuer or the Guarantor or a highly leveraged transaction involving the Issuer or the Guarantor. The merger covenant described above would apply only if the recapitalization transaction, change of control or highly leveraged transaction were structured to include a merger or consolidation of the Issuer or the Guarantor or a sale or conveyance of all or substantially all of the Issuer's or the Guarantor's assets. However, the Issuer may provide specific protections, such as a put right or increased interest, for particular debt securities, which the Issuer would describe in the applicable prospectus supplement.

## JPMorgan Chase Guarantee

The Guarantor will fully and unconditionally guarantee the full and punctual payment of the principal of, interest on, and all other amounts payable under the debt securities when the same becomes due and payable, whether at maturity, upon redemption, repurchase at the option of the holders of the applicable debt securities or upon acceleration. If for any reason the Issuer does not make any required payment in respect of the Issuer's debt securities when due, the Guarantor will on demand pay the unpaid amount at the same place and in the same manner that applies to payments made by the Issuer under the 2016 Indenture. The guarantee is of payment and not of collection. (Section 14.01)

The Guarantor's obligations under the guarantee are unconditional and absolute. However, (1) the Guarantor will not be liable for any amount of payment that the Issuer is excused from making or any amount in excess of the amount actually due and owing by the Issuer, and (2) any defense or counterclaims available to the Issuer (except those resulting solely from, or on account of, the Issuer's insolvency or the Issuer's status as debtor or subject of a bankruptcy or insolvency proceeding) will also be available to the Guarantor to the same extent as these defense or counterclaims are available to the Issuer, whether or not asserted by the Issuer. (Section 14.02)

Concerning the Trustee, Paying Agent, Registrar and Transfer Agent
We, the Guarantor and certain of their affiliates have a wide range of banking relationships with Deutsche Bank Trust Company Americas, The Bank of New York Mellon and The Bank of New York Mellon, London Branch. The Bank of New York Mellon and, for notes settled through Euroclear Bank SA/NV or Clearstream Banking, S.A., Luxembourg, The Bank of New York Mellon, London Branch, will be the paying agents, authenticating agents, registrars and transfer agents for debt securities issued under the 2016 Indenture.

Deutsche Bank Trust Company Americas is initially serving as the Trustee for the debt securities issued under our 2016 Indenture, to which JPMorgan Chase acts as a guarantor, the warrants issued under our warrant indenture, to which JPMorgan Chase acts as a guarantor, and the debt securities issued under JPMorgan Chase's indenture. Consequently, if an actual or potential event of default occurs with respect to any of these securities, the Trustee may be considered to have a conflicting interest for purposes of the Trust Indenture Act of 1939 , as amended. In that case, the Trustee may be required to resign under the 2016 Indenture, and the Issuer would be required to appoint a successor trustee. For this purpose, a "potential" event of default means an event that would be an event of default if the requirements for giving the Issuer default notice or for the default having to exist for a specific period of time were disregarded.

## Governing Law and Judgments

The debt securities and the 2016 Indenture, including the guarantee, will be governed by, and construed in accordance with, the laws of the State of New York. (Section 11.08)

## Exhibit 10.18

## JPMORGAN CHASE \& CO. LONG-TERM INCENTIVE PLAN <br> TERMS AND CONDITIONS OF JANUARY 17, 2023 <br> RESTRICTED STOCK UNIT AWARD OPERATING COMMITTEE

## Award Agreement

These terms and conditions are made part of the Award Agreement dated as of January 17, 2023 ("Grant Date") awarding Restricted Stock Units ("RSUs") pursuant to the terms of the JPMorgan Chase \& Co. Long-Term Incentive Plan ("Plan"). To the extent the terms of the Award Agreement (all references to which will include these terms and conditions) conflict with the Plan, the Plan will govern. The Award Agreement, the Plan and Prospectus supersede any other agreement, whether written or oral, that may have been entered into by the Firm and you relating to this award.

This award was granted on the Grant Date subject to the Award Agreement. Unless you decline by the deadline and in the manner specified in the Award Agreement, you will have agreed to be bound by these terms and conditions, effective as of the Grant Date. If you decline the award, it will be cancelled as of the Grant Date.

Capitalized terms that are not defined in "Definitions" below or elsewhere in the Award Agreement will have the same meaning as set forth in the Plan.

JPMorgan Chase \& Co. will be referred to throughout the Award Agreement as "JPMorgan Chase" and together with its subsidiaries as the "Firm".

## Form and Purpose of Award

Each RSU represents a non-transferable right to receive one share of Common Stock as of the applicable vesting date as set forth in your Award Agreement.

The purpose of this award is to motivate your future performance for services to be provided during the vesting period and to align your interests with those of the Firm and its shareholders.

## Dividend Equivalents

If dividends are paid on Common Stock while RSUs under this award are outstanding, you will be paid an amount equal to the dividend paid on one share of Common Stock, multiplied by the number of RSUs outstanding under this award as of the dividend record date.

## Vesting Period

The period from the Grant Date to the last vesting date is the "vesting period" (see subsections captioned "--Amendment" pursuant to which the Firm may extend the vesting period and "--No Ownership Rights/Other Limitations" pursuant to which the Firm may place restrictions on delivered shares of Common Stock following a vesting date).

## Protection-Based Vesting

This award is intended and expected to vest on the vesting date(s), provided that you are continuously employed by the Firm through such vesting date, or you meet the requirements for continued vesting described under the subsections "--Job Elimination", "--Full Career Eligibility", "--Government Office" or "--Disability". However, vesting and the number of RSUs in which you vest are subject to these terms and conditions (including, but not limited to, sections captioned "Remedies" and the following protection-based vesting provision).
Up to a total of fifty percent of your award that would otherwise be distributable to you during the vesting period ("At Risk RSUs") may be cancelled if the Chief Executive Officer of JPMorgan Chase ("CEO") determines in his or her sole discretion that cancellation of all or portion of the At Risk RSUs is appropriate in light of any one or a combination of the following factors:

- Your performance in relation to the priorities for your position, or the Firm's performance in relation to the priorities for which you share responsibility as a member of the Operating Committee, have been unsatisfactory for a sustained period of time. Among the factors the CEO may consider in assessing performance are net income, total net revenue, return on equity, earnings per share and capital ratios of the Firm, both on an absolute basis and, as appropriate, relative to peer firms.
- For any calendar year ending during the vesting period, JPMorgan Chase's annual pre-tax pre-provision income at the Firm
level is negative.
- Awards granted to participants in a Line of Business for which you exercise, or during the vesting period exercised, direct or indirect responsibility, were in whole or in part cancelled because the Line of Business did not meet its annual Line of Business Financial Threshold.
- The Firm does not meet the Firmwide Financial Threshold.

In the event that your employment terminates due to "Job Elimination", "Full Career Eligibility", "Government Office" or "Disability" thereby entitling you to continued vesting in your award (or potentially acceleration due to satisfaction of the Government Office Requirements), the cancellation circumstances described above will continue to apply to your At Risk RSUs pursuant to the subsection captioned "Accelerated Distribution for Ethics or Conflict Reasons Resulting From Employment by a Government Entity".
Any determination above with respect to protection-based vesting provisions is subject to ratification by the Compensation and Management Development Committee of the Board of Directors of JPMorgan Chase ("Committee"). In the case of an award to the CEO, all such determinations shall be made by the Committee and ratified by the Board.

## Bonus Recoupment

In consideration of the grant of this award, you agree that you are subject to the JPMorgan Chase Bonus Recoupment Policy (or successor policy) as in effect from time to time as it applies both to the cash incentive compensation awarded to you for performance year 2022 and to this award. You can access this policy as currently in effect by clicking the following link to the JPMorgan Chase \& Co. Corporate Governance Principles web page and scrolling to the Bonus Recoupment Policy located under the section titled "Other Matters": https://about.jpmorganchase.com/about/governance/corporate-governance-principles

For the avoidance of doubt, nothing in these terms and conditions in any way limits the rights of the Firm under the JPMorgan Chase Bonus Recoupment Policy (or successor policy).

## Termination of Employment

Except as explicitly set forth below under the subsections captioned "--Job Elimination", "--Full Career Eligibility", "--Government Office" or "--Disability" or under the section captioned "Death", any RSUs outstanding under this award will be cancelled effective on the date your employment with the Firm terminates for any reason.
Subject to these terms and conditions (including, but not limited to, sections captioned "Protection-Based Vesting", "Bonus Recoupment", "Your Obligations" and "Remedies"), you will be eligible to continue to vest (as you otherwise would vest if you were still employed by JPMorgan Chase) with respect to your award in accordance with its terms and conditions following the termination of your employment if one of the following circumstances applies to you:

- Job Elimination

In the event that the Director of Human Resources or nominee in his or her sole discretion determines that

- the Firm terminated your employment because your job was eliminated, and
- after you are notified that your job will be eliminated, you provided such services as requested by the Firm in a cooperative and professional manner, and
- you satisfied the Release/Certification Requirements set forth below.
- Full Career Eligibility

In the event that the Director of Human Resources or nominee in his or her sole discretion determines that

- you voluntarily terminated your employment with the Firm, had completed at least five years of continuous service with the Firm immediately preceding your termination date, and
- the sum of your age and Recognized Service (as defined below) on your date of termination equaled or exceeded 60 and
- you provided at least 180 days advance written notice to the Firm of your intention to voluntarily terminate your employment under this provision, during which notice period you provided such services as requested by the Firm in a cooperative and professional manner and you did not perform any services for any other employer, and
- continued vesting shall be appropriate, which determination shall be made prior to your termination and will be based on your performance and conduct (before and after providing notice), and
- for 36 months from the date of grant of this award you do not either perform services in any capacity (such as an employee, contractor, consultant, advisor, or self-employed individual, whether paid or unpaid) for a Financial Services Company (as defined below) or work in your profession (whether or not for a Financial Services Company); provided that you may work for a government, education or Not-for-Profit Organization (as defined below), and
- you satisfied the Release/Certification Requirements set forth below.

After receipt of such advance written notice, the Firm may choose to have you continue to provide services during such 180-day period as a condition to continued vesting or shorten the length of the 180-day period at the Firm's sole discretion, but to a date
no earlier than the date you would otherwise meet the age and service requirements.
Additional advance notice requirements may apply for employees subject to notice period policies (see "Notice Period" below).

## - Government Office

In the event that you voluntarily terminate your employment with the Firm to accept a Government Office or become a candidate for an elective Government Office, as described at the end of these terms and conditions under the section captioned "Government Office Requirements". See also definition of Government Office in the section captioned "Definitions".

- Disability

In the event that

- your employment with the Firm terminates because (i) you are unable to return to work while you are receiving benefits under the JPMorgan Chase Long Term Disability Plan, or for non-U.S. employees, under the equivalent JPMorgan Chase sponsored local country plan (in either case, "LTD Plan"), or (ii) if you are not covered by a LTD Plan, you are unable to return to work due to a long-term disability that would qualify for benefits under the applicable LTD Plan, as determined by the Firm or a third-party designated by the Firm; provided that you ( $x$ ) request in writing continued vesting due to such disability within 30 days of the date your employment terminates, and (y) provide any requested supporting documentation and ( $z$ ) receive the Firm's written consent to such treatment, and
- you satisfied the Release/Certification Requirements set forth below.


## Release/Certification

To qualify for continued vesting after termination of your employment under any of the foregoing circumstances:

- you must timely execute and deliver a release of claims in favor of the Firm, having such form and terms as the Firm shall specify,
- with respect to "Full Career Eligibility", prior to the termination of your employment, you must confirm with management that you meet the eligibility criteria (including providing at least 180 days advance written notification), advise that you are seeking to be treated as an individual eligible for "Full Career Eligibility", and receive written consent to such continued vesting,
- with respect to "Full Career Eligibility" and "Government Office", it is your responsibility to take the appropriate steps to certify to the Firm prior to each vesting date while the employment restrictions are outstanding, on the authorized form of the Firm, that you have complied with the employment restrictions applicable to you (as described herein) from your date of termination of employment through the applicable vesting date,
- with respect to "Disability", you must satisfy the notice and documentation described above and receive written consent to such continued vesting, and
- in all cases, complied with all other terms of the Award Agreement. (See section captioned "Your Obligations".)


## Death

If you die while you are eligible to vest in RSUs under this award, the RSUs will immediately vest and will be distributed in shares of Common Stock (after applicable tax withholding) to your designated beneficiary on file with the Firm's Stock Administration Department, or if no beneficiary has been designated or survives you or if beneficiary designation is not recognized locally, then to your estate unless otherwise required by local legislation. Any shares will be distributed no later than the end of the calendar year immediately following the calendar year which contains your date of death; however, our administrative practice is to register such shares in the name of your beneficiary or estate within 60 days of the Firm's receipt of any required documentation.

## Your Obligations

In consideration of the grant of this award, you agree to comply with and be bound by the obligations set forth below next to the subsections captioned "--Non-Solicitation of Employees and Customers", "--Confidential Information", "--Non-Disparagement", "-Cooperation", "--Compliance with Award Agreement" and "--Notice Period."

- Non-Solicitation of Employees and Customers

During your employment by the Firm and for the longer of the (i) one year period following the termination of your employment or, (ii) if your award is not cancelled as of your termination date, the three year period from Grant Date, you will not directly or indirectly, whether on your own behalf or on behalf of any other party, without the prior written consent of the Director of Human Resources: (i) solicit, induce or encourage any of the Firm's then current employees to leave the Firm or to apply for employment elsewhere, unless such current employee has received official, written notice that his or her employment will be terminated due to job elimination, (ii) hire any employee or former employee who was employed by the Firm at the date your employment terminated, unless the individual's employment terminated because his or her job was eliminated, or the individual's employment with the Firm has been terminated for more than six months, (iii) to the fullest extent enforceable under applicable law, solicit or induce or attempt to induce to leave the Firm, or divert or attempt to divert from doing business with the Firm, any then current customers, suppliers or
other persons or entities that were serviced by you or whose names became known to you by virtue of your employment with the Firm, or otherwise interfere with the relationship between the Firm and such customers, suppliers or other persons or entities. This does not apply to publicly known institutional customers that you service after your employment with the Firm without the use of the Firm's confidential or proprietary information.

These restrictions do not apply to authorized actions you take in the normal course of your employment with the Firm, such as employment decisions with respect to employees you supervise or business referrals in accordance with the Firm's policies.

## - Confidential Information

You will not, either during your employment with the Firm or thereafter, directly or indirectly (i) use or disclose to anyone any confidential information related to the Firm's business, or (ii) communicate with the press or other media about matters related to the Firm, its customers or employees, including matters and activities relating to your employment, or the employment of others, by the Firm, in the case of either (i) or (ii), except as explicitly permitted by the JPMorgan Chase Code of Conduct and applicable policies or law or legal process. In addition, following your termination of employment, you will not, without prior written authorization, access the Firm's private and internal information through telephonic, intranet or internet means. "Confidential information" shall have the same meaning for the Award Agreement as it has in the JPMorgan Chase Code of Conduct.

Nothing in this award precludes you from reporting to the Firm's management or directors, the government, a regulator, a selfregulatory agency, your attorneys or a court, conduct you believe to be in violation of the law or concerns of any known or suspected Code of Conduct violation. It is also not intended to prevent you from responding truthfully to questions or requests from the government, a regulator or in a court of law.

- Non-Disparagement

You will not, either during your employment with the Firm or thereafter, make or encourage others to make any public statement or release any information in verbal, written, electronic or any other form, that is intended to, or reasonably could be foreseen to, disparage, embarrass or criticize the Firm or its employees, officers, directors or shareholders as a group. This shall not preclude you from reporting to the Firm's management or directors or to the government or a regulator conduct you believe to be in violation of the law or the Firm's Code of Conduct or responding truthfully to questions or requests for information to the government, a regulator or in a court of law in connection with a legal or regulatory investigation or proceeding.

- Cooperation

You will cooperate fully with and provide full and accurate information to the Firm and its counsel with respect to any matter (including any audit, tax proceeding, litigation, investigation or governmental proceeding) with respect to which you may have knowledge or information, subject to reimbursement for actual, appropriate and reasonable out-of-pocket expenses incurred by you.

- Compliance with Award Agreement

You will provide the Firm with any information reasonably requested to determine compliance with the Award Agreement, and you authorize the Firm to disclose the terms of the Award Agreement to any third party who might be affected thereby, including your prospective employer.

- Notice Period

If you are subject to a notice period or become subject to a notice period after the Grant Date, whether by contract or by policy, that requires you to provide advance written notice of your intention to terminate your employment ("Notice Period"), then as consideration for this award and continued employment, you will provide the Firm with the necessary advance written notice that applies to you, as specified by such contract or policy.

After receipt of your notice, the Firm may choose to have you continue to provide services during the applicable Notice Period or may place you on a paid leave for all or part of the applicable Notice Period. During the Notice Period, you shall continue to devote your full time and loyalty to the Firm by providing services in a cooperative and professional manner and not perform any services for any other employer and shall receive your base salary and certain benefits until your employment terminates. You and the Firm may mutually agree to waive or modify the length of the Notice Period.

Regardless of whether a Notice Period applies to you, you must comply with the 180-day advance notice period described under the subsection captioned "--Full Career Eligibility" in the event you wish to terminate employment under that same subsection.

## Remedies

- Detrimental Conduct, Risk Related and Other Cancellation/Recapture

In addition to the cancellation provisions described under the sections captioned "Protection-Based Vesting", "Bonus

Recoupment", and "Termination of Employment", up to $100 \%$ of your outstanding RSUs under this award may be cancelled if the Firm in its sole discretion determines that:

- Any of the following detrimental and risk-related conduct has occurred:
- you engaged in conduct detrimental to the Firm insofar as it causes material financial or reputational harm to the Firm or its business activities, or
- this award was based on materially inaccurate performance metrics, whether or not you were responsible for the inaccuracy, or
- this award was based on a material misrepresentation by you, or
- you improperly or with gross negligence failed to identify, raise or assess, in a timely manner and as reasonably expected, risks and/or concerns with respect to risks material to the Firm or its business activities, or
- your employment was terminated for Cause (see section captioned "Definitions" below) or, in the case of a determination after the termination of your employment, that your employment could have been terminated for Cause.
- you have failed to comply with any of the advance notice/cooperation requirements or employment restrictions applicable to your termination of employment, or
- you have failed to return the required forms specified under the section captioned "Release/Certification" by the specified deadline, or
- you have violated any of the provisions as set forth above in the section captioned "Your Obligations".

To the extent provided under the subsection captioned "--Amendment" below, JPMorgan Chase reserves the right to suspend vesting of this award and/or distribution of shares under this award, including, without limitation, during any period that JPMorgan Chase is evaluating whether this award is subject to cancellation and/or recovery and/or whether the conditions for distributions of shares under this award are satisfied. JPMorgan Chase is not responsible for any price fluctuations during any period of suspension and, if applicable, suspended units will be reinstated consistent with Plan administration procedures. See also subsection captioned "--No Ownership Rights/Other Limitations".

- Recovery

In addition, you may be required to pay the Firm up to an amount equal to the Fair Market Value (determined as of the applicable vesting date) of the gross number of shares of Common Stock previously distributed under this award as follows:

- Payment may be required with respect to any shares distributed within the three year period prior to a notice-of-recovery under this section, if the Firm in its sole discretion determines that:
- you committed a fraudulent act, or engaged in knowing and willful misconduct related to your employment, or
- you violated any of the provisions as set forth above in the section captioned "Your Obligations", or
- you violated the employment restrictions set forth in the subsection "--Full Career Eligibility" or "--Government Office" following the termination of your employment.
- In addition, payment may be required with respect to any shares distributed within the one year period prior to notice-ofrecovery under this section, if the Firm in its sole discretion determines appropriate as a result of the detrimental and riskrelated conduct listed in the above "Detrimental Conduct, Risk Related and Other Cancellation/Recapture" subsection.

Notice-of-recovery under this subsection is a written (including electronic) notice from the Firm to you either requiring payment under this subsection or stating that JPMorgan Chase is evaluating requiring payment under this subsection. Without limiting the foregoing, notice-of-recovery will be deemed provided if the Firm makes a good faith attempt to provide written (including electronic) notice at your last known address maintained in the Firm's employment records. For the avoidance of doubt, a notice-ofrecovery that the Firm is evaluating requiring payment under this subsection shall preserve JPMorgan Chase's rights to require payment as set forth above in all respects and the Firm shall be under no obligation to complete its evaluation other than as the Firm may determine in its sole discretion.

For purposes of this subsection, shares distributed under this award include shares withheld for tax purposes. However, it is the Firm's intention that you only be required to pay the amounts under this subsection with respect to shares that are or may be retained by you following a determination of tax liability and that you will not be required to pay amounts with respect to shares representing irrevocable tax withholdings or tax payments previously made (whether by you or the Firm) that you will not be able to recover, recapture or reclaim (including as a tax credit, refund or other benefit). Accordingly, JPMorgan Chase will not require you to pay any amount that the Firm or its nominee in his or her sole discretion determines is represented by such withholdings or tax payments.

Payment may be made in shares of Common Stock or in cash. You agree that any repayment will be a lawful recovery under the terms and conditions of your Award Agreement and is not to be construed in any manner as a penalty.

Nothing in the section in any way limits your obligations under "Bonus Recoupment".

- Right to an Injunction

You acknowledge that a violation or attempted violation of the obligations set forth herein will cause immediate and irreparable damage to the Firm, and therefore agree that the Firm shall be entitled as a matter of right to an injunction, from any court of competent jurisdiction, restraining any violation or further violation of such obligations; such right to an injunction, however, shall be cumulative and in addition to whatever other remedies the Firm may have under law or equity.

## Administrative Provisions

Withholding Taxes: As a result of legal and/or tax obligations the Firm, in its sole discretion, may (i) retain from each distribution the number of shares of Common Stock required to satisfy applicable tax obligations or (ii) implement any other desirable or necessary procedures, so that appropriate withholding and other taxes are paid to the competent authorities with respect to the vested shares, dividend equivalents and the award. This may include but is not limited to (i) a market sale of a number of such shares on your behalf substantially equal to the withholding or other taxes, (ii) to the extent required by law, withhold from cash compensation, an amount equal to any withholding obligation with respect to the award, shares that vest under this award, and/or dividend equivalents, and (iii) retaining shares that vest under this award or dividend equivalents until you pay any taxes associated with the award, vested shares and/or the dividend equivalents directly to the competent authorities.

Right to Set Off: Although the Firm expects to settle this award in share(s) of Common Stock as of the applicable vesting date, as set forth in your Award Agreement, the Firm may, to the maximum extent permitted by applicable law (including Section 409A of the Code to the extent it is applicable to you), retain for itself funds or the Common Stock resulting from any vesting of this award to satisfy any obligation or debt that you owe to the Firm. Notwithstanding any account agreement with the Firm to the contrary, the Firm will not recoup or recover any amount owed from any funds or unrestricted securities held in your name and maintained at the Firm pursuant to such account agreement to satisfy any obligation or debt owed by you under this award without your consent. This restriction on the Firm does not apply to accounts described and authorized in "No Ownership Rights/Other Limitations" described below.

No Ownership Rights/Other Limitations: RSUs do not convey the rights of ownership of Common Stock and do not carry voting rights. No shares of Common Stock will be issued to you until after the RSUs have vested. Shares will be issued in accordance with JPMorgan Chase's procedures for issuing stock. By accepting this award, you authorize the Firm, in its sole discretion, to establish on your behalf a brokerage account in your name with the Firm or book-entry account with our stock plan administrator and/or transfer agent and deliver to that account any vested shares derived from the award. You also acknowledge that should there be a determination that the cancellation provisions of this award apply during the period when the vesting of any outstanding RSUs has been suspended, then you agree that such RSUs may be cancelled in whole or part. (See Sections captioned "Protection-Based Vesting", "Bonus Recoupment", "Termination of Employment" and "Remedies", as well as the subsection captioned "--Amendment" permitting suspension of vesting.)
With respect to any applicable vesting date, JPMorgan Chase may impose for any reason, as of such vesting date for such period as it may specify in its sole discretion, such restrictions on the Common Stock to be issued to you as it may deem appropriate, including, but not limited to, restricting the sale, transfer, pledging, assignment, hedging or encumbrance of such shares of Common Stock. Such restrictions described in the last sentence shall not impact your right to vote or receive dividends with respect to the Common Stock. By accepting this award, you acknowledge that during such specified period should there be a determination that the recovery provisions of this award apply, then you agree that you may be required to pay the Firm up to an amount equal to the Fair Market Value (determined as of the applicable vesting date) of the gross number of shares subject to such restrictions (notwithstanding the limitation set forth in the "Right to Set Off" subsection above). (See Sections captioned "Bonus Recoupment" and "Remedies".)

Binding Agreement: The Award Agreement will be binding upon any successor in interest to JPMorgan Chase, by merger or otherwise.

Not a Contract of Employment: Nothing contained in the Award Agreement constitutes a contract of employment or continued employment. Employment is "at-will" and may be terminated by either you or JPMorgan Chase for any reason at any time. This award does not confer any right or entitlement to, nor does the award impose any obligation on the Firm to provide, the same or any similar award in the future and its value is not compensation for purposes of determining severance.

Section 409A Compliance: To the extent that Section 409A of the Code is applicable to this award, distributions of shares and cash hereunder are intended to comply with Section 409A of the Code, and the Award Agreement, including these terms and conditions, shall be interpreted in a manner consistent with such intent.
Notwithstanding anything herein to the contrary, if you (i) are subject to taxation under the Code, (ii) are a specified employee as defined in the JPMorgan Chase 2005 Deferred Compensation Plan and (iii) have incurred a separation from service (as defined in that Plan with the exception of death) and if any units/shares under this award represent deferred compensation as defined in Section 409A and such shares are distributable (under the terms of this award) within six months following, and as a result of your
separation from service, then those shares will be delivered to you during the first calendar month after the expiration of six full months from date of your separation from service. Further, if your award is not subject to a substantial risk of forfeiture as defined by regulations issued under Section 409A of the Code, then the remainder of each calendar year immediately following (i) each applicable vesting date set forth in your Award Agreement shall be a payment date for purposes of distributing the vested portion of the award and (ii) each date that JPMorgan Chase specifies for payment of dividends declared on its Common Stock, shall be the payment date(s) for purposes of distributing dividend equivalent payments.

Change in Outstanding Shares: In the event of any change in the outstanding shares of Common Stock by reason of any stock dividend or split, recapitalization, issuance of a new class of common stock, merger, consolidation, spin-off, combination or exchange of shares or other similar corporate change, or any distributions to stockholders of Common Stock other than regular cash dividends, the Committee will make an equitable substitution or proportionate adjustment, in the number or kind of shares of Common Stock or other securities issued or reserved for issuance pursuant to the Plan and to any RSUs outstanding under this award for such corporate events.

Interpretation/Administration: The Committee has sole and complete authority to interpret and administer this Award Agreement, including,
without limitation, the power to (i) interpret the Plan and the terms of this Award Agreement; (ii) determine the reason for termination of employment; (iii) determine application of the post-employment obligations and cancellation and recovery provisions; (iv) decide all claims arising with respect to this award; and (v) delegate such authority as it deems appropriate. Any determination contemplated hereunder by the Committee, the Firm, the Director of Human Resources or their respective delegates or nominees shall be binding on all parties.
Notwithstanding anything herein to the contrary, the determinations of the Director of Human Resources, the Firm, the Committee and their respective delegates and nominees under the Plan and the Award Agreements are not required to be uniform. By way of clarification, the Committee, the Firm, the Director of Human Resources and their respective delegates and nominees shall be entitled to make non-uniform and selective determinations and modifications under Award Agreements and the Plan.

Amendment: The Committee or its nominee reserves the right to amend this Award Agreement in any manner, at any time and for any reason; provided, however, that no such amendment shall materially adversely affect your rights under this Award Agreement without your consent except to the extent that the Committee or its delegate considers advisable to ( $x$ ) comply with applicable laws or changes in or interpretation of applicable laws, regulatory requirements and accounting rules or standards and/or (y) make a change in a scheduled vesting date or impose the restrictions described above under "No Ownership Rights/Other Limitations", in either case, to the extent permitted by Section 409A of the Code if it is applicable to you. This Award Agreement may not be amended except in writing signed by the Director of Human Resources of JPMorgan Chase.

Severability: If any portion of the Award Agreement is determined by the Firm to be unenforceable in any jurisdiction, any court or arbitrator of competent jurisdiction or the Director of Human Resources may reform the relevant provisions (e.g., as to length of service, time, geographical area or scope) to the extent the Firm (or court/arbitrator) considers necessary to make the provision enforceable under applicable law.

Accelerated Distribution for Ethics or Conflict Reasons Resulting From Employment by a Government Entity: Upon receipt of satisfactory evidence that applicable United States federal, state, local, foreign or supranational ethics or conflict of interest laws or regulations require you to divest your interest in JPMorgan Chase RSUs, the Firm may accelerate the distribution of all or part of your outstanding award effective on or before the required divestiture date; provided that no accelerated distribution shall occur if the Firm determines that such acceleration will violate Section 409A of the Code. Accelerated distribution under this paragraph does not impact the dates as set forth in the "Remedies" section above. The time period for recovery shall be determined by the originally scheduled vesting date or distribution date prior to any acceleration event.
If you have voluntarily terminated your employment and have satisfied the requirements of the section captioned "Government Office Requirements", acceleration shall apply (to extent required) to the percentage of your outstanding award that would continue to vest under that section. In the case of a termination of employment where the award is outstanding as a result of the subsections entitled "--Job Elimination" or "--Full Career Eligibility", then acceleration shall apply, to the extent required, to the full outstanding award. Notwithstanding accelerated distribution pursuant to the foregoing, you will remain subject to the applicable terms of your Award Agreement as if your award had remained outstanding for the duration of the original vesting period and shares had been distributed as scheduled as of each applicable vesting date, including, but not limited to, repayment obligations set forth in the section captioned "Remedies" and the employment restrictions in the sections captioned "Protection-Based Vesting" and "Government Office Requirements" and the subsection "--Full Career Eligibility".

Use of Personal Data: By accepting this award, you acknowledge that the Firm may process your personal data for the purposes of providing you this award (to include registration of shares and units or establishing a brokerage account on your behalf) and disclosing to third parties, such as service providers or tax and regulatory authorities (e.g., for compensation reporting and payroll
tax withholding purposes). Additionally, you agree that the Firm may transfer your personal data to jurisdictions that do not afford protections equivalent to the protections in the country in which we collected your data. Where applicable law provides a right to terminate the foregoing authorization, you may do so at any time, except with respect to tax and regulatory reporting and the Firm's legal and regulatory obligations. In the event you terminate this authorization, your award will be cancelled.

Governing Law: This award shall be governed by and construed in accordance with the laws of the State of New York, without regard to conflicts of law principles.

Choice of Forum: By accepting this award under the Plan, you agree (and have agreed) that to the extent not otherwise subject to arbitration under an arbitration agreement between you and the Firm, any dispute arising directly or indirectly in connection with this award or the Plan shall be submitted to arbitration in accordance with the rules of the American Arbitration Association if so elected by the Firm in its sole discretion. In the event such a dispute is not subject to arbitration for any reason, you agree to accept the exclusive jurisdiction and venue of the United States District Court for the Southern District of New York with respect to any judicial proceeding in connection with this award or the Plan. You waive, to the fullest extent permitted by law, any objection to personal jurisdiction or to the laying of venue of such dispute and further agree not to commence any action arising out of or relating to this award or the Plan in any other forum.

Waiver of Jury Trial/Class Claims: By accepting this award, you agree, with respect to any claim brought in connection with your employment with the Firm in any forum (i) to waive the right to a jury trial and (ii) that any judicial proceeding or arbitration claim will be brought on an individual basis, and you hereby waive any right to submit, initiate, or participate in a representative capacity or as a plaintiff, claimant or member in a class action, collective action, or other representative or joint action.

Litigation: By accepting any award under the Plan, you agree (and have agreed) that in any action or proceeding by the Firm (other than a derivative suit in the right of the Firm) to enforce the terms and conditions of this Award Agreement or any other Award Agreement where the Firm is the prevailing party, the Firm shall be entitled to recover from you its reasonable attorney fees and expenses incurred in such action or proceeding. In addition, you agree that you are not entitled to, and agree not to seek, advancement of attorney fees and indemnification under the Firm's By-Laws in the event of such a suit by the Firm.

Non-transferability: Neither this award or any other outstanding awards of RSUs, nor your interests or rights in any such awards, shall be assigned, pledged, transferred, hedged, hypothecated or subject to any lien. An award may be transferred following your death by will, the laws of descent or by a beneficiary designation on file with the Firm.

Outstanding Awards: The Administrative provisions set forth above shall apply to any award of RSUs outstanding as of the date hereof, and such awards are hereby amended.

## Definitions

"Cause" means a determination by the Firm that your employment terminated as a result of your (i) violation of any law, rule or regulation (including rules of self-regulatory bodies) related to the Firm's business, (ii) indictment or conviction of a felony, (iii) commission of a fraudulent act, (iv) violation of the JPMorgan Chase Code of Conduct or other Firm policies or misconduct related to your duties to the Firm (other than immaterial and inadvertent violations or misconduct), (v) grossly inadequate performance of the duties associated with your position or job function or failure to follow reasonable directives of your manager, or (vi) any act or failure to act that is injurious to the interests of the Firm or its relationship with a customer, client or an employee.
"Financial Services Company" means a business enterprise that engages in any of the following services (itself or through an affiliate or subsidiary), regardless of whether such services are the principle strategy or revenue-generating activity:

- commercial or retail banking, including, but not limited to, commercial, institutional and personal trust, custody and/or lending and processing services, internet banking, originating and servicing mortgages, issuing and servicing credit cards, payment servicing or processing or merchant services,
- insurance, including but not limited to, guaranteeing against loss, harm, damage, illness, disability or death, providing and issuing annuities, acting as principal, agent or broker for purpose of the forgoing,
- financial, investment or economic advisory services, including but not limited to, investment banking services (such as advising on mergers or dispositions, underwriting, dealing in, or making a market in securities or other similar activities), brokerage services, investment management services, asset management services, foreign exchange services, interbank networks and hedge funds,
- issuing, trading or selling instruments representing interests in pools of assets or in derivatives instruments,
- financial technology companies, such as those selling blockchain services, or offering or selling financial products/services,
- advising on, or investing in, private equity or real estate funds or ventures, or
- any similar activities that the Director of Human Resources or nominee determines in his or her sole discretion constitute
financial services.
"Firmwide Financial Threshold" means a cumulative return on tangible common equity for calendar years 2023, 2024 and 2025 of not less than $15 \%$. Cumulative return on tangible common equity means (i) the sum of the Firm's reported net income for all three calendar years, divided by (ii) reported year-end tangible equity averaged over the three years.
"Government Office" means (i) a full-time position in an elected or appointed office in local, state, or federal government (including equivalent positions outside the U.S. or in a supranational organization), not reasonably anticipated to be a full-career position, or (ii) conducting a bona fide full-time campaign for such an elective public office after formally filing for candidacy, where it is customary and reasonably necessary to campaign full-time for the office.
"Line of Business" means a business unit of the Firm (or one or more business units designated below under the definition "Line of Business Financial Threshold" of the Corporate Investment Bank). All Corporate Functions (including the functions of the Chief Investment Office) are considered a single Line of Business.
"Line of Business Financial Threshold" means the financial threshold set forth below for the following Lines of Business based on the Firm's management reporting system:

| Asset \& Wealth Management | Annual negative pre-tax pre-provision income ${ }^{1}$ |
| :---: | :---: |
| Card and Auto | Annual negative pre-tax pre-loan loss reserve income ${ }^{2}$ |
| Commercial Banking | Annual negative pre-tax pre-loan loss reserve income ${ }^{2}$ |
| Corporate Investment Bank | Annual negative pre-tax pre-provision income ${ }^{1}$ for CIB overall or annual negative allocated product revenues (excluding XVA) for: <br> - Fixed Income <br> - Equities <br> - Securities Services <br> - Global Investment Banking <br> - Payments |
| Consumer Banking, J.P. Morgan Wealth Management and Business Banking | Annual negative pre-tax pre-loan loss reserve income ${ }^{2}$ |
| Corporate Functions (including Chief Investment Office) | Annual negative pre-tax pre-provision income ${ }^{1}$ at the Firm level |
| Home Lending | Annual negative pre-tax pre-loan loss reserve income ${ }^{2}$ |
| ${ }^{1}$ Pre-tax pre-provision income means Revenue less Expenses <br> ${ }^{2}$ Pre-tax pre-loan loss reserve income means Revenue less (Expenses plus Net Charge-offs) |  |

"Not-for-Profit Organization" means an entity exempt from tax under state law and under Section 501(c)(3) of the Code. Section 501(c)(3) only includes entities organized and operated exclusively for religious, charitable, scientific, testing for public safety, literary or educational purposes, or to foster national or international amateur sports competition or for the prevention of cruelty to children or animals. Not-for-Profit Organization shall also mean entities outside the United States exempt from local and national tax laws because they are organized and operated exclusively for religious, charitable, scientific, testing for public safety, literary or educational purposes, or to foster national or international amateur sports competition or for the prevention of cruelty to children or animals.
"Recognized Service" means the period of service as an employee set forth in the Firm’s applicable service-related policies.

## Government Office Requirements

You may be eligible to continue vesting in all or part of your award if you voluntarily resign to accept a Government office (as defined above) or to become a candidate for an elective Government Office.

## Full Career Eligibility:

"Government Office Requirements" does not apply to you if you satisfy the subsection captioned "--Full Career Eligibility" as of the date that you voluntarily terminate your employment with the Firm.

## Eligibility:

Eligibility for continued vesting is conditioned on your providing the Firm:

- At least 60 days' advance written notice of your intention to resign to accept or pursue a Government Office (see section captioned "Definitions"), during which period you must perform in a cooperative and professional manner services requested by the Firm and not provide services for any other employer. The Firm may elect to shorten this notice period at the Firm's sole discretion.
- Confirmation, in a form of satisfactory to the firm, that vesting in this award pursuant to this provision would not violate any applicable law, regulation or rule.
- Documentation in a form satisfactory to the Firm that your resignation is for the purpose of accepting a Government Office or becoming a candidate for a Government Office. (See Section captioned "Definitions".)


## Portion of Your Awards Subject to Continued Vesting:

Subject to the conditions below, the percentage of your outstanding awards that will continue to vest in accordance with this award's original schedule will be based on your years of continuous service completed with the Firm immediately preceding your termination date, as follows:

- $50 \%$ if you have at least 3 but less than 4 years of continuous service,
- $75 \%$ if you have at least 4 but less than 5 years of continuous service, or
- $100 \%$ if you have 5 or more years of continuous service.

The portion of each award subject to continued vesting above is referred to as the "CV Award" and the portion not subject to continued vesting will be cancelled on the date your employment terminates.

## Conditions for Continued Vesting of Awards:

- You must remain in a non-elective Government Office for two or more years after your employment with the Firm terminates to receive in full your CV Award; provided that if your non-elective Government Office is for a period less than two years, you will be entitled to retain any portion of the CV Award with a vesting date during your period of Government Service; or
- In the case of resignation from the Firm to campaign for an elective Government Office, your name must be on the primary or final public ballot for the election. (If you are not elected, see below for employment restrictions.)


## Satisfaction of Conditions:

If your service in a Government Office ends two years or more after your employment with the Firm terminates, or in the case of resignation from the Firm to campaign for a Government Office, your name is on the primary or final public ballot for the election and you are not elected, any CV Awards then outstanding and any such awards that would have then been outstanding but for an accelerated distribution of shares (as described in the subsection captioned "Accelerated Distribution for Ethics or Conflict Reasons Resulting From Employment by a Government Entity") will be subject for the remainder of the applicable vesting period to the same terms and conditions of this Award Agreement, including employment restrictions during the vesting period, as if you had resigned from the Firm having met the requirements for Full Career Eligibility.

## Failure to Satisfy Conditions:

If you do not satisfy the above "Conditions for Continued Vesting of Awards", any outstanding RSUs under each CV Award will be cancelled. You also will be required to repay the Fair Market Value of the number of shares (before tax and other withholdings) of Common Stock distributed to you that would have been outstanding as RSUs on the date you failed to satisfy the "Condition for Continued Vesting of Awards" but for their accelerated distribution (as described in the subsection captioned "Accelerated Distribution for Ethics or Conflict Reasons Resulting From Employment by a Government Entity"). Fair Market Value for this purpose will be determined as the date that the shares were distributed.

# JPMORGAN CHASE \& CO. LONG-TERM INCENTIVE PLAN <br> TERMS AND CONDITIONS OF JANUARY 17, 2023 <br> RESTRICTED STOCK UNIT AWARD <br> OPERATING COMMITTEE 

## Award Agreement

These terms and conditions are made part of the Award Agreement dated as of January 17, 2023 ("Grant Date") awarding Restricted Stock Units ("RSUs") pursuant to the terms of the JPMorgan Chase \& Co. Long-Term Incentive Plan ("Plan"). To the extent the terms of the Award Agreement (all references to which will include these terms and conditions) conflict with the Plan, the Plan will govern. The Award Agreement, the Plan and Prospectus supersede any other agreement, whether written or oral, that may have been entered into by the Firm and you relating to this award.
This award was granted on the Grant Date subject to the Award Agreement. Unless you decline by the deadline and in the manner specified in the Award Agreement, you will have agreed to be bound by these terms and conditions, effective as of the Grant Date. If you decline the award, it will be cancelled as of the Grant Date.

Capitalized terms that are not defined in "Definitions" below or elsewhere in the Award Agreement will have the same meaning as set forth in the Plan.

JPMorgan Chase \& Co. will be referred to throughout the Award Agreement as "JPMorgan Chase" and together with its subsidiaries as the "Firm".

## Form and Purpose of Award

Each RSU represents a non-transferable right to receive one share of Common Stock as of the applicable vesting date as set forth in your Award Agreement.

The purpose of this award is to motivate your future performance for services to be provided during the vesting period and to align your interests with those of the Firm and its shareholders.

## Dividend Equivalents

This award is not eligible for dividend equivalent payments.

## Vesting Period

The period from the Grant Date to the last vesting date is the "vesting period" (see subsections captioned "--Amendment" pursuant to which the Firm may extend the vesting period and "--No Ownership Rights/Other Limitations" pursuant to which the Firm may place restrictions on delivered shares of Common Stock following a vesting date).

## Protection-Based Vesting

This award is intended and expected to vest on the vesting date(s), provided that you are continuously employed by the Firm through such vesting date, or you meet the requirements for continued vesting described under the subsections "--Job Elimination", "--Full Career Eligibility", "--Government Office" or "--Disability". However, vesting and the number of RSUs in which you vest are subject to these terms and conditions (including, but not limited to, sections captioned "Remedies" and the following protection-based vesting provision).
Up to a total of fifty percent of your award that would otherwise be distributable to you during the vesting period ("At Risk RSUs") may be cancelled if the Chief Executive Officer of JPMorgan Chase ("CEO") determines in his or her sole discretion that cancellation of all or portion of the At Risk RSUs is appropriate in light of any one or a combination of the following factors:

- Your performance in relation to the priorities for your position, or the Firm's performance in relation to the priorities for which you share responsibility as a member of the Operating Committee, have been unsatisfactory for a sustained period of time. Among the factors the CEO may consider in assessing performance are net income, total net revenue, return on equity, earnings per share and capital ratios of the Firm, both on an absolute basis and, as appropriate, relative to peer firms
- For any calendar year ending during the vesting period, JPMorgan Chase's annual pre-tax pre-provision income at the Firm level is negative.
- Awards granted to participants in a Line of Business for which you exercise, or during the vesting period exercised, direct or indirect responsibility, were in whole or in part cancelled because the Line of Business did not meet its annual Line of Business Financial Threshold.
- The Firm does not meet the Firmwide Financial Threshold.

In the event that your employment terminates due to "Job Elimination", "Full Career Eligibility", "Government Office" or "Disability" thereby entitling you to continued vesting in your award (or potentially acceleration due to satisfaction of the Government Office Requirements), the cancellation circumstances described above will continue to apply to your At Risk RSUs pursuant to the subsection captioned "Accelerated Distribution for Ethics or Conflict Reasons Resulting From Employment by a Government Entity".

Any determination above with respect to protection-based vesting provisions is subject to ratification by the Compensation and Management Development Committee of the Board of Directors of JPMorgan Chase ("Committee"). In the case of an award to the CEO, all such determinations shall be made by the Committee and ratified by the Board.

## Holding Requirement

As of each vesting date, you shall be entitled to a distribution equal to the Fair Market Value of the number of RSUs vesting on such date, less the number being withheld to satisfy tax withholding obligations. You agree that the distribution made to you will be held in an account in your name with restrictions preventing you from transferring, assigning, hedging, selling, pledging or otherwise encumbering such distribution for a twelve month period commencing with the vesting date. Such restrictions shall lapse in event of your death.

## Bonus Recoupment

In consideration of the grant of this award, you agree that you are subject to the JPMorgan Chase Bonus Recoupment Policy (or successor policy) as in effect from time to time as it applies both to the cash incentive compensation awarded to you for performance year 2022 and to this award. You can access this policy as currently in effect by clicking the following link to the JPMorgan Chase \& Co. Corporate Governance Principles web page and scrolling to the Bonus Recoupment Policy located under the section titled "Other Matters": https://about.jpmorganchase.com/about/governance/corporate-governance-principles

For the avoidance of doubt, nothing in these terms and conditions in any way limits the rights of the Firm under the JPMorgan Chase Bonus Recoupment Policy (or successor policy).

## EMEA Malus and Clawback Policy - Identified Staff

In consideration of grant of this award, and without prejudice to any other provision of this Award Agreement, you agree that you are subject to the JPMorgan Chase EMEA Malus and Clawback Policy - Identified Staff (and any applicable supplement(s) to that policy) or successor policy as in effect from time to time as it applies both to the cash incentive compensation awarded to you for performance year 2022 and to this award.

The provisions of the JPMorgan Chase EMEA Malus and Clawback Policy - Identified Staff set out the terms and conditions applying to the grant of this award which ensure that the Firm is able to meet its regulatory obligations to operate malus (reduce) and/or clawback (recover) to awards in certain circumstances. These include, but are not limited to, where (i) there is a material downturn in the Firm's financial performance or (ii) where the Firm is required to hold more capital. The circumstances in which the events at (i) and (ii) would occur are analogous to some of the circumstances considered under the existing Firmwide terms and conditions, in particular the Bonus Recoupment Policy and the Protection Based Vesting provisions. You can access this policy as currently in effect in My Rewards through the following link: https://myrewards.jpmorganchase.com

## Termination of Employment

Except as explicitly set forth below under the subsections captioned "--Job Elimination", "--Full Career Eligibility", "--Government Office" or "--Disability" or under the section captioned "Death", any RSUs outstanding under this award will be cancelled effective on the date your employment with the Firm terminates for any reason.
Subject to these terms and conditions (including, but not limited to, sections captioned "Protection-Based Vesting", "Bonus Recoupment", "EMEA Malus and Clawback Policy - Identified Staff", "Your Obligations" and "Remedies"), you will be eligible to continue to vest (as you otherwise would vest if you were still employed by JPMorgan Chase) with respect to your award in accordance with its terms and conditions following the termination of your employment if one of the following circumstances applies to you:

- Job Elimination

In the event that the Director of Human Resources or nominee in his or her sole discretion determines that

- the Firm terminated your employment because your job was eliminated, and
- after you are notified that your job will be eliminated, you provided such services as requested by the Firm in a cooperative and professional manner, and
- you satisfied the Release/Certification Requirements set forth below.


## - Full Career Eligibility

In the event that the Director of Human Resources or nominee in his or her sole discretion determines that

- you voluntarily terminated your employment with the Firm, had completed at least five years of continuous service with the Firm immediately preceding your termination date, and
- your Recognized Service (as defined below) on your date of termination equaled or exceeded 15 years, or your combined Recognized Service with the Firm and external professional experience (as attested by you to the Firm) equaled or exceeded 30 years, and
- you provided at least 180 days advance written notice to the Firm of your intention to voluntarily terminate your employment under this provision, during which notice period you provided such services as requested by the Firm in a cooperative and professional manner and you did not perform any services for any other employer, and
- continued vesting shall be appropriate, which determination shall be made prior to your termination and will be based on your performance and conduct (before and after providing notice), and
- for 36 months from the date of grant of this award you do not either perform services in any capacity (such as an employee, contractor, consultant, advisor, or self-employed individual, whether paid or unpaid) for a Financial Services Company (as defined below) or work in your profession (whether or not for a Financial Services Company); provided that you may work for a government, education or Not-for-Profit Organization (as defined below), and
- you satisfied the Release/Certification Requirements set forth below.

After receipt of such advance written notice, the Firm may choose to have you continue to provide services during such 180-day period as a condition to continued vesting or shorten the length of the 180-day period at the Firm's sole discretion, but to a date no earlier than the date you would otherwise meet the service requirement.

Additional advance notice requirements may apply for employees subject to notice period policies (see "Notice Period" below).

- Government Office

In the event that you voluntarily terminate your employment with the Firm to accept a Government Office or become a candidate for an elective Government Office, as described at the end of these terms and conditions under the section captioned "Government Office Requirements". See also definition of Government Office in the section captioned "Definitions".

- Disability

In the event that

- your employment with the Firm terminates because (i) you are unable to return to work while you are receiving benefits under the JPMorgan Chase Long Term Disability Plan, or for non-U.S. employees, under the equivalent JPMorgan Chase sponsored local country plan (in either case, "LTD Plan"), or (ii) if you are not covered by a LTD Plan, you are unable to return to work due to a long-term disability that would qualify for benefits under the applicable LTD Plan, as determined by the Firm or a third-party designated by the Firm; provided that you ( $x$ ) request in writing continued vesting due to such disability within 30 days of the date your employment terminates, and (y) provide any requested supporting documentation and (z) receive the Firm's written consent to such treatment, and
- you satisfied the Release/Certification Requirements set forth below.


## Release/Certification

To qualify for continued vesting after termination of your employment under any of the foregoing circumstances:

- you must timely execute and deliver a release of claims in favor of the Firm, having such form and terms as the Firm shall specify,
- with respect to "Full Career Eligibility", prior to the termination of your employment, you must confirm with management that you meet the eligibility criteria (including providing at least 180 days advance written notification), advise that you are seeking to be treated as an individual eligible for "Full Career Eligibility", and receive written consent to such continued vesting,
- with respect to "Full Career Eligibility" and "Government Office", it is your responsibility to take the appropriate steps to certify to the Firm prior to each vesting date while the employment restrictions are outstanding, on the authorized form of the Firm, that you have complied with the employment restrictions applicable to you (as described herein) from your date of termination of employment through the applicable vesting date,
- with respect to "Disability", you must satisfy the notice and documentation described above and receive written consent to such continued vesting, and
- in all cases, complied with all other terms of the Award Agreement. (See section captioned "Your Obligations".)


## Death

If you die while you are eligible to vest in RSUs under this award, the RSUs will immediately vest and will be distributed in shares of Common Stock (after applicable tax withholding) to your designated beneficiary on file with the Firm's Stock Administration Department, or if no beneficiary has been designated or survives you or if beneficiary designation is not recognized locally, then to
your estate unless otherwise required by local legislation. Any shares will be distributed no later than the end of the calendar year immediately following the calendar year which contains your date of death; however, our administrative practice is to register such shares in the name of your beneficiary or estate within 60 days of the Firm's receipt of any required documentation.

## Your Obligations

In consideration of the grant of this award, you agree to comply with and be bound by the obligations set forth below next to the subsections captioned "--Non-Solicitation of Employees and Customers", "--Confidential Information", "--Non-Disparagement", "-Cooperation", "--Compliance with Award Agreement" and "--Notice Period."

## - Non-Solicitation of Employees and Customers

During your employment by the Firm and for the longer of the (i) one year period following the termination of your employment or, (ii) if your award is not cancelled as of your termination date, the three year period from Grant Date, you will not directly or indirectly, whether on your own behalf or on behalf of any other party, without the prior written consent of the Director of Human Resources: (i) solicit, induce or encourage any of the Firm's then current employees to leave the Firm or to apply for employment elsewhere, unless such current employee has received official, written notice that his or her employment will be terminated due to job elimination, (ii) hire any employee or former employee who was employed by the Firm at the date your employment terminated, unless the individual's employment terminated because his or her job was eliminated, or the individual's employment with the Firm has been terminated for more than six months, (iii) to the fullest extent enforceable under applicable law, solicit or induce or attempt to induce to leave the Firm, or divert or attempt to divert from doing business with the Firm, any then current customers, suppliers or other persons or entities that were serviced by you or whose names became known to you by virtue of your employment with the Firm, or otherwise interfere with the relationship between the Firm and such customers, suppliers or other persons or entities. This does not apply to publicly known institutional customers that you service after your employment with the Firm without the use of the Firm's confidential or proprietary information.

These restrictions do not apply to authorized actions you take in the normal course of your employment with the Firm, such as employment decisions with respect to employees you supervise or business referrals in accordance with the Firm's policies.

- Confidential Information

You will not, either during your employment with the Firm or thereafter, directly or indirectly (i) use or disclose to anyone any confidential information related to the Firm's business, or (ii) communicate with the press or other media about matters related to the Firm, its customers or employees, including matters and activities relating to your employment, or the employment of others, by the Firm, in the case of either (i) or (ii), except as explicitly permitted by the JPMorgan Chase Code of Conduct and applicable policies or law or legal process. In addition, following your termination of employment, you will not, without prior written authorization, access the Firm's private and internal information through telephonic, intranet or internet means. "Confidential information" shall have the same meaning for the Award Agreement as it has in the JPMorgan Chase Code of Conduct.

Nothing in this award precludes you from reporting to the Firm's management or directors, the government, a regulator, a selfregulatory agency, your attorneys or a court, conduct you believe to be in violation of the law or concerns of any known or suspected Code of Conduct violation. It is also not intended to prevent you from responding truthfully to questions or requests from the government, a regulator or in a court of law.

- Non-Disparagement

You will not, either during your employment with the Firm or thereafter, make or encourage others to make any public statement or release any information in verbal, written, electronic or any other form, that is intended to, or reasonably could be foreseen to, disparage, embarrass or criticize the Firm or its employees, officers, directors or shareholders as a group. This shall not preclude you from reporting to the Firm's management or directors or to the government or a regulator conduct you believe to be in violation of the law or the Firm's Code of Conduct or responding truthfully to questions or requests for information to the government, a regulator or in a court of law in connection with a legal or regulatory investigation or proceeding.

- Cooperation

You will cooperate fully with and provide full and accurate information to the Firm and its counsel with respect to any matter (including any audit, tax proceeding, litigation, investigation or governmental proceeding) with respect to which you may have knowledge or information, subject to reimbursement for actual, appropriate and reasonable out-of-pocket expenses incurred by you.

- Compliance with Award Agreement

You will provide the Firm with any information reasonably requested to determine compliance with the Award Agreement, and you authorize the Firm to disclose the terms of the Award Agreement to any third party who might be affected thereby, including your prospective employer.

- Notice Period

If you are subject to a notice period or become subject to a notice period after the Grant Date, whether by contract or by policy, that requires you to provide advance written notice of your intention to terminate your employment ("Notice Period"), then as consideration for this award and continued employment, you will provide the Firm with the necessary advance written notice that applies to you, as specified by such contract or policy.

After receipt of your notice, the Firm may choose to have you continue to provide services during the applicable Notice Period or may place you on a paid leave for all or part of the applicable Notice Period. During the Notice Period, you shall continue to devote your full time and loyalty to the Firm by providing services in a cooperative and professional manner and not perform any services for any other employer and shall receive your base salary and certain benefits until your employment terminates. You and the Firm may mutually agree to waive or modify the length of the Notice Period.

Regardless of whether a Notice Period applies to you, you must comply with the 180-day advance notice period described under the subsection captioned "--Full Career Eligibility" in the event you wish to terminate employment under that same subsection.

## Remedies

- Detrimental Conduct, Risk Related and Other Cancellation/Recapture

In addition to the cancellation provisions described under the sections captioned "Protection-Based Vesting", "Bonus Recoupment", "EMEA Malus and Clawback Policy - Identified Staff", and "Termination of Employment", up to $100 \%$ of your outstanding RSUs under this award may be cancelled if the Firm in its sole discretion determines that:

- Any of the following detrimental and risk-related conduct has occurred:
- you engaged in conduct detrimental to the Firm insofar as it causes material financial or reputational harm to the Firm or its business activities, or
- this award was based on materially inaccurate performance metrics, whether or not you were responsible for the inaccuracy, or
- this award was based on a material misrepresentation by you, or
- you improperly or with gross negligence failed to identify, raise or assess, in a timely manner and as reasonably expected, risks and/or concerns with respect to risks material to the Firm or its business activities, or
- your employment was terminated for Cause (see section captioned "Definitions" below) or, in the case of a determination after the termination of your employment, that your employment could have been terminated for Cause.
- you have failed to comply with any of the advance notice/cooperation requirements or employment restrictions applicable to your termination of employment, or
- you have failed to return the required forms specified under the section captioned "Release/Certification" by the specified deadline, or
- you have violated any of the provisions as set forth above in the section captioned "Your Obligations".

To the extent provided under the subsection captioned "--Amendment" below, JPMorgan Chase reserves the right to suspend vesting of this award and/or distribution of shares under this award, including, without limitation, during any period that JPMorgan Chase is evaluating whether this award is subject to cancellation and/or recovery and/or whether the conditions for distributions of shares under this award are satisfied. JPMorgan Chase is not responsible for any price fluctuations during any period of suspension and, if applicable, suspended units will be reinstated consistent with Plan administration procedures. See also subsection captioned "--No Ownership Rights/Other Limitations".

- Recovery

In addition, you may be required to pay the Firm up to an amount equal to the Fair Market Value (determined as of the applicable vesting date) of the gross number of shares of Common Stock previously distributed under this award as follows:

- Payment may be required with respect to any shares distributed within the three year period prior to a notice-of-recovery under this section, if the Firm in its sole discretion determines that:
- you committed a fraudulent act, or engaged in knowing and willful misconduct related to your employment, or
- you violated any of the provisions as set forth above in the section captioned "Your Obligations", or
- you violated the employment restrictions set forth in the subsection "--Full Career Eligibility" or "--Government office" following the termination of your employment.
- In addition, payment may be required with respect to any shares distributed within the one year period prior to notice-ofrecovery under this section, if the Firm in its sole discretion determines appropriate as a result of the detrimental and riskrelated conduct listed in the above "Detrimental Conduct, Risk Related and Other Cancellation/Recapture" subsection.

Notice-of-recovery under this subsection is a written (including electronic) notice from the Firm to you either requiring payment under this subsection or stating that JPMorgan Chase is evaluating requiring payment under this subsection. Without limiting the
foregoing, notice-of-recovery will be deemed provided if the Firm makes a good faith attempt to provide written (including electronic) notice at your last known address maintained in the Firm's employment records. For the avoidance of doubt, a notice-ofrecovery that the Firm is evaluating requiring payment under this subsection shall preserve JPMorgan Chase's rights to require payment as set forth above in all respects and the Firm shall be under no obligation to complete its evaluation other than as the Firm may determine in its sole discretion.

For purposes of this subsection, shares distributed under this award include shares withheld for tax purposes. However, it is the Firm's intention that you only be required to pay the amounts under this subsection with respect to shares that are or may be retained by you following a determination of tax liability and that you will not be required to pay amounts with respect to shares representing irrevocable tax withholdings or tax payments previously made (whether by you or the Firm) that you will not be able to recover, recapture or reclaim (including as a tax credit, refund or other benefit). Accordingly, JPMorgan Chase will not require you to pay any amount that the Firm or its nominee in his or her sole discretion determines is represented by such withholdings or tax payments.

Payment may be made in shares of Common Stock or in cash. You agree that any repayment will be a lawful recovery under the terms and conditions of your Award Agreement and is not to be construed in any manner as a penalty.

Nothing in the section in any way limits your obligations under "Bonus Recoupment" and "EMEA Malus and Clawback Policy Identified Staff".

- Right to an Injunction

You acknowledge that a violation or attempted violation of the obligations set forth herein will cause immediate and irreparable damage to the Firm, and therefore agree that the Firm shall be entitled as a matter of right to an injunction, from any court of competent jurisdiction, restraining any violation or further violation of such obligations; such right to an injunction, however, shall be cumulative and in addition to whatever other remedies the Firm may have under law or equity.

## Administrative Provisions

Withholding Taxes: As a result of legal and/or tax obligations the Firm, in its sole discretion, may (i) retain from each distribution the number of shares of Common Stock required to satisfy applicable tax obligations or (ii) implement any other desirable or necessary procedures, so that appropriate withholding and other taxes are paid to the competent authorities with respect to the vested shares and the award. This may include but is not limited to (i) a market sale of a number of such shares on your behalf substantially equal to the withholding or other taxes, (ii) to the extent required by law, withhold from cash compensation, an amount equal to any withholding obligation with respect to the award and shares that vest under this award, and (iii) retaining shares that vest under this award until you pay any taxes associated with the award and/or vested shares directly to the competent authorities.

Right to Set Off: Although the Firm expects to settle this award in share(s) of Common Stock as of the applicable vesting date, as set forth in your Award Agreement, the Firm may, to the maximum extent permitted by applicable law (including Section 409A of the Code to the extent it is applicable to you), retain for itself funds or the Common Stock resulting from any vesting of this award to satisfy any obligation or debt that you owe to the Firm. Notwithstanding any account agreement with the Firm to the contrary, the Firm will not recoup or recover any amount owed from any funds or unrestricted securities held in your name and maintained at the Firm pursuant to such account agreement to satisfy any obligation or debt owed by you under this award without your consent. This restriction on the Firm does not apply to accounts described and authorized in "No Ownership Rights/Other Limitations" described below.

No Ownership Rights/Other Limitations: RSUs do not convey the rights of ownership of Common Stock and do not carry voting rights. No shares of Common Stock will be issued to you until after the RSUs have vested. Shares will be issued in accordance with JPMorgan Chase's procedures for issuing stock. By accepting this award, you authorize the Firm, in its sole discretion, to establish on your behalf a brokerage account in your name with the Firm or book-entry account with our stock plan administrator and/or transfer agent and deliver to that account any vested shares derived from the award. You also acknowledge that should there be a determination that the cancellation provisions of this award apply during the period when the vesting of any outstanding RSUs has been suspended, then you agree that such RSUs may be cancelled in whole or part. (See Sections captioned "Protection-Based Vesting", "Bonus Recoupment", "EMEA Malus and Clawback Policy - Identified Staff", "Termination of Employment" and "Remedies", as well as the subsection captioned "--Amendment" permitting suspension of vesting.)

With respect to any applicable vesting date, JPMorgan Chase may impose for any reason, as of such vesting date for such period as it may specify in its sole discretion, such restrictions on the Common Stock to be issued to you as it may deem appropriate, including, but not limited to, restricting the sale, transfer, pledging, assignment, hedging or encumbrance of such shares of Common Stock. Such restrictions described in the last sentence shall not impact your right to vote or receive dividends with respect to the Common Stock. By accepting this award, you acknowledge that during such specified period should there be a determination that the recovery
provisions of this award apply, then you agree that you may be required to pay the Firm up to an amount equal to the Fair Market Value (determined as of the applicable vesting date) of the gross number of shares subject to such restrictions (notwithstanding the limitation set forth in the "Right to Set Off" subsection above). (See Sections captioned "Bonus Recoupment" and "Remedies".)

Binding Agreement: The Award Agreement will be binding upon any successor in interest to JPMorgan Chase, by merger or otherwise.

Not a Contract of Employment: Nothing contained in the Award Agreement constitutes a contract of employment or continued employment. Employment is "at-will" and may be terminated by either you or JPMorgan Chase for any reason at any time. This award does not confer any right or entitlement to, nor does the award impose any obligation on the Firm to provide, the same or any similar award in the future and its value is not compensation for purposes of determining severance.

Section 409A Compliance: To the extent that Section 409A of the Code is applicable to this award, distributions of shares hereunder are intended to comply with Section 409A of the Code, and the Award Agreement, including these terms and conditions, shall be interpreted in a manner consistent with such intent.

Notwithstanding anything herein to the contrary, if you (i) are subject to taxation under the Code, (ii) are a specified employee as defined in the JPMorgan Chase 2005 Deferred Compensation Plan and (iii) have incurred a separation from service (as defined in that Plan with the exception of death) and if any units/shares under this award represent deferred compensation as defined in Section 409A and such shares are distributable (under the terms of this award) within six months following, and as a result of your separation from service, then those shares will be delivered to you during the first calendar month after the expiration of six full months from date of your separation from service. Further, if your award is not subject to a substantial risk of forfeiture as defined by regulations issued under Section 409A of the Code, then the remainder of each calendar year immediately following each applicable vesting date set forth in your Award Agreement shall be a payment date for purposes of distributing the vested portion of the award.

Change in Outstanding Shares: In the event of any change in the outstanding shares of Common Stock by reason of any stock dividend or split, recapitalization, issuance of a new class of common stock, merger, consolidation, spin-off, combination or exchange of shares or other similar corporate change, or any distributions to stockholders of Common Stock other than regular cash dividends, the Committee will make an equitable substitution or proportionate adjustment, in the number or kind of shares of Common Stock or other securities issued or reserved for issuance pursuant to the Plan and to any RSUs outstanding under this award for such corporate events.

Interpretation/Administration: The Committee has sole and complete authority to interpret and administer this Award Agreement, including, without limitation, the power to (i) interpret the Plan and the terms of this Award Agreement; (ii) determine the reason for termination of employment; (iii) determine application of the post-employment obligations and cancellation and recovery provisions; (iv) decide all claims arising with respect to this award; and (v) delegate such authority as it deems appropriate. Any determination contemplated hereunder by the Committee, the Firm, the Director of Human Resources or their respective delegates or nominees shall be binding on all parties.

Notwithstanding anything herein to the contrary, the determinations of the Director of Human Resources, the Firm, the Committee and their respective delegates and nominees under the Plan and the Award Agreements are not required to be uniform. By way of clarification, the Committee, the Firm, the Director of Human Resources and their respective delegates and nominees shall be entitled to make non-uniform and selective determinations and modifications under Award Agreements and the Plan.

Amendment: The Committee or its nominee reserves the right to amend this Award Agreement in any manner, at any time and for any reason; provided, however, that no such amendment shall materially adversely affect your rights under this Award Agreement without your consent except to the extent that the Committee or its delegate considers advisable to (x) comply with applicable laws or changes in or interpretation of applicable laws, regulatory requirements and accounting rules or standards and/or (y) make a change in a scheduled vesting date or impose the restrictions described above under "No Ownership Rights/Other Limitations", in either case, to the extent permitted by Section 409A of the Code if it is applicable to you. This Award Agreement may not be amended except in writing signed by the Director of Human Resources of JPMorgan Chase.

Severability: If any portion of the Award Agreement is determined by the Firm to be unenforceable in any jurisdiction, any court or arbitrator of competent jurisdiction or the Director of Human Resources may reform the relevant provisions (e.g., as to length of service, time, geographical area or scope) to the extent the Firm (or court/arbitrator) considers necessary to make the provision enforceable under applicable law.

Accelerated Distribution for Ethics or Conflict Reasons Resulting From Employment by a Government Entity: Upon receipt of satisfactory evidence that applicable United States federal, state, local, foreign or supranational ethics or conflict of interest laws or regulations require you to divest your interest in JPMorgan Chase RSUs, the Firm may accelerate the distribution of all or part of your outstanding award effective on or before the required divestiture date; provided that no accelerated distribution shall occur if the Firm determines that such acceleration will violate Section 409A of the Code. Accelerated distribution under this paragraph does not impact the dates as set forth in the "Remedies" section above. The time period for recovery shall be determined by the originally scheduled vesting date or distribution date prior to any acceleration event.
If you have voluntarily terminated your employment and have satisfied the requirements of the section captioned "Government Office Requirements", acceleration shall apply (to extent required) to the percentage of your outstanding award that would continue to vest under that section. In the case of a termination of employment where the award is outstanding as a result of the subsections entitled "--Job Elimination" or "--Full Career Eligibility", then acceleration shall apply, to the extent required, to the full outstanding award. Notwithstanding accelerated distribution pursuant to the foregoing, you will remain subject to the applicable terms of your Award Agreement as if your award had remained outstanding for the duration of the original vesting period and shares had been distributed as scheduled as of each applicable vesting date, including, but not limited to, repayment obligations set forth in the section captioned "Remedies" and the employment restrictions in the sections captioned "Protection-Based Vesting" and "Government Office Requirements" and the subsection "--Full Career Eligibility".

Use of Personal Data: By accepting this award, you acknowledge that the Firm may process your personal data for the purposes of providing you this award (to include registration of shares and units or establishing a brokerage account on your behalf) and disclosing to third parties, such as service providers or tax and regulatory authorities (e.g., for compensation reporting and payroll tax withholding purposes). Additionally, you agree that the Firm may transfer your personal data to jurisdictions that do not afford protections equivalent to the protections in the country in which we collected your data. Where applicable law provides a right to terminate the foregoing authorization, you may do so at any time, except with respect to tax and regulatory reporting and the Firm's legal and regulatory obligations. In the event you terminate this authorization, your award will be cancelled.

Governing Law: This award shall be governed by and construed in accordance with the laws of the State of New York, without regard to conflicts of law principles.

Choice of Forum: By accepting this award under the Plan, you agree (and have agreed) that to the extent not otherwise subject to arbitration under an arbitration agreement between you and the Firm, any dispute arising directly or indirectly in connection with this award or the Plan shall be submitted to arbitration in accordance with the rules of the American Arbitration Association if so elected by the Firm in its sole discretion. In the event such a dispute is not subject to arbitration for any reason, you agree to accept the exclusive jurisdiction and venue of the United States District Court for the Southern District of New York with respect to any judicial proceeding in connection with this award or the Plan. You waive, to the fullest extent permitted by law, any objection to personal jurisdiction or to the laying of venue of such dispute and further agree not to commence any action arising out of or relating to this award or the Plan in any other forum.

Waiver of Jury Trial/Class Claims: By accepting this award, you agree, with respect to any claim brought in connection with your employment with the Firm in any forum (i) to waive the right to a jury trial and (ii) that any judicial proceeding or arbitration claim will be brought on an individual basis, and you hereby waive any right to submit, initiate, or participate in a representative capacity or as a plaintiff, claimant or member in a class action, collective action, or other representative or joint action.

Litigation: By accepting any award under the Plan, you agree (and have agreed) that in any action or proceeding by the Firm (other than a derivative suit in the right of the Firm) to enforce the terms and conditions of this Award Agreement or any other Award Agreement where the Firm is the prevailing party, the Firm shall be entitled to recover from you its reasonable attorney fees and expenses incurred in such action or proceeding. In addition, you agree that you are not entitled to, and agree not to seek, advancement of attorney fees and indemnification under the Firm's By-Laws in the event of such a suit by the Firm.

Non-transferability: Neither this award or any other outstanding awards of RSUs, nor your interests or rights in any such awards, shall be assigned, pledged, transferred, hedged, hypothecated or subject to any lien. An award may be transferred following your death by will, the laws of descent or by a beneficiary designation on file with the Firm.

Outstanding Awards: The Administrative provisions set forth above shall apply to any award of RSUs outstanding as of the date hereof, and such awards are hereby amended.

## Definitions

"Cause" means a determination by the Firm that your employment terminated as a result of your (i) violation of any law, rule or regulation (including rules of self-regulatory bodies) related to the Firm's business, (ii) indictment or conviction of a felony, (iii) commission of a fraudulent act, (iv) violation of the JPMorgan Chase Code of Conduct or other Firm policies or misconduct related to
your duties to the Firm (other than immaterial and inadvertent violations or misconduct), (v) grossly inadequate performance of the duties associated with your position or job function or failure to follow reasonable directives of your manager, or (vi) any act or failure to act that is injurious to the interests of the Firm or its relationship with a customer, client or an employee.
"Financial Services Company" means a business enterprise that engages in any of the following services (itself or through an affiliate or subsidiary), regardless of whether such services are the principle strategy or revenue-generating activity:

- commercial or retail banking, including, but not limited to, commercial, institutional and personal trust, custody and/or lending and processing services, internet banking, originating and servicing mortgages, issuing and servicing credit cards, payment servicing or processing or merchant services,
- insurance, including but not limited to, guaranteeing against loss, harm, damage, illness, disability or death, providing and issuing annuities, acting as principal, agent or broker for purpose of the forgoing,
- financial, investment or economic advisory services, including but not limited to, investment banking services (such as advising on mergers or dispositions, underwriting, dealing in, or making a market in securities or other similar activities), brokerage services, investment management services, asset management services, foreign exchange services, interbank networks and hedge funds,
- issuing, trading or selling instruments representing interests in pools of assets or in derivatives instruments,
- financial technology companies, such as those selling blockchain services, or offering or selling financial products/services,
- advising on, or investing in, private equity or real estate funds or ventures, or
- any similar activities that the Director of Human Resources or nominee determines in his or her sole discretion constitute financial services.
"Firmwide Financial Threshold" means a cumulative return on tangible common equity for calendar years 2023, 2024 and 2025 of not less than $15 \%$. Cumulative return on tangible common equity means (i) the sum of the Firm's reported net income for all three calendar years, divided by (ii) reported year-end tangible equity averaged over the three years.
"Government Office" means (i) a full-time position in an elected or appointed office in local, state, or federal government (including equivalent positions outside the U.S. or in a supranational organization), not reasonably anticipated to be a full-career position, or (ii) conducting a bona fide full-time campaign for such an elective public office after formally filing for candidacy, where it is customary and reasonably necessary to campaign full-time for the office.


## "Line of Business"

"Line of Business" means a business unit of the Firm (or one or more business units designated below under the definition "Line of Business Financial Threshold" of the Corporate Investment Bank). All Corporate Functions (including the functions of the Chief Investment Office) are considered a single Line of Business.
"Line of Business Financial Threshold" means the financial threshold set forth below for the following Lines of Business based on the Firm's management reporting system:

| Asset \& Wealth Management | Annual negative pre-tax pre-provision income ${ }^{1}$ |
| :---: | :---: |
| Card and Auto | Annual negative pre-tax pre-loan loss reserve income ${ }^{2}$ |
| Commercial Banking | Annual negative pre-tax pre-loan loss reserve income ${ }^{2}$ |
| Corporate Investment Bank | Annual negative pre-tax pre-provision income ${ }^{1}$ for CIB overall or annual negative allocated product revenues (excluding XVA) for: <br> - Fixed Income <br> - Equities <br> - Securities Services <br> - Global Investment Banking <br> - Payments |
| Consumer Banking, J.P. Morgan Wealth Management and Business Banking | Annual negative pre-tax pre-loan loss reserve income ${ }^{2}$ |
| Corporate Functions (including Chief Investment Office) | Annual negative pre-tax pre-provision income ${ }^{1}$ at the Firm level |
| Home Lending | Annual negative pre-tax pre-Ioan loss reserve income ${ }^{2}$ |
| ${ }^{1}$ Pre-tax pre-provision income means Revenue less Expenses <br> ${ }^{2}$ Pre-tax pre-loan loss reserve income means Revenue less (Expenses plus Net Charge-offs) |  |

"Not-for-Profit Organization" means an entity exempt from tax under state law and under Section 501(c)(3) of the Code. Section 501(c)(3) only includes entities organized and operated exclusively for religious, charitable, scientific, testing for public safety, literary or educational purposes, or to foster national or international amateur sports competition or for the prevention of cruelty to children or animals. Not-for-Profit Organization shall also mean entities outside the United States exempt from local and national tax
laws because they are organized and operated exclusively for religious, charitable, scientific, testing for public safety, literary or educational purposes, or to foster national or international amateur sports competition or for the prevention of cruelty to children or animals.
"Recognized Service" means the period of service as an employee set forth in the Firm's applicable service-related policies.

## Government Office Requirements

You may be eligible to continue vesting in all or part of your award if you voluntarily resign to accept a Government Office (as defined above) or to become a candidate for an elective Government Office.

## Full Career Eligibility:

"Government Office Requirements" does not apply to you if you satisfy the subsection captioned "--Full Career Eligibility" as of the date that you voluntarily terminate your employment with the Firm.

## Eligibility:

Eligibility for continued vesting is conditioned on your providing the Firm:

- At least 60 days' advance written notice of your intention to resign to accept or pursue a Government Office (see section captioned "Definitions"), during which period you must perform in a cooperative and professional manner services requested by the Firm and not provide services for any other employer. The Firm may elect to shorten this notice period at the Firm's sole discretion.
- Confirmation, in a form of satisfactory to the firm, that vesting in this award pursuant to this provision would not violate any applicable law, regulation or rule.
- Documentation in a form satisfactory to the Firm that your resignation is for the purpose of accepting a Government Office or becoming a candidate for a Government Office. (See Section captioned "Definitions".)


## Portion of Your Awards Subject to Continued Vesting:

Subject to the conditions below, the percentage of your outstanding awards that will continue to vest in accordance with this award's original schedule will be based on your years of continuous service completed with the Firm immediately preceding your termination date, as follows:

- $50 \%$ if you have at least 3 but less than 4 years of continuous service,
- $75 \%$ if you have at least 4 but less than 5 years of continuous service, or
- $100 \%$ if you have 5 or more years of continuous service.

The portion of each award subject to continued vesting above is referred to as the "CV Award" and the portion not subject to continued vesting will be cancelled on the date your employment terminates.

## Conditions for Continued Vesting of Awards:

- You must remain in a non-elective Government Office for two or more years after your employment with the Firm terminates to receive in full your CV Award; provided that if your non-elective Government Office is for a period less than two years, you will be entitled to retain any portion of the CV Award with a vesting date during your period of Government Service; or
- In the case of resignation from the Firm to campaign for an elective Government Office, your name must be on the primary or final public ballot for the election. (If you are not elected, see below for employment restrictions.)


## Satisfaction of Conditions:

If your service in a Government Office ends two years or more after your employment with the Firm terminates, or in the case of resignation from the Firm to campaign for a Government Office, your name is on the primary or final public ballot for the election and you are not elected, any CV Awards then outstanding and any such awards that would have then been outstanding but for an accelerated distribution of shares (as described in the subsection captioned "Accelerated Distribution for Ethics or Conflict Reasons Resulting From Employment by a Government Entity") will be subject for the remainder of the applicable vesting period to the same terms and conditions of this Award Agreement, including employment restrictions during the vesting period, as if you had resigned from the Firm having met the requirements for Full Career Eligibility.

## Failure to Satisfy Conditions:

If you do not satisfy the above "Conditions for Continued Vesting of Awards", any outstanding RSUs under each CV Award will be cancelled. You also will be required to repay the Fair Market Value of the number of shares (before tax and other withholdings) of Common Stock distributed to you that would have been outstanding as RSUs on the date you failed to satisfy the "Condition for Continued Vesting of Awards" but for their accelerated distribution (as described in the subsection captioned "Accelerated

Distribution for Ethics or Conflict Reasons Resulting From Employment by a Government Entity"). Fair Market Value for this purpose will be determined as the date that the shares were distributed.

# JPMORGAN CHASE \& CO. LONG-TERM INCENTIVE PLAN <br> TERMS AND CONDITIONS OF <br> $\qquad$ , 20 <br> PERFORMANCE SHARE UNIT AWARD <br> OPERATING COMMITTEE <br> (Protection-Based Vesting Provisions) 

## Award Agreement

These terms and conditions are made part of the Award Agreement dated as of $\qquad$ , 20__ ("Grant Date") awarding performance share units ("PSUs") pursuant to the terms of the JPMorgan Chase \& Co. Long-Term Incentive Plan ("Plan"). To the extent the terms of the Award Agreement (all references to which will include these terms and conditions) conflict with the Plan, the Plan will govern. The Award Agreement, the Plan and Prospectus supersede any other agreement, whether written or oral, that may have been entered into by the Firm and you relating to this award.

This award was granted on the Grant Date subject to the Award Agreement and Plan. Unless you decline by the deadline and in the manner specified in the Award Agreement, you will have agreed to be bound by these terms and conditions, effective as of the Grant Date. If you decline the award, it will be cancelled as of the Grant Date.

Capitalized terms that are not defined in "Definitions" below or elsewhere in the Award Agreement will have the same meaning as set forth in the Plan.

JPMorgan Chase \& Co. will be referred to throughout the Award Agreement as "JPMorgan Chase", and together with its subsidiaries as the "Firm".

Form and Purpose of Award
Each PSU represents a non-transferable right to receive one share of Common Stock as of the vesting date as set forth in your Award Agreement.

The purpose of this award is to further emphasize sustained long-term performance and to align your interests with those of the Firm and its shareholders.

## Number to Vest on the Vesting Date

Subject to any cancellation in whole or part of your award pursuant to these terms and conditions:
Performance calculation: On the vesting date, you will vest in a number of PSUs derived by multiplying the Target Award Number by the Award Payout Percentage determined using the Performance Table. See sections captioned "Calculation of Performance Ranking" and "Definitions".

You will also vest in additional shares of Common Stock as calculated under the section captioned, "Reinvested Dividend Equivalent Share Units". Delivery of vested shares to your account will be made not later than the date specified in the last sentence of the subsection captioned "Section 409A Compliance".

## Reinvested Dividend Equivalent Share Units

If dividends are paid on Common Stock during the Vesting Period while the award is outstanding, you will receive on the vesting date additional units representing shares of Common Stock as calculated in this section. The number, if any, will be based on the dividends that would have been paid during the Vesting Period as of each dividend payment date on the actual number of shares of Common Stock distributable to you resulting from the vesting of the PSUs, if any, and treated as reinvested in additional shares of Common Stock on each dividend payment based on the Fair Market Value of one share of Common Stock on each dividend payment date ("Reinvested Dividend Equivalent Share Units").

## Holding Requirement

As of the vesting date set forth in your Award Agreement, you shall be entitled to be issued a number of shares of the Common Stock of JPMorgan Chase equal to the number of PSUs, if any, plus any additional Reinvested Dividend Equivalent Share Units, vesting on such date, less the number withheld to satisfy tax withholding obligations. The net number of shares issued to you will be held in an account in your name with restrictions preventing you from transferring, assigning, hedging, selling, pledging or otherwise encumbering such shares for a two-year period commencing as of the vesting date and ending as of the second anniversary of the vesting date. Such restrictions shall only lapse, prior to the expiration of the two-year holding period, in the event of your death or for an accelerated distribution for ethics or conflict reasons. See section captioned, "Death" and subsection captioned, "Accelerated Distribution for Ethics or Conflict Reasons Resulting from Employment by a Government Entity".

## Calculation of Performance Ranking

For purposes of the Performance Ranking, the ranking of the Firm and of each Performance Company for the Performance Period shall be determined and calculated by the Calculation Agent, using the definitions of "Average Tangible Common Equity" (if otherwise applicable), "Calculated PSUs", "Firm Reported ROTCE", "Performance Table" (including its footnote) and "ROTCE" as set forth in the
"Definitions" section of these terms and conditions. See section captioned "Definitions". Except for Firm Reported ROTCE, calculations will be expressed as a decimal to the second place (i.e. xx.yy\%), rounded to the nearest hundredth. See section captioned, "Definitions--Performance Table" in the event of a tie. All performance based calculations as set forth herein are binding and conclusive on you and your successors.

## Capital Ratio Performance Threshold

Unvested PSUs are subject to reduction if the Firm's Common Equity Tier 1 (CET1) capital ratio at any year end falls below a predetermined threshold of $\qquad$ $\%$.

If the Firm's CET1 capital ratio at any year end during the Performance Period is below this predetermined threshold, up to one-third of the Target Award Number of PSUs will be subject to downward adjustment by the CMDC for each such year.

## Vesting Period

The period from the Grant Date to the vesting date is the "Vesting Period". (See "Administrative Provision--Amendment" pursuant to which the Firm may extend the vesting period and "No Ownership Rights/Other Limitations" pursuant to which the Firm may place restrictions on delivered shares of Common Stock following the vesting date and section captioned, "Holding Period" above.)

## Protection-Based Vesting

This award is intended and expected to vest on the vesting date, provided that you are continuously employed by the Firm through such vesting date, or you meet the requirements for continued vesting described under the subsections "--Job Elimination", "--Full Career Eligibility", "--Government Office" or "--Disability". However, vesting and the number of PSUs that will vest are subject to these terms and conditions (including, but not limited to, sections captioned "Number to Vest on Vesting Date", "Capital Ratio Performance Threshold", "Remedies" and the following protection-based vesting provision).

Up to a total of fifty percent of your award (including any associated Reinvested Dividend Equivalent Share Units) that would otherwise be distributable to you on the vesting date ("At Risk PSUs") may be cancelled if the Chief Executive Officer of JPMorgan Chase ("CEO") determines in his or her sole discretion that cancellation of all or portion of the At Risk PSUs is appropriate in light of any one or a combination of the following factors:

- Your performance in relation to the priorities for your position, or the Firm's performance in relation to the priorities for which you share responsibility as a member of the Operating Committee, have been unsatisfactory for a sustained period of time. Among the factors the CEO may consider in assessing performance are: net income, total net revenue, earnings per share and capital ratios of the Firm, both on an absolute basis and, as appropriate, relative to peer firms.
- For any calendar year ending during the vesting period, JPMorgan Chase's annual pre-tax pre-provision income at the Firm level is negative.
- RSU awards granted to participants in a Line of Business for which you exercise, or during the vesting period exercised, direct or indirect responsibility, were in whole or in part cancelled because the Line of Business did not meet its annual Line of Business Financial Threshold.
- The Firm does not meet the Firmwide Financial Threshold.

For avoidance of doubt, cancellation of the At Risk PSUs, in whole or part, for one or more of the above factors may occur prior to the end of the Performance Period and the maximum number of At Risk PSUs subject to cancellation prior to the end of the Performance Period will be up to fifty percent of the Target Award Number.
In the event that your employment terminates due to "Job Elimination", "Full Career Eligibility", "Government Office" or "Disability" thereby entitling you to continued vesting in your award, (or potentially acceleration due to satisfaction of the Government Office Requirements), the cancellation circumstances described above will continue to apply.

Any determination above with respect to protection-based vesting provisions is subject to ratification by the Compensation and Management Development Committee of the Board of Directors of JPMorgan Chase ("Committee"). In the case of an award to any current or former CEO, all such determinations shall be made by the Committee and ratified by the Board.

## Bonus Recoupment

In consideration of the grant of this award, you agree that you are subject to the JPMorgan Chase Bonus Recoupment Policy (or successor policy) as in effect from time to time as it applies both to the cash incentive compensation awarded to you for performance year 20 $\qquad$ and to this award. You can access this policy as currently in effect by clicking the following link to the JPMorgan Chase \& Co. Corporate Governance Principles web page and scrolling to the Bonus Recoupment Policy located under the section titled "Other Matters":
https://about.jpmorganchase.com/about/governance/corporate-governance-principles
For the avoidance of doubt, nothing in these terms and conditions in any way limits the rights of the Firm under the JPMorgan Chase Bonus Recoupment Policy (or successor policy).

## Termination of Employment

Except as explicitly set forth below under the subsections captioned "--Job Elimination", "--Full Career Eligibility", "--Government Office" or "--Disability" or under the section captioned "Death", this award (for avoidance of doubt, including any associated Reinvested Dividend Equivalent Share Units) will be cancelled in full effective on the date your employment with the Firm terminates for any reason.
Subject to these terms and conditions (including, but not limited to, sections captioned "Protection-Based Vesting", "Number to Vest on Vesting Date", "Bonus Recoupment", "Your Obligations" and "Remedies") you will be eligible to continue to vest (as you otherwise would vest if you were still employed by JPMorgan Chase) with respect to your award in accordance with its terms and conditions following the termination of your employment if one of the following circumstances applies to you:

- Job Elimination

In the event that the Director of Human Resources or nominee in his or her sole discretion determines that

- the Firm terminated your employment because your job was eliminated, and
- after you are notified that your job will be eliminated, you provided such services as requested by the Firm in a cooperative and professional manner, and
- you satisfied the Release/Certification Requirements set forth below.
- Full Career Eligibility

In the event that the Director of Human Resources or nominee in his or her sole discretion determines that

- you voluntarily terminated your employment with the Firm, had completed at least five years of continuous service with the Firm immediately preceding your termination date, and
- the sum of your age and Recognized Service (as defined below) on your date of termination equaled or exceeded 60 , and
- you provided at least 180 days advance written notice to the Firm of your intention to voluntarily terminate your employment under this provision, during which notice period you provided such services as requested by the Firm in a cooperative and professional manner and you did not perform any services for any other employer, and
- continued vesting shall be appropriate, which determination shall be made prior to your termination and will be based on your performance and conduct (before and after providing notice), and
- for 36 months from the date of grant of this award, you do not either perform services in any capacity (such as an employee, contractor, consultant advisor, or self-employed individual, whether paid or unpaid) for a Financial Services Company (as defined below) or work in your profession (whether or not for a Financial Services Company); provided that you may work for a government, education or Not-for-Profit Organization (as defined below), and
- you satisfied the Release/Certification Requirements set forth below.

After receipt of such advance written notice, the Firm may choose to have you continue to provide services during such 180 -day period as a condition to continued vesting or shorten the length of the 180 -day period at the Firm's sole discretion, but to a date no earlier than the date you would otherwise meet the age and service requirements.

Additional advance notice requirements may apply for employees subject to notice period policies. (See "Notice Period" below.)

- Government Office

In the event that you voluntarily terminate your employment with the Firm to accept a Government Office or become a candidate for an elective Government Office, as described at the end of these terms and conditions under the section captioned "Government Office Requirements". See also definition of Government Office in the section captioned "Definitions".

- Disability

In the event that

- your employment with the Firm terminates because (i) you are unable to return to work while you are receiving benefits under the JPMorgan Chase Long Term Disability Plan, or for non-U.S. employees, under the equivalent JPMorgan Chasesponsored local country plan (in either case, "LTD Plan"), or (ii) if you are not covered by a LTD Plan, you are unable to return to work due to a long-term disability that would qualify for benefits under the applicable LTD Plan, as determined by the Firm or a third-party designated by the Firm; provided that you ( x ) request in writing continued vesting due to such disability within 30 days of the date your employment terminates, and (y) provide any requested supporting documentation and (z) receive the Firm's written consent to such treatment, and
- you satisfied the Release/Certification Requirements set forth below.


## Release/Certification

To qualify for continued vesting after termination of your employment under any of the foregoing circumstances:

- you must timely execute and deliver a release of claims in favor of the Firm, having such form and terms as the Firm shall specify,
- with respect to Full Career Eligibility, prior to the termination of your employment, you must confirm with management that you meet the eligibility criteria (including providing at least 180 days advance written notification), advise that you are seeking to be treated as an individual eligible for Full Career Eligibility, and receive written consent to such continued vesting,
- with respect to "Full Career Eligibility" and "Government Office", it is your responsibility to take the appropriate steps to certify to the Firm prior to the vesting date while the employment restrictions are outstanding on the authorized form of the Firm that you have complied with the employment restrictions applicable to you (as described herein) from your date of termination of employment through the applicable vesting date,
- with respect to Disability, you must satisfy the notice and documentation described above and receive written consent to such continued vesting, and
- in all cases, otherwise complied with all other terms of the Award Agreement. (See section captioned "Your Obligations" below.)


## Death

If you die while you are eligible to vest in this award, your designated beneficiary on file with the Firm's Stock Administration Department (or your estate or if no beneficiary has been designated or survives you or if beneficiary designation is not recognized locally) may be entitled to receive a distribution of a number of shares of Common Stock associated with your award. The Award Payout Percentage in the case of death is based on the Number to Vest on the Vesting Date calculation described above using the average performance of all completed calendar years, multiplied by one-third of the Target Award Number of PSUs for each completed calendar year in the Performance Period, and using the Award Payout Percentage equal to 100 percent for any remaining calendar years in the Performance Period.

In addition, your beneficiary or your estate shall receive additional shares of Common Stock, i.e. Reinvested Dividend Equivalent Share Units, as set forth in the section captioned, "Reinvested Dividend Equivalent Share Units" but based on dividend equivalents up to the date of your death.

Any shares will be distributed no later than the end of the calendar year immediately following the calendar year which contains your date of death; however, our administrative practice is to register such shares in the name of your beneficiary or estate within 60 days of the Firm's receipt of any required documentation.

## Your Obligations

In consideration of the grant of this award, you agree to comply with and be bound by the obligations set forth below next to the subsections captioned "--Non-Solicitation of Employees and Customers", "--Confidential Information", "--Non-Disparagement", "-Cooperation", "--Compliance with Award Agreement", and "--Notice Period".

## - Non-Solicitation of Employees and Customers

During your employment by the Firm and for the longer of the (i) one year period following the termination of your employment or, (ii) if your award is not cancelled as of your termination date, the three year period from Grant Date, you will not directly or indirectly, whether on your own behalf or on behalf of any other party, without the prior written consent of the Director of Human Resources: (i) solicit, induce or encourage any of the Firm's then current employees to leave the Firm or to apply for employment elsewhere, unless such current employee has received official, written notice that his or her employment will be terminated due to job elimination (ii) hire any employee or former employee who was employed by the Firm at the date your employment terminated, unless the individual's employment terminated because his or her job was eliminated, or the individual's employment with the Firm has been terminated for more than six months, (iii) to the fullest extent enforceable under applicable law, solicit or induce or attempt to induce to leave the Firm, or divert or attempt to divert from doing business with the Firm, any then current customers, suppliers or other persons or entities that were serviced by you or whose names became known to you by virtue of your employment with the Firm, or otherwise interfere with the relationship between the Firm and such customers, suppliers or other persons or entities. This does not apply to publicly known institutional customers that you service after your employment with the Firm without the use of the Firm's confidential or proprietary information.
These restrictions do not apply to authorized actions you take in the normal course of your employment with the Firm, such as employment decisions with respect to employees you supervise or business referrals in accordance with the Firm's policies.

## - Confidential Information

You will not, either during your employment with the Firm or thereafter, directly or indirectly (i) use or disclose to anyone any confidential information related to the Firm's business, or (ii) communicate with the press or other media about matters related to the Firm, its customers or employees, including matters and activities relating to your employment, or the employment of others, by the Firm, in the case of either (i) or (ii), except as explicitly permitted by the JPMorgan Chase Code of Conduct and applicable policies or law or legal process. In addition, following your termination of employment, you will not, without prior
written authorization, access the Firm's private and internal information through telephonic, intranet or internet means. "Confidential information" shall have the same meaning for the Award Agreement as it has in the JPMorgan Chase Code of Conduct.
Nothing in this award precludes you from reporting to the Firm's management or directors, the government, a regulator, a selfregulatory agency, your attorneys or a court, conduct you believe to be in violation of the law or concerns of any known or suspected Code of Conduct violation. It is also not intended to prevent you from responding truthfully to questions or requests from the government, a regulator or in a court of law.

## - Non-Disparagement

You will not, either during your employment with the Firm or thereafter, make or encourage others to make any public statement or release any information in verbal, written, electronic or any other form, that is intended to, or reasonably could be foreseen to, disparage, embarrass or criticize the Firm or its employees, officers, directors or shareholders as a group. This shall not preclude you from reporting to the Firm's management or directors or to the government or a regulator conduct you believe to be in violation of the law or the Firm's Code of Conduct or responding truthfully to questions or requests for information to the government, a regulator or in a court of law in connection with a legal or regulatory investigation or proceeding.

## - Cooperation

You will cooperate fully with and provide full and accurate information to the Firm and its counsel with respect to any matter (including any audit, tax proceeding, litigation, investigation or governmental proceeding) with respect to which you may have knowledge or information, subject to reimbursement for actual, appropriate and reasonable out-of-pocket expenses incurred by you.

- Compliance with Award Agreement

You will provide the Firm with any information reasonably requested to determine compliance with the Award Agreement, and you authorize the Firm to disclose the terms of the Award Agreement to any third party who might be affected thereby, including your prospective employer.

- Notice Period

If you are subject to a notice period or become subject to a notice period after the Grant Date, whether by contract or by policy, that requires you to provide advance written notice of your intention to terminate your employment ("Notice Period"), then as consideration for this award and continued employment, you will provide the Firm with the necessary advance written notice that applies to you, as specified by such contract or policy.
After receipt of your notice, the Firm may choose to have you continue to provide services during the applicable Notice Period or may place you on a paid leave for all or part of the applicable Notice Period. During the Notice Period, you shall continue to devote your full time and loyalty to the Firm by providing services in a cooperative and professional manner and not perform any services for any other employer and shall receive your base salary and certain benefits until your employment terminates. You and the Firm may mutually agree to waive or modify the length of the Notice Period.
Regardless of whether a Notice Period applies to you, you must comply with the 180-day advance notice period described under the subsection captioned "-- Full Career Eligibility" in the event you wish to terminate employment under that same subsection.

## Remedies

## - Detrimental Conduct, Risk Related and Other Cancellation/Recapture

In addition to the cancellation provisions described under the sections captioned "Protection-Based Vesting", "Bonus Recoupment" and "Termination of Employment", up to $100 \%$ of your award (for the avoidance of doubt, including any associated Reinvested Dividend Equivalent Share Units as well as the Calculated PSUs) your outstanding PSUs under this award may be cancelled if the Firm in its sole discretion determines that:

- Any of the following detrimental and risk-related conduct has occurred:
- you engaged in conduct detrimental to the Firm insofar as it causes material financial or reputational harm to the Firm or its business activities, or
- this award was based on materially inaccurate performance metrics, whether or not you were responsible for the inaccuracy, or
- this award was based on a material misrepresentation by you, or
- you improperly or with gross negligence failed to identify, raise or assess, in a timely manner and as reasonably expected, risks and/or concerns with respect to risks material to the Firm or its business activities, or
- your employment was terminated for Cause (see section captioned "Definitions" below) or, in the case of a determination after the termination of your employment, that your employment could have been terminated for Cause.
- you have failed to comply with any of the advance notice/cooperation requirements or employment restrictions applicable to your termination of employment, or
- you have failed to return the required forms specified under the section captioned "Release/Certification" by the specified deadline, or
- you have violated any of the provisions as set forth above in the section captioned "Your Obligations".

To the extent provided under the subsection captioned "--Amendment" below, JPMorgan Chase reserves the right to suspend vesting of this award and/or distribution of shares under this award, including, without limitation, during any period that JPMorgan Chase is evaluating whether this award is subject to cancellation and/or recovery and/or whether the conditions for distributions of shares under this award are satisfied. The Firm is not responsible for any price fluctuations during any period of suspension and, if applicable, suspended units will be reinstated consistent with Plan administration procedures. See also "Administrative Provisions-No Ownership Rights/Other Limitations".

In addition, you may be required to pay the Firm up to an amount equal to the Fair Market Value (determined as of the applicable vesting date or acceleration date) of the gross number of shares of Common Stock previously distributed, including vested shares subject to the Holding Requirements, under this award as follows:

- Payment may be required with respect to any shares of Common Stock distributed within the three year period prior to a notice-of-recovery under this section, if the Firm in its sole discretion determines that:
- you committed a fraudulent act, or engaged in knowing and willful misconduct related to your employment;
- you violated any of the provisions as set forth above in the section captioned "Your Obligations;" or
- you violated the employment restrictions set forth in the subsection "Full Career Eligibility" or "Government Office" following the termination of your employment.
- In addition, payment may be required with respect to any shares distributed within the one year period prior to notice-ofrecovery under this section, if the Firm in its sole discretion determines appropriate pursuant to the provisions in the section captioned "Recapture Provisions".

Notice-of-recovery under this subsection is a written (including electronic) notice from the Firm to you either requiring payment under this subsection or stating that JPMorgan Chase is evaluating requiring payment under this subsection. Without limiting the foregoing, notice-of-recovery will be deemed provided if the Firm makes a good faith attempt to provide written (including electronic) notice at your last known address maintained in the Firm's employment records. For the avoidance of doubt, a notice-of-recovery that the Firm is evaluating requiring payment under this subsection shall preserve JPMorgan Chase's rights to require payment as set forth above in all respects and the Firm shall be under no obligation to complete its evaluation other than as the Firm may determine in its sole discretion.

For purposes of this subsection, shares distributed under this award include shares withheld for tax purposes. However, it is the Firm's intention that you only be required to pay the amounts under this subsection with respect to shares that are or may be retained by you following a determination of tax liability and that you will not be required to pay amounts with respect to shares representing irrevocable tax withholdings or tax payments previously made (whether by you or the Firm) that you will not be able to recover, recapture or reclaim (including as a tax credit, refund or other benefit). Accordingly, JPMorgan Chase will not require you to pay any amount that the Firm or its nominee in his or her sole discretion determines is represented by such withholdings or tax payments.

Payment may be made in shares of Common Stock or in cash. You agree that any repayment will be a lawful recovery under the terms and conditions of your Award Agreement and is not to be construed in any manner as a penalty.
Nothing in the section in any way limits your obligations under "Bonus Recoupment".

- Right to an Injunction

You acknowledge that a violation or attempted violation of the obligations set forth herein will cause immediate and irreparable damage to the Firm, and therefore agree that the Firm shall be entitled as a matter of right to an injunction, from any court of competent jurisdiction, restraining any violation or further violation of such obligations; such right to an injunction, however, shall be cumulative and in addition to whatever other remedies the Firm may have under law or equity.

## Administrative Provisions

Withholding Taxes: As a result of legal and/or tax obligations the Firm, in its sole discretion, may (i) retain from each distribution the number of shares of Common Stock required to satisfy applicable tax obligations or (ii) implement any other desirable or necessary procedures, so that appropriate withholding and other taxes are paid to the competent authorities with respect to the
vested shares and the award. This may include but is not limited to (i) a market sale of a number of such shares on your behalf substantially equal to the withholding or other taxes, (ii) to the extent required by law, withhold from cash compensation, an amount equal to any withholding obligation with respect to the award and shares that vest under this award, and (iii) retaining shares that vest under this award until you pay any taxes associated with the award and vested shares directly to the competent authorities.

Right to Set Off: Although the Firm expects to settle this award in share(s) of Common Stock as of the applicable vesting date, as set forth in your Award Agreement, the Firm may, to the maximum extent permitted by applicable law (including Section 409A of the Code to the extent it is applicable to you), retain for itself funds or the Common Stock resulting from any vesting of this award to satisfy any obligation or debt that you owe to the Firm. Notwithstanding any account agreement with the Firm to the contrary, the Firm will not recoup or recover any amount owed from any funds or unrestricted securities held in your name and maintained at the Firm pursuant to such account agreement to satisfy any obligation or debt or obligation owed by you under this award without your consent. This restriction on the Firm does not apply to accounts described and authorized in "No Ownership Rights/Other Limitations" described below.

No Ownership Rights/Other Limitations: PSUs do not convey the rights of ownership of Common Stock and do not carry voting rights. No shares of Common Stock will be issued to you until after the number of PSUs have been determined, if any, and have vested. Shares will be issued in accordance with JPMorgan Chase's procedures for issuing stock. By accepting this award, you authorize the Firm, in its sole discretion, to establish on your behalf a brokerage account in your name with the Firm or book-entry account with our stock plan administrator and/or transfer agent and deliver to that account any vested shares derived from the award. You also acknowledge that should there be a determination that the cancellation provisions of this award apply during the period when the vesting of any outstanding PSUs has been suspended, then you agree that such PSUs may be cancelled in whole or part. (See Sections captioned "Protection-Based Vesting", "Bonus Recoupment", "Termination of Employment" and "Remedies", as well as the subsection captioned "--Amendment" permitting suspension of vesting.)

With respect to any applicable vesting date, JPMorgan Chase may impose for any reason, as of such vesting date for such period as it may specify in its sole discretion, such restrictions on the Common Stock to be issued to you as it may deem appropriate, including, but not limited to, restricting the sale, transfer, pledging, assignment, hedging or encumbrance of such shares of Common Stock. Such restrictions described in the last sentence shall not impact your right to vote or receive dividends with respect to the Common Stock. By accepting this award, you acknowledge that during such specified period should there be a determination that the recovery provisions of this award apply, then you agree that you may be required to pay the Firm up to an amount equal to the Fair Market Value (determined as of the applicable vesting date) of the gross number of shares subject to such restrictions (notwithstanding the limitation set forth in the "Right to Set Off" subsection above). (See sections captioned "Bonus Recoupment" and "Remedies".)

Binding Agreement: The Award Agreement will be binding upon any successor in interest to JPMorgan Chase, by merger or otherwise.

Not a Contract of Employment: Nothing contained in the Award Agreement constitutes a contract of employment or continued employment. Employment is "at-will" and may be terminated by either you or JPMorgan Chase for any reason at any time. This award does not confer any right or entitlement to, nor does the award impose any obligation on the Firm to provide, the same or any similar award in the future and its value is not compensation for purposes of determining severance.

Section 409A Compliance: To the extent that Section 409A of the Code is applicable to this award, distributions of shares hereunder are intended to comply with Section 409A of the Code, and the Award Agreement, including these terms and conditions, shall be interpreted in a manner consistent with such intent.

Notwithstanding anything herein to the contrary, if you (i) are subject to taxation under the Code, (ii) are a specified employee as defined in the JPMorgan Chase 2005 Deferred Compensation Plan and (iii) have incurred a separation from service (as defined in that Plan with the exception of death) and if any units/shares under this award represent deferred compensation as defined in Section 409A and such shares are distributable (under the terms of this award) within six months following, and as a result of your separation from service, then those shares will be delivered during the first calendar month after the expiration of six full months from date of your separation from service. Further, if your award is not subject to a substantial risk of forfeiture as defined by regulations issued under Section 409A of the Code, then the remainder of each calendar year immediately following the vesting date set forth in your Award Agreement shall be a payment date for purposes of distributing the vested portion of the award.

Change in Outstanding Shares: In the event of any change in the outstanding shares of Common Stock by reason of any stock dividend or split, recapitalization, issuance of a new class of common stock, merger, consolidation, spin-off, combination or exchange of shares or other similar corporate change, or any distributions to stockholders of Common Stock other than regular cash dividends, the Committee will make an equitable substitution or proportionate adjustment, in the number or kind of shares of Common Stock or other securities issued or reserved for issuance pursuant to the Plan and to any PSUs outstanding under this award for such corporate events.

Other Equitable Adjustments: The Committee may make adjustments (up or down) to the award as it deems to be equitable, to maintain the intended economics of the award in light of changed circumstances, which may include unusual or non-recurring events affecting the Firm (or the Performance Companies) or its financial statements in each case resulting from changes in accounting methods, practices or policies, changes in capital structure by reason of legal or regulatory requirements and such other changed circumstances, as the Committee may deem appropriate.

Interpretation/Administration: The Committee has sole and complete authority to interpret and administer this Award Agreement, including, without limitation, the power to (i) interpret the Plan and the terms of this Award Agreement; (ii) determine the reason for termination of employment; (iii) determine application of the post-employment obligations and cancellation and recovery provisions; (iv) decide all claims arising with respect to this award; and (v) delegate such authority as it deems appropriate. Any determination contemplated hereunder by the Committee, the Firm, the Director of Human Resources or their respective delegates or nominees shall be binding on all parties.

Notwithstanding anything herein to the contrary, the determinations of the Director of Human Resources, the Firm, the Committee and their respective delegates and nominees under the Plan and the Award Agreements are not required to be uniform. By way of clarification, the Committee, the Firm, the Director of Human Resources and their respective delegates and nominees shall be entitled to make non-uniform and selective determinations and modifications under Award Agreements and the Plan.

Amendment: The Committee or its nominee reserves the right to amend this Award Agreement in any manner, at any time and for any reason; provided, however, that no such amendment shall materially adversely affect your rights under this Award Agreement without your consent except to the extent that the Committee or its delegate considers advisable to ( $x$ ) comply with applicable laws or changes in or interpretation of applicable laws, regulatory requirements and accounting rules or standards and/or (y) make a change in a scheduled vesting date or impose the restrictions described above under "No Ownership Rights/Other Limitations", in either case, to the extent permitted by Section 409A of the Code if it is applicable to you. This Award Agreement may not be amended except in writing signed by the Director of Human Resources of JPMorgan Chase.

Severability: If any portion of the Award Agreement is determined by the Firm to be unenforceable in any jurisdiction, any court or arbitrator of competent jurisdiction or the Director of Human Resources may reform the relevant provisions (e.g., as to length of service, time, geographical area or scope) to the extent the Firm (or court/arbitrator) considers necessary to make the provision enforceable under applicable law.

Accelerated Distribution for Ethics or Conflict Reasons Resulting From Employment by a Government Entity: Upon receipt of satisfactory evidence that applicable United States federal, state, local, foreign or supranational ethics or conflict of interest laws or regulations require you to divest your interest in JPMorgan Chase PSUs, the Firm may accelerate the distribution of all or part of your outstanding award, including Reinvested Dividend Equivalent Share Units, effective on or before the required divestiture date and waive the Holding Requirement; provided that no accelerated distribution shall occur if the Firm determines that such acceleration will violate Section 409A of the Code. Accelerated distribution under this paragraph does not impact the dates as set forth in the "Remedies" section above. The time period for recovery shall be determined by the originally scheduled vesting date or distribution date prior to any acceleration event.

If you have voluntarily terminated your employment and have satisfied the requirements of the section captioned "Government Office Requirements", acceleration shall apply (to extent required) to the percentage of your outstanding award that would continue to vest under that section. In the case of a termination of employment where the award is outstanding as a result of the subsections entitled "Job Elimination" or "Full Career Eligibility", then acceleration shall apply, to the extent required, to the full outstanding award. Subject to the two foregoing sections, the number of shares of Common Stock to be received on acceleration shall be determined using the methodology set forth under the section captioned "Death".

To the extent you have vested shares under this award subject to the Holding Requirement and become subject to divestiture requirement as forth herein, the Firm may waive the holding period to the extent required.

Notwithstanding an accelerated distribution or waiver of the Holding Requirement pursuant to the foregoing, you will remain subject to the applicable terms of your Award Agreement as if your award had remained outstanding for the duration of the original vesting period and shares had been distributed as scheduled as of the vesting date, including, but not limited to, repayment obligations set forth in the section captioned "Remedies" and the employment restrictions in the sections captioned "Protection-Based Vesting" and "Government Office Requirements" and the subsection "Full Career Eligibility".

Use of Personal Data: By accepting this award, you acknowledge that the Firm may process your personal data for the purposes of providing you this award (to include registration of shares and units or establishing a brokerage account on your behalf) and disclosing to third parties, such as service providers or tax and regulatory authorities (e.g., for compensation reporting and payroll tax withholding purposes). Additionally, you agree that the Firm may transfer your personal data to jurisdictions that do not afford protections equivalent to the protections in the country in which we collected your data. Where applicable law provides a right to
terminate the foregoing authorization, you may do so at any time, except with respect to tax and regulatory reporting and the Firm's legal and regulatory obligations. In the event you terminate this authorization, your award will be cancelled.

Governing Law: This award shall be governed by and construed in accordance with the laws of the State of New York, without regard to conflicts of law principles.

Choice of Forum: By accepting this award under the Plan, you agree (and have agreed) that to the extent not otherwise subject to arbitration under an arbitration agreement between you and the Firm, any dispute arising directly or indirectly in connection with this award or the Plan shall be submitted to arbitration in accordance with the rules of the American Arbitration Association if so elected by the Firm in its sole discretion. In the event such a dispute is not subject to arbitration for any reason, you agree to accept the exclusive jurisdiction and venue of the United States District Court for the Southern District of New York with respect to any judicial proceeding in connection with this award or the Plan. You waive, to the fullest extent permitted by law, any objection to personal jurisdiction or to the laying of venue of such dispute and further agree not to commence any action arising out of or relating to this award or the Plan in any other forum.

Waiver of Jury Trial/Class Claims: By accepting this award, you agree, with respect to any claim brought in connection with your employment with the Firm in any forum (i) to waive the right to a jury trial and (ii) that any judicial proceeding or arbitration claim will be brought on an individual basis, and you hereby waive any right to submit, initiate, or participate in a representative capacity or as a plaintiff, claimant or member in a class action, collective action, or other representative or joint action.

Litigation: By accepting any award under the Plan, you agree (and have agreed) that in any action or proceeding by the Firm (other than a derivative suit in the right of the Firm) to enforce the terms and conditions of this Award Agreement or any other Award Agreement where the Firm is the prevailing party, the Firm shall be entitled to recover from you its reasonable attorney fees and expenses incurred in such action or proceeding. In addition, you agree that you are not entitled to, and agree not to seek, advancement of attorney fees and indemnification under the Firm's By-Laws in the event of such a suit by the Firm.

Non-transferability: Neither this award or any other outstanding awards of restricted stock units or of performance based share units, nor your interests or rights in any such awards, shall be assigned, pledged, transferred, hedged, hypothecated or subject to any lien. An award may be transferred following your death by will, the laws of descent or by a beneficiary designation on file with the Firm.

## Definitions

"Average Tangible Common Equity" means annual average common stockholders' equity less annual average goodwill and annual average identifiable intangible assets. Annual averages of the components of Average Tangible Common Equity will be calculated using quarterly balances as reported in publically available financial disclosures. In the event that quarterly balances are not available, annual year end balances will be used. This calculation is used solely for purposes of the Performance Ranking.
"Award Payout Percentage" means the applicable percentage specified in the footnote to the Performance Table.
"Calculated PSUs" means the number of PSUs determined by multiplying the Target Award Number (after giving effect to any cancellation thereof, in whole or in part) by the Award Payout Percentage corresponding to the Firm's Performance Ranking based on the three-year average performance for the Performance Period (both percentage and ranking, as set forth in the footnote to the Performance Table); provided that if the average of the Firm's Reported ROTCE for the Performance Period either equals or exceeds
$\qquad$ $\%$ or is less than ___ (without taking into account any rounding conventions used), $\qquad$ percent or $\qquad$ , respectively as the case may be, shall be substituted for the Performance Period's Award Payout Percentage in calculating the number of PSUs to distribute. For avoidance of doubt, any cancellation of this award (in whole or in part) during the Performance Period will reduce the Target Award Number.
"Calculation Agent" means a third party entity not owned or controlled by the Firm, such as an accounting or consulting firm, retained from time to time by the Director of Human Resources or his/her delegate.
"Cause" means a determination by the Firm that your employment terminated as a result of your (i) violation of any law, rule or regulation (including rules of self-regulatory bodies) related to the Firm's business, (ii) indictment or conviction of a felony, (iii) commission of a fraudulent act, (iv) violation of the JPMorgan Chase Code of Conduct or other Firm policies or misconduct related to your duties to the Firm (other than immaterial and inadvertent violations or misconduct), (v) grossly inadequate performance of the duties associated with your position or job function or failure to follow reasonable directives of your manager, or (vi) any act or failure to act that is injurious to the interests of the Firm or its relationship with a customer, client or an employee.
"Financial Services Company" means a business enterprise that engages in any of the following services (itself or through an affiliate or subsidiary), regardless of whether such services are the principle strategy or revenue-generating activity:

- commercial or retail banking, including, but not limited to, commercial, institutional and personal trust, custody and/or lending and processing services, internet banking, originating and servicing mortgages, issuing and servicing credit cards, payment servicing or processing or merchant services,
- insurance, including but not limited to, guaranteeing against loss, harm, damage, illness, disability or death, providing and issuing annuities, acting as principal, agent or broker for purpose of the forgoing,
- financial, investment or economic advisory services, including but not limited to, investment banking services (such as advising on mergers or dispositions, underwriting, dealing in, or making a market in securities or other similar activities), brokerage services, investment management services, asset management services, foreign exchange services, interbank networks and hedge funds,
- issuing, trading or selling instruments representing interests in pools of assets or in derivatives instruments,
- financial technology ("Fintech") companies, such as those selling blockchain services, or offering or selling financial products/ services,
- advising on, or investing in, private equity or real estate funds or ventures, or
- any similar activities that the Director of Human Resources or nominee determines in his or her sole discretion constitute financial services.
"Firm Reported ROTCE" means the Firm's percentage return on tangible common equity for each year in the Performance Period (as calculated for use in its publicly available year-end financial disclosures without taking into account any rounding conventions used for financial reporting purposes).
"Firmwide Financial Threshold" means a cumulative return on tangible common equity for calendar years 20 $\qquad$ and 20 of not less than $\qquad$ \%. Cumulative return on tangible common equity means (i) the sum of the Firm's reported net income for all three calendar years, divided by (ii) reported year-end tangible equity averaged over the three years.
"Government Office" means (i) a full-time position in an elected or appointed office in local, state, or federal government (including equivalent positions outside the U.S. or in a supranational organization), not reasonably anticipated to be a full-career position, or (ii) conducting a bona fide full-time campaign for such an elective public office after formally filing for candidacy, where it is customary and reasonably necessary to campaign full-time for the office.
"Line of Business" means a business unit of the Firm (or one or more business units designated below under the definition "Line of Business Financial Threshold" of the Corporate Investment Bank). All Corporate Functions (including the functions of the Chief Investment Office) are considered a single Line of Business.
"Line of Business Financial Threshold" means the financial threshold set forth below: for the following Lines of Business based on the Firm's management reporting system:

| Asset \& Wealth Management | Annual negative pre-tax pre-provision income ${ }^{1}$ |
| :---: | :---: |
| Card and Auto | Annual negative pre-tax pre-loan loss reserve income ${ }^{2}$ |
| Commercial Banking | Annual negative pre-tax pre-loan loss reserve income ${ }^{2}$ |
| Corporate Investment Bank | Annual negative pre-tax pre-provision income ${ }^{1}$ for CIB overall and/or annual negative allocated product revenues (excluding XVA) for: <br> - Fixed Income <br> - Equities <br> - Securities Services <br> - Global Investment Banking <br> - Payments |
| Consumer Banking, J.P. Morgan Wealth Management and Business Banking | Annual negative pre-tax pre-loan loss reserve income ${ }^{2}$ |
| Corporate Functions (including Chief Investment Office) | Annual negative pre-tax pre-provision income ${ }^{1}$ at the Firm level |
| Home Lending | Annual negative pre-tax pre-loan loss reserve income ${ }^{2}$ |
| ${ }^{1}$ Pre-tax pre-provision income means Revenue less Expenses <br> ${ }^{2}$ Pre-tax pre-Ioan loss reserve income means Revenue less (Expenses plus Net Charge-offs) |  |

"Not-for-Profit Organization" means an entity exempt from tax under state law and under Section 501(c)(3) of the Code. Section 501(c)(3) only includes entities organized and operated exclusively for religious, charitable, scientific, testing for public safety, literary or educational purposes, or to foster national or international amateur sports competition or for the prevention of cruelty to children or animals. Not-for-Profit Organization shall also mean entities outside the United States exempt from local and national tax laws because they are organized and operated exclusively for purposes identical to those applicable to Section 501(c)(3) organization.
"Performance Companies" mean the following institutions which have business activities that overlap with a significant portion of the Firm's revenue mix: $\qquad$ and $\qquad$ .

If, during the Performance Period, one or more Performance Companies shall merge, engage in a spin-off or otherwise experience a material change in its revenue mix or business activities or its existence or its primary businesses shall terminate or cease due to receivership, bankruptcy, sale, or otherwise, then the Committee may eliminate such institution from the list of Performance Companies or make such other equitable adjustments, such as adding an acquirer or a new company to the list of Performance Companies, as it deems appropriate, with any such changes having effect for purposes of all calculations hereunder on a prospective basis from the date the applicable change is made.
"Performance Period" means calendar years 20_, 20__ and 20__.
"Performance Ranking" means the ranking of the average ROTCE of the Firm as compared to the ranking of the average ROTCE of the Performance Companies as specified in the footnote to the Performance Table for the Performance Period.
"Performance Table" means the table used in the calculation of PSUs for the Performance Period as set forth below:


1. The following sets forth the precise Award Payout Percentage corresponding to the Firm's Performance Ranking (when compared to Performance Companies): \#_ = _ \%; \#_ = _ \%; \#_ = _ \%; \#_ = _ \%; \#_ = _ \%; \#_ = _ \%; \#_ = _ \%; \#_ = _ \%; \#_ = _ \%; \#_ = _ \%; \#_ = _ \%; \#_ = _ \%; etc.

If, after the calculation of the Performance Ranking, there is a tie, the tie shall be disregarded for purposes of determining the Award Payout Percentage. For example, in the case of a tie for the $\qquad$ ranking between the Firm and a Performance Company, the Firm shall be treated as having satisfied that ranking. In the case of that same tie among Performance Companies, the $\qquad$ and $\qquad$ rankings will be deemed to have been satisfied.
"Recognized Service" means the period of service as an employee set forth in the Firm's applicable service-related policies.
"ROTCE" means for the Firm and each of the Performance Companies a percentage derived by, for each year in the Performance Period, dividing (i) annual earnings from continuing operations less dividends on preferred stock as set forth in published financial disclosures by (ii) the Average Tangible Common Equity for the year. If, prior to the end of the vesting period, the Firm or any Performance Company restates its published financial statements for any year in the Performance Period, ROTCE for that year shall be recalculated for the Firm or Performance Company with the Performance Ranking adjusted, if necessary. This calculation is used solely for purposes of the Performance Ranking.
"Target Award Number" means the number of PSUs designated as such in the Award Agreement.

## Government Office Requirements

You may be eligible to continue vesting in all or part of your award if you voluntarily resign to accept a Government office (as defined above) or to become a candidate for an elective Government Office.

Full Career Eligibility:
"Government Office Requirements" does not apply to you if you satisfy the subsection captioned "--Full Career Eligibility" as of the date that you voluntarily terminate your employment with the Firm.

## Eligibility:

Eligibility for continued vesting is conditioned on your providing the Firm:

- At least 60 days' advance written notice of your intention to resign to accept or pursue a Government Office (see section captioned "Definitions"), during which period you must perform in a cooperative and professional manner services requested by the Firm and not provide services for any other employer. The Firm may elect to shorten this notice period at the Firm's sole discretion.
- Confirmation, in a form satisfactory to the Firm, that vesting in this award pursuant to this provision would not violate any applicable law, regulation or rule.
- Documentation in a form satisfactory to the Firm that your resignation is for the purpose of accepting a Government Office or becoming a candidate for a Government Office. (See section captioned "Definitions".)

Portion of Your Award Subject to Continued Vesting:
Subject to the conditions below, the percentage of this award that will continue to vest in accordance with this award's original schedule will be based on your years of continuous service completed with the Firm immediately preceding your termination date, as follows:

- $50 \%$ if you have at least 3 but less than 4 years of continuous service,
- $75 \%$ if you have at least 4 but less than 5 years of continuous service, or
- $100 \%$ if you have 5 or more years of continuous service.

The portion of this award subject to continued vesting above is referred to as the "CV Award" and the portion not subject to continued vesting will be cancelled as of the date your employment terminates.

## Conditions for Continued Vesting of Award:

- You must remain in a non-elective Government Office for two or more years after your employment with the Firm terminates to be eligible to receive the CV Award; provided that if your non-elective Government Office is for a period less than two years, you will be eligible to receive the CV Award if it has a vesting date during your period of Government Service; or
- In the case of resignation from the Firm to campaign for an elective Government Office, your name must be on the primary or final public ballot for the election. (If you are not elected, see below for employment restrictions.)
For avoidance of doubt, the performance criteria and protection based vesting set forth in these terms and conditions continue to apply to a CV Award.


## Satisfaction of Conditions:

If your service in a Government Office ends two years or more after your employment with the Firm terminates, or in the case of resignation from the Firm to campaign for a Government Office, your name is on the primary or final public ballot for the election and you are not elected, any CV Awards then outstanding and any such awards that would have then been outstanding but for an accelerated distribution of shares (as described in the subsection captioned "--Accelerated Distribution for Ethics or Conflict Reasons Resulting From Employment by a Government Entity") will be subject for the remainder of the applicable vesting period to the same terms and conditions of this Award Agreement, including employment restrictions during the vesting period, as if you had resigned from the Firm having met the requirements for Full Career Eligibility.

## Failure to Satisfy Conditions:

If you do not satisfy the above "Conditions for Continued Vesting of Awards", any outstanding PSUs under the CV Award will be cancelled. You also will be required to repay the Fair Market Value of the number of shares (before tax and other withholdings) of Common Stock distributed to you that would have been outstanding as PSUs on the date you failed to satisfy the "Conditions for Continued Vesting of Award" but for their accelerated distribution (as described in subsection captioned, "Accelerated Distribution for Ethics or Conflict Reasons Resulting From Employment by a Government Entity"). Fair Market Value for this purpose will be determined as the date that the shares were distributed.

# JPMORGAN CHASE \& CO. LONG-TERM INCENTIVE PLAN TERMS AND CONDITIONS OF <br> $\qquad$ , 20 <br> PERFORMANCE SHARE UNIT AWARD <br> OPERATING COMMITTEE <br> (Protection-Based Vesting Provisions) 

## Award Agreement

These terms and conditions are made part of the Award Agreement dated as of $\qquad$ , 20
$\qquad$ ("Grant Date") awarding performance share units ("PSUs") pursuant to the terms of the JPMorgan Chase \& Co. Long-Term Incentive Plan ("Plan"). To the extent the terms of the Award Agreement (all references to which will include these terms and conditions) conflict with the Plan, the Plan will govern. The Award Agreement, the Plan and Prospectus supersede any other agreement, whether written or oral, that may have been entered into by the Firm and you relating to this award.

This award was granted on the Grant Date subject to the Award Agreement and Plan. Unless you decline by the deadline and in the manner specified in the Award Agreement, you will have agreed to be bound by these terms and conditions, effective as of the Grant Date. If you decline the award, it will be cancelled as of the Grant Date.

Capitalized terms that are not defined in "Definitions" below or elsewhere in the Award Agreement will have the same meaning as set forth in the Plan.

JPMorgan Chase \& Co. will be referred to throughout the Award Agreement as "JPMorgan Chase", and together with its subsidiaries as the "Firm".

## Form and Purpose of Award

Each PSU represents a non-transferable right to receive one share of Common Stock following each vesting date as set forth in your Award Agreement.

The purpose of this award is to further emphasize sustained long-term performance and to align your interests with those of the Firm and its shareholders.

## Number of Performance Share Units at End of Performance Period

Subject to any cancellation in whole or part of your award pursuant to these terms and conditions:
Performance calculation: The number of PSUs at the end of the Performance Period will be derived by multiplying the Target Award Number by the Award Payout Percentage determined using the Performance Table.

The number of PSUs determined above will be subject to the Qualitative Performance Factor (as detailed below), which if the Committee determines that such an adjustment is appropriate, will be applied following the end of each year during the Performance Period, to adjust downward one-third of the Target Award Number of PSUs for each calendar year in the Performance Period. Additionally, the Committee, in its discretion, may make a qualitative performance assessment based on the entire three-year Performance Period and apply the Qualitative Performance Factor to the entire number of PSUS determined above.

See sections captioned "Calculation of Performance Ranking" and "Definitions".
Delivery of vested shares of common stock to your account will be made not later than the date specified in the last sentence of the subsection captioned "Section 409A Compliance".

Reinvested Dividend Equivalent Share Units
This award is not eligible for reinvested dividend equivalent share units.

## Holding Requirement

The net number of shares of Common Stock (after tax and all other lawful withholdings) in which you have vested, if any, as of the vesting date set forth in your Award Agreement will be held in an account in your name with restrictions preventing you from transferring, assigning, hedging, selling, pledging or otherwise encumbering such shares for (i) a twelve month period measured from each vesting date; and (ii) a two year period for such shares vesting on $\qquad$ , 20__, with the holding periods running concurrently. Such restrictions shall only lapse, prior to the expiration of the two year holding period, in the event of your death or for an accelerated distribution for ethics or conflict reasons. See section captioned, "Death" and subsection captioned, "Accelerated Distribution for Ethics or Conflict Reasons Resulting from Employment by a Government Entity".

## Calculation of Performance Ranking

For purposes of the Performance Ranking, the ranking of the Firm and of each Performance Company for the Performance Period shall be determined and calculated by the Calculation Agent, using the definitions of "Average Tangible Common Equity" (if otherwise applicable), "Calculated PSUs", "Firm Reported ROTCE", "Performance Table" (including its footnote) and "ROTCE" as set forth in the "Definitions" section of these terms and conditions. See section captioned "Definitions". Except for Firm Reported ROTCE, calculations will be expressed as a decimal to the second place (i.e. xx.yy\%), rounded to the nearest hundredth. See section captioned, "Definitions--Performance Table" in the event of a tie. All performance based calculations as set forth herein are binding and conclusive on you and your successors.

## Capital Ratio Performance Threshold

Unvested PSUs are subject to reduction if the Firm's Common Equity Tier 1 (CET1) capital ratio at any year end falls below a predetermined threshold of $\qquad$ \%.

If the Firm's CET1 capital ratio at any year end during the Performance Period is below this predetermined threshold, up to one-third of the Target Award Number of PSUs will be subject to downward adjustment by the CMDC for each such year.

## Qualitative Performance

Determination of Qualitative Performance Factor. Annually during the Performance Period, the Committee will formally assess your qualitative performance based on four broad categories: (1) Client/Customer Focus; (2) Risk, Controls \& Conduct; (3) Teamwork \& Leadership; and (4) Business Results. If the Committee determines that your performance "Meets" expectations, no downward adjustment to one-third of the Target Award Number of PSUs for that year shall take place (and the Qualitative Performance Factor shall be $100 \%$ ). If the Committee determines that your performance did "Not Meet" expectations, the Committee shall determine whether a downward adjustment is appropriate, and if so, to what extent. A downward adjustment could result in a Qualitative Performance Factor of between 0\% and 99\%, depending on the circumstances. During the Performance Period, a 0\% Performance Factor for each year in the Performance Period would reduce your Target Award Number of PSUs to zero, resulting in the cancellation of award with no shares vesting.

Additionally, the Committee may, in its sole discretion, make such assessment of your qualitative performance based on your performance during the entire three year Performance Period and apply the Qualitative Performance Factor to the entire number of PSUs determined under section captioned "Number of Performance Share Units at End of the Performance Period". In the case of a Qualitative Performance Factor of 0\%, the award would be cancelled.

The assessment will have regard to feedback solicited from the Chair of the UK Remuneration Committee to incorporate qualitative performance against local regulatory responsibilities as a "Senior Manager" of the relevant CIB UK-regulated entities.

The Qualitative Performance Factor shall only be applied, if applicable, in respect of a period of your employment with the Firm, or as soon as administratively practical.

## Protection-Based Vesting

This award is intended and expected to vest on each vesting date set forth in your Award Agreement, provided that you are continuously employed by the Firm through such vesting date, or you meet the requirements for continued vesting described under the subsections "--Job Elimination", "--Full Career Eligibility", "--Government Office" or "--Disability". However, vesting and the number of PSUs that will vest are subject to these terms and conditions (including, but not limited to, sections captioned "Number of Performance Share Units at the end of Performance Period", "Capital Ratio Performance Threshold", "Recapture Provisions", "Remedies" and the following protection-based vesting provision).

Up to a total of fifty percent of your award that would otherwise be distributable to you as of any vesting date ("At Risk PSUs") may be cancelled if the Chief Executive Officer of JPMorgan Chase ("CEO") determines in his or her sole discretion that cancellation of all or portion of the At Risk PSUs is appropriate in light of any one or a combination of the following factors:

- Your performance in relation to the priorities for your position, or the Firm's performance in relation to the priorities for which you share responsibility as a member of the Operating Committee, have been unsatisfactory for a sustained period of time. Among the factors the CEO may consider in assessing performance are: net income, total net revenue, earnings per share and capital ratios of the Firm, both on an absolute basis and, as appropriate, relative to peer firms.
- For any calendar year ending during the vesting period, JPMorgan Chase's annual pre-tax pre-provision income at the Firm level is negative.
- RSU awards granted to participants in a Line of Business for which you exercise, or during the vesting period exercised, direct or indirect responsibility, were in whole or in part cancelled because the Line of Business did not meet its annual Line of Business Financial Threshold.
- The Firm does not meet the Firmwide Financial Threshold.

For avoidance of doubt, cancellation of the At Risk PSUs, in whole or part, for one or more of the above factors may occur prior to the end of the Performance Period and the maximum number of At Risk PSUs subject to cancellation prior to the end of the Performance Period will be up to fifty percent of the Target Award Number.

In the event that your employment terminates due to "Job Elimination", "Full Career Eligibility", "Government Office" or "Disability" thereby entitling you to continued vesting in your award, (or potentially acceleration due to satisfaction of the Government Office Requirements), the cancellation circumstances described above will continue to apply.

Any determination above with respect to protection-based vesting provisions is subject to ratification by the Compensation and Management Development Committee of the Board of Directors of JPMorgan Chase ("Committee"). In the case of an award to any current or former CEO, all such determinations shall be made by the Committee and ratified by the Board.

## Bonus Recoupment

In consideration of the grant of this award, you agree that you are subject to the JPMorgan Chase Bonus Recoupment Policy (or successor policy) as in effect from time to time as it applies both to the cash incentive compensation awarded to you for performance year 20___ and to this award. You can access this policy as currently in effect by clicking the following link to the JPMorgan Chase \& Co. Corporate Governance Principles web page and scrolling to the Bonus Recoupment Policy located under the section titled "Other Matters":

## https://about.jpmorganchase.com/about/governance/corporate-governance-principles

For the avoidance of doubt, nothing in these terms and conditions in any way limits the rights of the Firm under the JPMorgan Chase Bonus Recoupment Policy (or successor policy).

## EMEA Malus and Clawback Policy - Identified Staff

In consideration of grant of this award, and without prejudice to any other provision of this Award Agreement, you agree that you are subject to the JPMorgan Chase EMEA Malus and Clawback Policy - Identified Staff (and any applicable supplement(s) to that policy) or successor policy as in effect from time to time as it applies both to the cash incentive compensation awarded to you for performance year $\qquad$ and to this award.

The provisions of the JPMorgan Chase EMEA Malus and Clawback Policy - Identified Staff set out the terms and conditions applying to the grant of this award which ensure that the Firm is able to meet its regulatory obligations to operate malus (reduce) and/or clawback (recover) to awards in certain circumstances. These include, but are not limited to, where (i) there is a material downturn in the Firm's financial performance or (ii) where the Firm is required to hold more capital. The circumstances in which the events at (i) and (ii) would occur are analogous to some of the circumstances considered under the existing Firmwide terms and conditions, in particular the Bonus Recoupment Policy and the Protection Based Vesting provisions.

You can access this policy as currently in effect in My Rewards through the following link: https://myrewards.jpmorganchase.com

## Termination of Employment

Except as explicitly set forth below under the subsections captioned "--Job Elimination", "--Full Career Eligibility", "--Government Office" or "--Disability" or under the section captioned "Death", this award will be cancelled in full effective on the date your employment with the Firm terminates for any reason.

Subject to these terms and conditions (including, but not limited to, sections captioned "Protection-Based Vesting", "Bonus Recoupment", "EMEA Malus and Clawback Policy - Identified Staff", "Your Obligations" and "Remedies") you will be eligible to continue to vest (as you otherwise would vest if you were still employed by JPMorgan Chase) with respect to your award in accordance with its terms and conditions following the termination of your employment if one of the following circumstances applies to you:

## - Job Elimination

In the event that the Director of Human Resources or nominee in his or her sole discretion determines that

- the Firm terminated your employment because your job was eliminated, and
- after you are notified that your job will be eliminated, you provided such services as requested by the Firm in a cooperative and professional manner, and
- you satisfied the Release/Certification Requirements set forth below.


## - Full Career Eligibility

In the event that the Director of Human Resources or nominee in his or her sole discretion determines that

- you voluntarily terminated your employment with the Firm, had completed at least five years of continuous service with the Firm immediately preceding your termination date, and
- your Recognized Service (as defined below) on your date of termination equaled or exceeded 15 years, or your combined Recognized Service with the Firm and external professional experience (as attested by you to the Firm) equaled or exceeded 30 years, and
- you provided at least 180 days advance written notice to the Firm of your intention to voluntarily terminate your employment under this provision, during which notice period you provided such services as requested by the Firm in a cooperative and professional manner and you did not perform any services for any other employer, and
- continued vesting shall be appropriate, which determination shall be made prior to your termination and will be based on your performance and conduct (before and after providing notice), and
- for 36 months from the date of grant of this award, you do not either perform services in any capacity (such as an employee, contractor, consultant advisor, or self-employed individual, whether paid or unpaid) for a Financial Services Company (as defined below) or work in your profession (whether or not for a Financial Services Company); provided that you may work for a government, education or Not-for-Profit Organization (as defined below), and
- you satisfied the Release/Certification Requirements set forth below.

After receipt of such advance written notice, the Firm may choose to have you continue to provide services during such 180 -day period as a condition to continued vesting or shorten the length of the 180 -day period at the Firm's sole discretion, but to a date no earlier than the date you would otherwise meet the service requirement.

Additional advance notice requirements may apply for employees subject to notice period policies. (See "Notice Period" below.)

- Government Office

In the event that you voluntarily terminate your employment with the Firm to accept a Government Office or become a candidate for an elective Government Office, as described at the end of these terms and conditions under the section captioned "Government Office Requirements". See also definition of Government Office in the section captioned "Definitions".

- Disability

In the event that

- your employment with the Firm terminates because (i) you are unable to return to work while you are receiving benefits under the JPMorgan Chase Long Term Disability Plan, or for non-U.S. employees, under the equivalent JPMorgan Chasesponsored local country plan (in either case, "LTD Plan"), or (ii) if you are not covered by a LTD Plan, you are unable to return to work due to a long-term disability that would qualify for benefits under the applicable LTD Plan, as determined by the Firm or a third-party designated by the Firm; provided that you ( x ) request in writing continued vesting due to such disability within 30 days of the date your employment terminates, and (y) provide any requested supporting documentation and (z) receive the Firm's written consent to such treatment, and
- you satisfied the Release/Certification Requirements set forth below.


## Release/Certification

To qualify for continued vesting after termination of your employment under any of the foregoing circumstances:

- you must timely execute and deliver a release of claims in favor of the Firm, having such form and terms as the Firm shall specify,
- with respect to Full Career Eligibility, prior to the termination of your employment, you must confirm with management that you meet the eligibility criteria (including providing at least 180 days advance written notification), advise that you are seeking to be treated as an individual eligible for Full Career Eligibility, and receive written consent to such continued vesting,
- with respect to "Full Career Eligibility" and "Government Office", it is your responsibility to take the appropriate steps to certify to the Firm prior to each vesting date while the employment restrictions are outstanding on the authorized form of the Firm that you have complied with the employment restrictions applicable to you (as described herein) from your date of termination of employment through the applicable vesting date,
- with respect to Disability, you must satisfy the notice and documentation described above and receive written consent to such continued vesting, and
- in all cases, otherwise complied with all other terms of the Award Agreement. (See section captioned "Your Obligations" below.)

Death
If you die while you are eligible to vest in this award, your designated beneficiary on file with the Firm's Stock Administration Department (or your estate or if no beneficiary has been designated or survives you or if beneficiary designation is not recognized locally) may be entitled to receive a distribution of a number of shares of Common Stock associated with your award.

Should you die after the end of the Performance Period, your beneficiary will receive shares of Common Stock equal to any outstanding PSUs.

Should you die during the Performance Period, your Beneficiary will receive shares of Common Stock based on the average performance of all completed calendar years, multiplied by one-third of the Target Award Number of PSUs for each completed calendar year in the Performance Period, and using the Award Payout Percentage equal to 100 percent for any remaining calendar years in the Performance Period.

Any shares will be distributed no later than the end of the calendar year immediately following the calendar year which contains your date of death; however, our administrative practice is to register such shares in the name of your beneficiary or estate within 60 days of the Firm's receipt of any required documentation.

## Your Obligations

In consideration of the grant of this award, you agree to comply with and be bound by the obligations set forth below next to the subsections captioned "--Non-Solicitation of Employees and Customers", "--Confidential Information", "--Non-Disparagement", "-Cooperation", "--Compliance with Award Agreement", and "--Notice Period".

## - Non-Solicitation of Employees and Customers

During your employment by the Firm and for the longer of the (i) one year period following the termination of your employment or, (ii) if your award is not cancelled as of your termination date, the three year period from Grant Date, you will not directly or indirectly, whether on your own behalf or on behalf of any other party, without the prior written consent of the Director of Human Resources: (i) solicit, induce or encourage any of the Firm's then current employees to leave the Firm or to apply for employment elsewhere, unless such current employee has received official, written notice that his or her employment will be terminated due to job elimination (ii) hire any employee or former employee who was employed by the Firm at the date your employment terminated, unless the individual's employment terminated because his or her job was eliminated, or the individual's employment with the Firm has been terminated for more than six months, (iii) to the fullest extent enforceable under applicable law, solicit or induce or attempt to induce to leave the Firm, or divert or attempt to divert from doing business with the Firm, any then current customers, suppliers or other persons or entities that were serviced by you or whose names became known to you by virtue of your employment with the Firm, or otherwise interfere with the relationship between the Firm and such customers, suppliers or other persons or entities. This does not apply to publicly known institutional customers that you service after your employment with the Firm without the use of the Firm's confidential or proprietary information.

These restrictions do not apply to authorized actions you take in the normal course of your employment with the Firm, such as employment decisions with respect to employees you supervise or business referrals in accordance with the Firm's policies.

## - Confidential Information

You will not, either during your employment with the Firm or thereafter, directly or indirectly (i) use or disclose to anyone any confidential information related to the Firm's business, or (ii) communicate with the press or other media about matters related to the Firm, its customers or employees, including matters and activities relating to your employment, or the employment of others, by the Firm, in the case of either (i) or (ii), except as explicitly permitted by the JPMorgan Chase Code of Conduct and applicable policies or law or legal process. In addition, following your termination of employment, you will not, without prior written authorization, access the Firm's private and internal information through telephonic, intranet or internet means. "Confidential information" shall have the same meaning for the Award Agreement as it has in the JPMorgan Chase Code of Conduct.

Nothing in this award precludes you from reporting to the Firm's management or directors, the government, a regulator, a selfregulatory agency, your attorneys or a court, conduct you believe to be in violation of the law or concerns of any known or suspected Code of Conduct violation. It is also not intended to prevent you from responding truthfully to questions or requests from the government, a regulator or in a court of law.

- Non-Disparagement

You will not, either during your employment with the Firm or thereafter, make or encourage others to make any public statement or release any information in verbal, written, electronic or any other form, that is intended to, or reasonably could be foreseen to, disparage, embarrass or criticize the Firm or its employees, officers, directors or shareholders as a group. This shall not preclude you from reporting to the Firm's management or directors or to the government or a regulator conduct you believe to be in violation of the law or the Firm's Code of Conduct or responding truthfully to questions or requests for information to the government, a regulator or in a court of law in connection with a legal or regulatory investigation or proceeding.

- Cooperation

You will cooperate fully with and provide full and accurate information to the Firm and its counsel with respect to any matter (including any audit, tax proceeding, litigation, investigation or governmental proceeding) with respect to which you may have
knowledge or information, subject to reimbursement for actual, appropriate and reasonable out-of-pocket expenses incurred by you.

## - Compliance with Award Agreement

You will provide the Firm with any information reasonably requested to determine compliance with the Award Agreement, and you authorize the Firm to disclose the terms of the Award Agreement to any third party who might be affected thereby, including your prospective employer.

## - Notice Period

If you are subject to a notice period or become subject to a notice period after the Grant Date, whether by contract or by policy, that requires you to provide advance written notice of your intention to terminate your employment ("Notice Period"), then as consideration for this award and continued employment, you will provide the Firm with the necessary advance written notice that applies to you, as specified by such contract or policy.

After receipt of your notice, the Firm may choose to have you continue to provide services during the applicable Notice Period or may place you on a paid leave for all or part of the applicable Notice Period. During the Notice Period, you shall continue to devote your full time and loyalty to the Firm by providing services in a cooperative and professional manner and not perform any services for any other employer and shall receive your base salary and certain benefits until your employment terminates. You and the Firm may mutually agree to waive or modify the length of the Notice Period.

Regardless of whether a Notice Period applies to you, you must comply with the 180-day advance notice period described under the subsection captioned "-- Full Career Eligibility" in the event you wish to terminate employment under that same subsection.

## Remedies

- Detrimental Conduct, Risk Related and Other Cancellation/Recapture

In addition to the cancellation provisions described under the sections captioned "Protection-Based Vesting", "Qualitative Performance Factor", "Bonus Recoupment", "EMEA Malus and Clawback Policy - Identified Staff", "Recapture Provisions" and "Termination of Employment", up to $100 \%$ of your award (for the avoidance of doubt, including any associated Reinvested Dividend Equivalent Share Units as well as the Calculated PSUs) your outstanding PSUs under this award may be cancelled if the Firm in its sole discretion determines that:

- Any of the following detrimental and risk-related conduct has occurred:
- you engaged in conduct detrimental to the Firm insofar as it causes material financial or reputational harm to the Firm or its business activities, or
- this award was based on materially inaccurate performance metrics, whether or not you were responsible for the inaccuracy, or
- this award was based on a material misrepresentation by you, or
- you improperly or with gross negligence failed to identify, raise or assess, in a timely manner and as reasonably expected, risks and/or concerns with respect to risks material to the Firm or its business activities, or
- your employment was terminated for Cause (see section captioned "Definitions" below) or, in the case of a determination after the termination of your employment, that your employment could have been terminated for Cause.
- you have failed to comply with any of the advance notice/cooperation requirements or employment restrictions applicable to your termination of employment, or
- you have failed to return the required forms specified under the section captioned "Release/Certification" by the specified deadline, or
- you have violated any of the provisions as set forth above in the section captioned "Your Obligations".

To the extent provided under the subsection captioned "--Amendment" below, JPMorgan Chase reserves the right to suspend vesting of this award and/or distribution of shares under this award, including, without limitation, during any period that JPMorgan Chase is evaluating whether this award is subject to cancellation and/or recovery and/or whether the conditions for distributions of shares under this award are satisfied. The Firm is not responsible for any price fluctuations during any period of suspension and, if applicable, suspended units will be reinstated consistent with Plan administration procedures. See also "Administrative Provisions-No Ownership Rights/Other Limitations".

- Recovery

In addition, you may be required to pay the Firm up to an amount equal to the Fair Market Value (determined as of the applicable vesting date or acceleration date) of the gross number of shares of Common Stock previously distributed, including vested shares subject to the Holding Requirements, under this award as follows:

- Payment may be required with respect to any shares of Common Stock distributed within the three year period prior to a notice-of-recovery under this section, if the Firm in its sole discretion determines that:
- you committed a fraudulent act, or engaged in knowing and willful misconduct related to your employment;
- you violated any of the provisions as set forth above in the section captioned "Your Obligations;" or
- you violated the employment restrictions set forth in the subsection "Full Career Eligibility" or "Government Office" following the termination of your employment.
- In addition, payment may be required with respect to any shares distributed within the one year period prior to notice-ofrecovery under this section, if the Firm in its sole discretion determines appropriate as a result of the detrimental and riskrelated conduct listed in the above "Detrimental Conduct, Risk Related and Other Cancellation/Recapture" subsection".

Notice-of-recovery under this subsection is a written (including electronic) notice from the Firm to you either requiring payment under this subsection or stating that JPMorgan Chase is evaluating requiring payment under this subsection. Without limiting the foregoing, notice-of-recovery will be deemed provided if the Firm makes a good faith attempt to provide written (including electronic) notice at your last known address maintained in the Firm's employment records. For the avoidance of doubt, a notice-of-recovery that the Firm is evaluating requiring payment under this subsection shall preserve JPMorgan Chase's rights to require payment as set forth above in all respects and the Firm shall be under no obligation to complete its evaluation other than as the Firm may determine in its sole discretion.

For purposes of this subsection, shares distributed under this award include shares withheld for tax purposes. However, it is the Firm's intention that you only be required to pay the amounts under this subsection with respect to shares that are or may be retained by you following a determination of tax liability and that you will not be required to pay amounts with respect to shares representing irrevocable tax withholdings or tax payments previously made (whether by you or the Firm) that you will not be able to recover, recapture or reclaim (including as a tax credit, refund or other benefit). Accordingly, JPMorgan Chase will not require you to pay any amount that the Firm or its nominee in his or her sole discretion determines is represented by such withholdings or tax payments.

Payment may be made in shares of Common Stock or in cash. You agree that any repayment will be a lawful recovery under the terms and conditions of your Award Agreement and is not to be construed in any manner as a penalty.

Nothing in the section in any way limits your obligations under "Bonus Recoupment" and "EMEA Malus and Clawback Policy Identified Staff".

- Right to an Injunction

You acknowledge that a violation or attempted violation of the obligations set forth herein will cause immediate and irreparable damage to the Firm, and therefore agree that the Firm shall be entitled as a matter of right to an injunction, from any court of competent jurisdiction, restraining any violation or further violation of such obligations; such right to an injunction, however, shall be cumulative and in addition to whatever other remedies the Firm may have under law or equity.

## Administrative Provisions

Withholding Taxes: As a result of legal and/or tax obligations the Firm, in its sole discretion, may (i) retain from each distribution the number of shares of Common Stock required to satisfy applicable tax obligations or (ii) implement any other desirable or necessary procedures, so that appropriate withholding and other taxes are paid to the competent authorities with respect to the vested shares and the award. This may include but is not limited to (i) a market sale of a number of such shares on your behalf substantially equal to the withholding or other taxes, (ii) to the extent required by law, withhold from cash compensation, an amount equal to any withholding obligation with respect to the award and shares that vest under this award, and (iii) retaining shares that vest under this award until you pay any taxes associated with the award and vested shares directly to the competent authorities.

Right to Set Off: Although the Firm expects to settle this award in share(s) of Common Stock as of the applicable vesting date, as set forth in your Award Agreement, the Firm may, to the maximum extent permitted by applicable law (including Section 409A of the Code to the extent it is applicable to you), retain for itself funds or the Common Stock resulting from any vesting of this award to satisfy any obligation or debt that you owe to the Firm. Notwithstanding any account agreement with the Firm to the contrary, the Firm will not recoup or recover any amount owed from any funds or unrestricted securities held in your name and maintained at the Firm pursuant to such account agreement to satisfy any obligation or debt or obligation owed by you under this award without your consent. This restriction on the Firm does not apply to accounts described and authorized in "No Ownership Rights/Other Limitations" described below.

No Ownership Rights/Other Limitations: PSUs do not convey the rights of ownership of Common Stock and do not carry voting rights. No shares of Common Stock will be issued to you until after the number of PSUs have been determined, if any, and have vested. Shares will be issued in accordance with JPMorgan Chase's procedures for issuing stock. By accepting this award, you authorize the Firm, in its sole discretion, to establish on your behalf a brokerage account in your name with the Firm or book-entry account with our stock plan administrator and/or transfer agent and deliver to that account any vested shares derived from the award. You also acknowledge that should there be a determination that the cancellation provisions of this award apply during the
period when the vesting of any outstanding PSUs has been suspended, then you agree that such PSUs may be cancelled in whole or part. (See Sections captioned "Protection-Based Vesting", "Qualitative Performance Factor", "Bonus Recoupment", "EMEA Malus \& Clawback Policy - Identified Staff", "Termination of Employment" and "Remedies", as well as the subsection captioned "-Amendment" permitting suspension of vesting.)

With respect to any applicable vesting date, JPMorgan Chase may impose for any reason, as of such vesting date for such period as it may specify in its sole discretion, such restrictions on the Common Stock to be issued to you as it may deem appropriate, including, but not limited to, restricting the sale, transfer, pledging, assignment, hedging or encumbrance of such shares of Common Stock. Such restrictions described in the last sentence shall not impact your right to vote or receive dividends with respect to the Common Stock. By accepting this award, you acknowledge that during such specified period should there be a determination that the recovery provisions of this award apply, then you agree that you may be required to pay the Firm up to an amount equal to the Fair Market Value (determined as of the applicable vesting date) of the gross number of shares subject to such restrictions (notwithstanding the limitation set forth in the "Right to Set Off" subsection above). (See sections captioned "Bonus Recoupment" and "Remedies".)

Binding Agreement: The Award Agreement will be binding upon any successor in interest to JPMorgan Chase, by merger or otherwise.

Not a Contract of Employment: Nothing contained in the Award Agreement constitutes a contract of employment or continued employment. Employment is "at-will" and may be terminated by either you or JPMorgan Chase for any reason at any time. This award does not confer any right or entitlement to, nor does the award impose any obligation on the Firm to provide, the same or any similar award in the future and its value is not compensation for purposes of determining severance.

Section 409A Compliance: To the extent that Section 409A of the Code is applicable to this award, distributions of shares hereunder are intended to comply with Section 409A of the Code, and the Award Agreement, including these terms and conditions, shall be interpreted in a manner consistent with such intent.

Notwithstanding anything herein to the contrary, if you (i) are subject to taxation under the Code, (ii) are a specified employee as defined in the JPMorgan Chase 2005 Deferred Compensation Plan and (iii) have incurred a separation from service (as defined in that Plan with the exception of death) and if any units/shares under this award represent deferred compensation as defined in Section 409A and such shares are distributable (under the terms of this award) within six months following, and as a result of your separation from service, then those shares will be delivered during the first calendar month after the expiration of six full months from date of your separation from service. Further, if your award is not subject to a substantial risk of forfeiture as defined by regulations issued under Section 409A of the Code, then the remainder of each calendar year immediately following each vesting date set forth in your Award Agreement shall be a payment date for purposes of distributing the vested portion of the award.

Change in Outstanding Shares: In the event of any change in the outstanding shares of Common Stock by reason of any stock dividend or split, recapitalization, issuance of a new class of common stock, merger, consolidation, spin-off, combination or exchange of shares or other similar corporate change, or any distributions to stockholders of Common Stock other than regular cash dividends, the Committee will make an equitable substitution or proportionate adjustment, in the number or kind of shares of Common Stock or other securities issued or reserved for issuance pursuant to the Plan and to any PSUs outstanding under this award for such corporate events.

Other Equitable Adjustments: Except for the "Qualitative Performance Factor", the Committee may make adjustments (up or down) to the award as it deems to be equitable, to maintain the intended economics of the award in light of changed circumstances, which may include unusual or non-recurring events affecting the Firm (or the Performance Companies) or its financial statements in each case resulting from changes in accounting methods, practices or policies, changes in capital structure by reason of legal or regulatory requirements and such other changed circumstances, as the Committee may deem appropriate.

Interpretation/Administration: The Committee has sole and complete authority to interpret and administer this Award Agreement, including, without limitation, the power to (i) interpret the Plan and the terms of this Award Agreement; (ii) determine the reason for termination of employment; (iii) determine application of the post-employment obligations and cancellation and recovery provisions; (iv) decide all claims arising with respect to this award; and (v) delegate such authority as it deems appropriate. Any determination contemplated hereunder by the Committee, the Firm, the Director of Human Resources or their respective delegates or nominees shall be binding on all parties.

Notwithstanding anything herein to the contrary, the determinations of the Director of Human Resources, the Firm, the Committee and their respective delegates and nominees under the Plan and the Award Agreements are not required to be uniform. By way of clarification, the Committee, the Firm, the Director of Human Resources and their respective delegates and nominees shall be entitled to make non-uniform and selective determinations and modifications under Award Agreements and the Plan.

Amendment: The Committee or its nominee reserves the right to amend this Award Agreement in any manner, at any time and for any reason; provided, however, that no such amendment shall materially adversely affect your rights under this Award Agreement without your consent except to the extent that the Committee or its delegate considers advisable to (x) comply with applicable laws or changes in or interpretation of applicable laws, regulatory requirements and accounting rules or standards and/or (y) make a change in a scheduled vesting date or impose the restrictions described above under "No Ownership Rights/Other Limitations", in either case, to the extent permitted by Section 409A of the Code if it is applicable to you. This Award Agreement may not be amended except in writing signed by the Director of Human Resources of JPMorgan Chase.

Severability: If any portion of the Award Agreement is determined by the Firm to be unenforceable in any jurisdiction, any court or arbitrator of competent jurisdiction or the Director of Human Resources may reform the relevant provisions (e.g., as to length of service, time, geographical area or scope) to the extent the Firm (or court/arbitrator) considers necessary to make the provision enforceable under applicable law.

Accelerated Distribution for Ethics or Conflict Reasons Resulting From Employment by a Government Entity: Upon receipt of satisfactory evidence that applicable United States federal, state, local, foreign or supranational ethics or conflict of interest laws or regulations require you to divest your interest in JPMorgan Chase PSUs, the Firm may accelerate the distribution of all or part of your outstanding award effective on or before the required divestiture date and waive the Holding Requirement; provided that no accelerated distribution shall occur if the Firm determines that such acceleration will violate Section 409A of the Code. Accelerated distribution under this paragraph does not impact the dates as set forth in the "Remedies" section above. The time period for recovery shall be determined by the originally scheduled vesting date set forth in your Award Agreement or distribution date prior to any acceleration event.

If you have voluntarily terminated your employment and have satisfied the requirements of the section captioned "Government Office Requirements", acceleration shall apply (to extent required) to the percentage of your outstanding award that would continue to vest under that section. In the case of a termination of employment where the award is outstanding as a result of the subsections entitled "Job Elimination" or "Full Career Eligibility", then acceleration shall apply, to the extent required, to the full outstanding award. Subject to the two foregoing sections, the number of shares of Common Stock to be received on acceleration shall be determined using the methodology set forth under the section captioned "Death".

To the extent you have vested shares under this award subject to the Holding Requirement and become subject to divestiture requirement as forth herein, the Firm may waive the holding period to the extent required.

Notwithstanding an accelerated distribution or waiver of the Holding Requirement pursuant to the foregoing, you will remain subject to the applicable terms of your Award Agreement as if your award had remained outstanding for the duration of the vesting period and shares had been distributed as scheduled as of each vesting date, including, but not limited to, repayment obligations set forth in the section captioned "Remedies" and the employment restrictions in the sections captioned "Protection-Based Vesting" and "Government Office Requirements" and the subsection "Full Career Eligibility".

Use of Personal Data: By accepting this award, you acknowledge that the Firm may process your personal data for the purposes of providing you this award (to include registration of shares and units or establishing a brokerage account on your behalf) and disclosing to third parties, such as service providers or tax and regulatory authorities (e.g., for compensation reporting and payroll tax withholding purposes). Additionally, you agree that the Firm may transfer your personal data to jurisdictions that do not afford protections equivalent to the protections in the country in which we collected your data. Where applicable law provides a right to terminate the foregoing authorization, you may do so at any time, except with respect to tax and regulatory reporting and the Firm's legal and regulatory obligations. In the event you terminate this authorization, your award will be cancelled.

Governing Law: This award shall be governed by and construed in accordance with the laws of the State of New York, without regard to conflicts of law principles.

Choice of Forum: By accepting this award under the Plan, you agree (and have agreed) that to the extent not otherwise subject to arbitration under an arbitration agreement between you and the Firm, any dispute arising directly or indirectly in connection with this award or the Plan shall be submitted to arbitration in accordance with the rules of the American Arbitration Association if so elected by the Firm in its sole discretion. In the event such a dispute is not subject to arbitration for any reason, you agree to accept the exclusive jurisdiction and venue of the United States District Court for the Southern District of New York with respect to any judicial proceeding in connection with this award or the Plan. You waive, to the fullest extent permitted by law, any objection to personal jurisdiction or to the laying of venue of such dispute and further agree not to commence any action arising out of or relating to this award or the Plan in any other forum.

Waiver of Jury Trial/Class Claims: By accepting this award, you agree, with respect to any claim brought in connection with your employment with the Firm in any forum (i) to waive the right to a jury trial and (ii) that any judicial proceeding or arbitration claim
will be brought on an individual basis, and you hereby waive any right to submit, initiate, or participate in a representative capacity or as a plaintiff, claimant or member in a class action, collective action, or other representative or joint action.

Litigation: By accepting any award under the Plan, you agree (and have agreed) that in any action or proceeding by the Firm (other than a derivative suit in the right of the Firm) to enforce the terms and conditions of this Award Agreement or any other Award Agreement where the Firm is the prevailing party, the Firm shall be entitled to recover from you its reasonable attorney fees and expenses incurred in such action or proceeding. In addition, you agree that you are not entitled to, and agree not to seek, advancement of attorney fees and indemnification under the Firm's By-Laws in the event of such a suit by the Firm.

Non-transferability: Neither this award or any other outstanding awards of restricted stock units or of performance based share units, nor your interests or rights in any such awards, shall be assigned, pledged, transferred, hedged, hypothecated or subject to any lien. An award may be transferred following your death by will, the laws of descent or by a beneficiary designation on file with the Firm.

## Definitions

"Average Tangible Common Equity" means annual average common stockholders' equity less annual average goodwill and annual average identifiable intangible assets. Annual averages of the components of Average Tangible Common Equity will be calculated using quarterly balances as reported in publically available financial disclosures. In the event that quarterly balances are not available, annual year end balances will be used. This calculation is used solely for purposes of the Performance Ranking.
"Award Payout Percentage" means the applicable percentage specified in the footnote to the Performance Table.
"Calculated PSUs" means the number of PSUs determined by multiplying the Target Award Number (after giving effect to any cancellation thereof, in whole or in part) by the Award Payout Percentage corresponding to the Firm's Performance Ranking based on the three-year average performance for the Performance Period (both percentage and ranking, as set forth in the footnote to the Performance Table); provided that if the average of the Firm's Reported ROTCE for the Performance Period either equals or exceeds
$\qquad$ $\%$ or is less than ___ \% (without taking into account any rounding conventions used), $\qquad$ percent or $\qquad$ , respectively as the case may be, shall be substituted for the Performance Period's Award Payout Percentage in calculating the number of PSUs to distribute. For avoidance of doubt, any cancellation of this award (in whole or in part) during the Performance Period will reduce the Target Award Number.
"Calculation Agent" means a third party entity not owned or controlled by the Firm, such as an accounting or consulting firm, retained from time to time by the Director of Human Resources or his/her delegate.
"Cause" means a determination by the Firm that your employment terminated as a result of your (i) violation of any law, rule or regulation (including rules of self-regulatory bodies) related to the Firm's business, (ii) indictment or conviction of a felony, (iii) commission of a fraudulent act, (iv) violation of the JPMorgan Chase Code of Conduct or other Firm policies or misconduct related to your duties to the Firm (other than immaterial and inadvertent violations or misconduct), (v) grossly inadequate performance of the duties associated with your position or job function or failure to follow reasonable directives of your manager, or (vi) any act or failure to act that is injurious to the interests of the Firm or its relationship with a customer, client or an employee.
"Financial Services Company" means a business enterprise that engages in any of the following services (itself or through an affiliate or subsidiary), regardless of whether such services are the principle strategy or revenue-generating activity:

- commercial or retail banking, including, but not limited to, commercial, institutional and personal trust, custody and/or lending and processing services, internet banking, originating and servicing mortgages, issuing and servicing credit cards, payment servicing or processing or merchant services,
- insurance, including but not limited to, guaranteeing against loss, harm, damage, illness, disability or death, providing and issuing annuities, acting as principal, agent or broker for purpose of the forgoing,
- financial, investment or economic advisory services, including but not limited to, investment banking services (such as advising on mergers or dispositions, underwriting, dealing in, or making a market in securities or other similar activities), brokerage services, investment management services, asset management services, foreign exchange services, interbank networks and hedge funds,
- issuing, trading or selling instruments representing interests in pools of assets or in derivatives instruments,
- financial technology ("Fintech") companies, such as those selling blockchain services, or offering or selling financial products/ services,
- advising on, or investing in, private equity or real estate funds or ventures, or
- any similar activities that the Director of Human Resources or nominee determines in his or her sole discretion constitute financial services.
"Firm Reported ROTCE" means the Firm's percentage return on tangible common equity for each year in the Performance Period (as calculated for use in its publicly available year-end financial disclosures without taking into account any rounding conventions used for financial reporting purposes).
"Firmwide Financial Threshold" means a cumulative return on tangible common equity for calendar years 20__, 20__ and 20__ not less than ___\%. Cumulative return on tangible common equity means (i) the sum of the Firm's reported net income for all three calendar years, divided by (ii) reported year-end tangible equity averaged over the three years.
"Government Office" means (i) a full-time position in an elected or appointed office in local, state, or federal government (including equivalent positions outside the U.S. or in a supranational organization), not reasonably anticipated to be a full-career position, or (ii) conducting a bona fide full-time campaign for such an elective public office after formally filing for candidacy, where it is customary and reasonably necessary to campaign full-time for the office.
"Line of Business" means a business unit of the Firm (or one or more business units designated below under the definition "Line of Business Financial Threshold" of the Corporate Investment Bank). All Corporate Functions (including the functions of the Chief Investment Office) are considered a single Line of Business.
"Line of Business Financial Threshold" means the financial threshold set forth below: for the following Lines of Business based on the Firm's management reporting system:

| Asset \& Wealth Management | Annual negative pre-tax pre-provision income ${ }^{1}$ |
| :---: | :---: |
| Card and Auto | Annual negative pre-tax pre-Ioan loss reserve income ${ }^{2}$ |
| Commercial Banking | Annual negative pre-tax pre-Ioan loss reserve income ${ }^{2}$ |
| Corporate Investment Bank | Annual negative pre-tax pre-provision income ${ }^{1}$ for CIB overall or annual negative allocated product revenues (excluding XVA) for: <br> - Fixed Income <br> - Equities <br> - Securities Services <br> - Global Investment Banking <br> - Payments |
| Consumer Banking, J.P. Morgan Wealth Management and Business Banking | Annual negative pre-tax pre-Ioan loss reserve income ${ }^{2}$ |
| Corporate Functions (including Chief Investment Office) | Annual negative pre-tax pre-provision income ${ }^{1}$ at the Firm level |
| Home Lending | Annual negative pre-tax pre-Ioan loss reserve income ${ }^{2}$ |
| ${ }^{1}$ Pre-tax pre-provision income means Revenue less Expenses <br> ${ }^{2}$ Pre-tax pre-loan loss reserve income means Revenue less (Expenses plus Net Charge-offs) |  |

"Not-for-Profit Organization" means an entity exempt from tax under state law and under Section 501(c)(3) of the Code. Section 501(c)(3) only includes entities organized and operated exclusively for religious, charitable, scientific, testing for public safety, literary or educational purposes, or to foster national or international amateur sports competition or for the prevention of cruelty to children or animals. Not-for-Profit Organization shall also mean entities outside the United States exempt from local and national tax laws because they are organized and operated exclusively for purposes identical to those applicable to Section 501(c)(3) organization.
"Performance Companies" mean the following institutions which have business activities that overlap with a significant portion of the Firm's revenue mix: $\qquad$ , and $\qquad$ .

If, during the Performance Period, one or more Performance Companies shall merge, engage in a spin-off or otherwise experience a material change in its revenue mix or business activities or its existence or its primary businesses shall terminate or cease due to receivership, bankruptcy, sale, or otherwise, then the Committee may eliminate such institution from the list of Performance Companies or make such other equitable adjustments, such as adding an acquirer or a new company to the list of Performance Companies, as it deems appropriate, with any such changes having effect for purposes of all calculations hereunder on a prospective basis from the date the applicable change is made.
"Performance Period" means calendar years 20__, 20__ and 20__.
"Performance Ranking" means the ranking of the average ROTCE of the Firm as compared to the ranking of the average ROTCE of the Performance Companies as specified in the footnote to the Performance Table for the Performance Period.

[^141]| Firm Reported ROTCE (average performance) | Award Payout Percentage | Performance Ranking ${ }^{1}$ (average performance) | Award Payout Percentage ${ }^{1}$ |
| :---: | :---: | :---: | :---: |
| =>__\% | \% |  | \% to ___\% |
| __\% to ___\% | Pay by relative ROTCE scale | -- | ___\% to ___\% |
| <__\% | __\% | - | \% to __\% |
|  |  | - | __\% to ___\% |

1. The following sets forth the precise Award Payout Percentage corresponding to the Firm's Performance Ranking (when compared to Performance Companies): \#_ = _\%; \#_ = _ \%; \#_ = _ \%; \#_ = _ \%; \#_ = _ \%; \#_ = _ \%; \#_ = _ \%; \#_ = _ \%; \#_ = _ \%; \#_ = _ \%; \#_ = _ \%; \#_ = _ \%; etc.

If, after the calculation of the Performance Ranking, there is a tie, the tie shall be disregarded for purposes of determining the Award Payout Percentage. For example, in the case of a tie for the $\qquad$ ranking between the Firm and a Performance Company, the Firm shall be treated as having satisfied that ranking. In the case of that same tie among Performance Companies, the $\qquad$ and $\qquad$ rankings will be deemed to have been satisfied.
"Recognized Service" means the period of service as an employee set forth in the Firm's applicable service-related policies.
"ROTCE" means for the Firm and each of the Performance Companies a percentage derived by, for each year in the Performance Period, dividing (i) annual earnings from continuing operations less dividends on preferred stock as set forth in published financial disclosures by (ii) the Average Tangible Common Equity for the year. If, prior to the end of the vesting period, the Firm or any Performance Company restates its published financial statements for any year in the Performance Period, ROTCE for that year shall be recalculated for the Firm or Performance Company with the Performance Ranking adjusted, if necessary. This calculation is used solely for purposes of the Performance Ranking.
"Target Award Number" means the number of PSUs designated as such in the Award Agreement.

## Government Office Requirements

You may be eligible to continue vesting in all or part of your award if you voluntarily resign to accept a Government Office (as defined above) or to become a candidate for an elective Government Office.

## Full Career Eligibility:

"Government Office Requirements" does not apply to you if you satisfy the subsection captioned "--Full Career Eligibility" as of the date that you voluntarily terminate your employment with the Firm.

## Eligibility:

Eligibility for continued vesting is conditioned on your providing the Firm:

- At least 60 days' advance written notice of your intention to resign to accept or pursue a Government Office (see section captioned "Definitions"), during which period you must perform in a cooperative and professional manner services requested by the Firm and not provide services for any other employer. The Firm may elect to shorten this notice period at the Firm's sole discretion.
- Confirmation, in a form satisfactory to the Firm, that vesting in this award pursuant to this provision would not violate any applicable law, regulation or rule.
- Documentation in a form satisfactory to the Firm that your resignation is for the purpose of accepting a Government Office or becoming a candidate for a Government Office. (See section captioned "Definitions".)


## Portion of Your Award Subject to Continued Vesting:

Subject to the conditions below, the percentage of this award that will continue to vest in accordance with this award's original schedule will be based on your years of continuous service completed with the Firm immediately preceding your termination date, as follows:

- 50\% if you have at least 3 but less than 4 years of continuous service,
- $75 \%$ if you have at least 4 but less than 5 years of continuous service, or
- $100 \%$ if you have 5 or more years of continuous service.

The portion of this award subject to continued vesting above is referred to as the "CV Award" and the portion not subject to continued vesting will be cancelled as of the date your employment terminates.

## Conditions for Continued Vesting of Award:

- You must remain in a non-elective Government Office for two or more years after your employment with the Firm terminates to be eligible to receive the CV Award; provided that if your non-elective Government Office is for a period less than two years, you will be eligible to receive the CV Award if it has a vesting date during your period of Government Service; or
- In the case of resignation from the Firm to campaign for an elective Government Office, your name must be on the primary or final public ballot for the election. (If you are not elected, see below for employment restrictions.)
For avoidance of doubt, the performance criteria and protection based vesting set forth in these terms and conditions continue to apply to a CV Award.


## Satisfaction of Conditions:

If your service in a Government Office ends two years or more after your employment with the Firm terminates, or in the case of resignation from the Firm to campaign for a Government Office, your name is on the primary or final public ballot for the election and you are not elected, any CV Awards then outstanding and any such awards that would have then been outstanding but for an accelerated distribution of shares (as described in the subsection captioned "--Accelerated Distribution for Ethics or Conflict Reasons Resulting From Employment by a Government Entity") will be subject for the remainder of the applicable vesting period to the same terms and conditions of this Award Agreement, including employment restrictions during the vesting period, as if you had resigned from the Firm having met the requirements for Full Career Eligibility.

## Failure to Satisfy Conditions:

If you do not satisfy the above "Conditions for Continued Vesting of Awards", any outstanding PSUs under the CV Award will be cancelled. You also will be required to repay the Fair Market Value of the number of shares (before tax and other withholdings) of Common Stock distributed to you that would have been outstanding as PSUs on the date you failed to satisfy the "Conditions for Continued Vesting of Award" but for their accelerated distribution (as described in subsection captioned, "Accelerated Distribution for Ethics or Conflict Reasons Resulting From Employment by a Government Entity"). Fair Market Value for this purpose will be determined as the date that the shares were distributed.

## Exhibit 21

JPMorgan Chase \& Co.

## List of subsidiaries

While there are a number of subsidiaries that are required to be reported for various purposes to bank regulators, the following is a list of JPMorgan Chase \& Co.'s significant legal entity subsidiaries as of December 31, 2022, as defined by SEC rules. The list includes the parent company of significant subsidiaries even if the parent company did not meet the definition of a significant subsidiary. Excluded from the list are subsidiaries that, if considered in the aggregate, would not constitute a significant subsidiary under SEC rules as of December 31, 2022.
Also included in the list are certain subsidiaries that have been designated as material legal entities for resolution planning purposes under the Dodd-Frank Act that did not meet the definition of a significant subsidiary under SEC rules.

| December 31, 2022 <br> Name | Organized Under <br> The Laws Of |
| :--- | ---: |
| JPMorgan Chase Bank, National Association | United States |
| Paymentech, LLC | United States |
| J.P. Morgan International Finance Limited | United States |
| JPMorgan Securities Japan Co., Ltd. | Japan |
| J.P. Morgan Capital Holdings Limited | United Kingdom |
| J.P. Morgan Securities PLC | United Kingdom |
| J.P. Morgan SE | Germany |
| JPMorgan Chase Holdings LLC | United States |
| J.P. Morgan Services India Private Limited | India |
| JPMorgan Asset Management Holdings Inc. | United States |
| JPMorgan Distribution Services, Inc. | United Kingdom |
| JPMorgan Asset Management International Limited | United Kingdom |
| JPMorgan Asset Management (UK) Limited | Luxembourg |
| JPMorgan Asset Management Holdings (Luxembourg) S.à r.I. | Luxembourg |
| JPMorgan Asset Management (Europe) S.à r.l. | United States |

## Exhibit 22.2

JPMorgan Chase \& Co.
JPMorgan Chase \& Co. guarantee of subsidiary issuances

| Securities | Guarantor |
| :--- | :--- |
| JPMorgan Chase Financial Company LLC issues, from time to time, | JPMorgan Chase \& Co. |
| its Global Medium-Term Notes, Series A, under the Indenture dated |  |
| February 19, 2016 that are each fully and unconditionally |  |
| guaranteed by JPMorgan Chase \& Co. and are currently offered and |  |
| sold pursuant to a Registration Statement on Form S-3 |  |
| (Registration Statement Nos. 333-236659 and 333-236659-01), |  |
| which was declared effective on April 8, 2020. |  |

## Exhibit 23

## CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on:

Form S-3
(No. 333-236659)
(No. 333-236659-01)
(No. 333-263304)

Form S-8
(No. 333-219702)
(No. 333-219701)
(No. 333-219699)
(No. 333-185584)
(No. 333-185582)
(No. 333-185581)
(No. 333-175681)
(No. 333-158325)
(No. 333-142109)
(No. 333-125827)
(No. 333-112967)
of JPMorgan Chase \& Co. or its affiliates of our report dated February 21, 2023 relating to the financial statements and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.
/s/ PricewaterhouseCoopers LLP
New York, New York
February 21, 2023

Exhibit 31.1
JPMorgan Chase \& Co.

## CERTIFICATION

I, James Dimon, certify that:

1. I have reviewed this Annual Report on Form 10-K of JPMorgan Chase \& Co.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent function):
(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 21, 2023
/s/ James Dimon
James Dimon
Chairman and Chief Executive Officer

## Exhibit 31.2

JPMorgan Chase \& Co.

## CERTIFICATION

I, Jeremy Barnum, certify that:

1. I have reviewed this Annual Report on Form 10-K of JPMorgan Chase \& Co.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent function):
(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 21, 2023
/s/ Jeremy Barnum
Jeremy Barnum
Executive Vice President and Chief Financial Officer

## Exhibit 32

JPMorgan Chase \& Co.

## CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of JPMorgan Chase \& Co. on Form 10-K for the period ended December 31, 2022 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned officers of JPMorgan Chase \& Co., certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of JPMorgan Chase \& Co.

Date: February 21, 2023 By: /s/ James Dimon
James Dimon
Chairman and Chief Executive Officer
Date: February 21, 2023
By: /s/ Jeremy Barnum
Jeremy Barnum
Executive Vice President and Chief Financial Officer

This certification accompanies this Annual Report and shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, or otherwise subject to the liability of that Section.

A signed original of this written statement required by Section 906 has been provided to, and will be retained by, JPMorgan Chase \& Co. and furnished to the Securities and Exchange Commission or its staff upon request.

## UNITED STATES

## SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

## FORM 10-Q

## Quarterly report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

| For the quarterly period ended | Commission file |
| :---: | :---: |
| June 30,2023 | number $1-5805$ |

## JPMorgan Chase \& Co.

(Exact name of registrant as specified in its charter)

| Delaware | 13-2624428 |
| :---: | :---: |
| (State or other jurisdiction of <br> incorporation or organization) | (I.R.S. employer <br> identification no.) |

383 Madison Avenue,
New York, New York
10179
(Address of principal executive offices)
(Zip Code)
Registrant's telephone number, including area code: (212) 270-6000 Securities registered pursuant to Section 12(b) of the Act:

| Title of each class | Trading Symbol(s) | Name of each exchange on which registered |
| :---: | :---: | :---: |
| Common stock | JPM | The New York Stock Exchange |
| Depositary Shares, each representing a one-four hundredth interest in a share of 5.75\% Non-Cumulative Preferred Stock, Series DD | JPM PR D | The New York Stock Exchange |
| Depositary Shares, each representing a one-four hundredth interest in a share of 6.00\% Non-Cumulative Preferred Stock, Series EE | JPM PR C | The New York Stock Exchange |
| Depositary Shares, each representing a one-four hundredth interest in a share of 4.75\% Non-Cumulative Preferred Stock, Series GG | JPM PR J | The New York Stock Exchange |
| Depositary Shares, each representing a one-four hundredth interest in a share of $4.55 \%$ Non-Cumulative Preferred Stock, Series JJ | JPM PR K | The New York Stock Exchange |
| Depositary Shares, each representing a one-four hundredth interest in a share of $\mathbf{4 . 6 2 5 \%}$ Non-Cumulative Preferred Stock, Series LL | JPM PR L | The New York Stock Exchange |
| Depositary Shares, each representing a one-four hundredth interest in a share of $\mathbf{4 . 2 0 \%}$ Non-Cumulative Preferred Stock, Series MM | JPM PR M | The New York Stock Exchange |
| Alerian MLP Index ETNs due May 24, 2024 | AMJ | NYSE Arca, Inc. |
| Guarantee of Callable Fixed Rate Notes due June 10, 2032 of JPMorgan Chase Financial Company LLC | JPM/32 | The New York Stock Exchange |

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. $\boldsymbol{\chi}$ Yes $\square$ No
Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T ( $\$ 232.405$ of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). $X$ Yes $\square$ No
Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer
$\pm \quad$ Accelerated filer
Non-accelerated filer $\quad \square \quad$ Smaller reporting company
Emerging growth company
If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. $\square$

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).Yes $\boldsymbol{X}$ №

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JPMorgan Chase \& Co.
Consolidated financial highlights (unaudited)

| As of or for the period ended, (in millions, except per share, ratio, headcount data and where otherwise noted) | 2Q23 |  |  | 1Q23 |  | 4Q22 |  | 3Q22 |  |  | 2Q22 |  | Six months ended June 30, |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | 2023 |  |  |  |  |  | 2022 |
| Selected income statement data |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total net revenue | \$ | 41,307 |  | \$ | 38,349 |  |  | \$ | 34,547 | \$ |  |  | 32,716 |  | \$ | 30,715 | \$ | 79,656 |  | \$ | 61,432 |
| Total noninterest expense |  | 20,822 |  |  | 20,107 |  | 19,022 |  | 19,178 |  |  | 18,749 |  | 40,929 |  |  | 37,940 |
| Pre-provision profit ${ }^{(\mathrm{a})}$ |  | 20,485 |  |  | 18,242 |  | 15,525 |  | 13,538 |  |  | 11,966 |  | 38,727 |  |  | 23,492 |
| Provision for credit losses |  | 2,899 |  |  | 2,275 |  | 2,288 |  | 1,537 |  |  | 1,101 |  | 5,174 |  |  | 2,564 |
| Income before income tax expense |  | 17,586 |  |  | 15,967 |  | 13,237 |  | 12,001 |  |  | 10,865 |  | 33,553 |  |  | 20,928 |
| Income tax expense |  | 3,114 |  |  | 3,345 |  | 2,229 |  | 2,264 |  |  | 2,216 |  | 6,459 |  |  | 3,997 |
| Net income | \$ | 14,472 |  | \$ | 12,622 | \$ | 11,008 | \$ | 9,737 |  | \$ | 8,649 | \$ | 27,094 |  | \$ | 16,931 |
| Earnings per share data |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Net income: Basic | \$ | 4.76 |  | \$ | 4.11 | \$ | 3.58 | \$ | 3.13 |  | \$ | 2.77 | \$ | 8.86 |  | \$ | 5.40 |
| Diluted |  | 4.75 |  |  | 4.10 |  | 3.57 |  | 3.12 |  |  | 2.76 |  | 8.85 |  |  | 5.39 |
| Average shares: Basic |  | 2,943.8 |  |  | 2,968.5 |  | 2,962.9 |  | 2,961.2 |  |  | 2,962.2 |  | 2,956.1 |  |  | 2,969.6 |
| Diluted |  | 2,948.3 |  |  | 2,972.7 |  | 2,967.1 |  | 2,965.4 |  |  | 2,966.3 |  | 2,960.5 |  |  | 2,973.7 |
| Market and per common share data |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Market capitalization |  | 422,661 |  |  | 380,803 |  | 393,484 |  | 306,520 |  |  | 330,237 |  | 422,661 |  |  | 330,237 |
| Common shares at period-end |  | 2,906.1 |  |  | 2,922.3 |  | 2,934.3 |  | 2,933.2 |  |  | 2,932.6 |  | 2,906.1 |  |  | 2,932.6 |
| Book value per share |  | 98.11 |  |  | 94.34 |  | 90.29 |  | 87.00 |  |  | 86.38 |  | 98.11 |  |  | 86.38 |
| Tangible book value per share ("TBVPS") ${ }^{(a)}$ |  | 79.90 |  |  | 76.69 |  | 73.12 |  | 69.90 |  |  | 69.53 |  | 79.90 |  |  | 69.53 |
| Cash dividends declared per share |  | 1.00 |  |  | 1.00 |  | 1.00 |  | 1.00 |  |  | 1.00 |  | 2.00 |  |  | 2.00 |
| Selected ratios and metrics |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Return on common equity ("ROE") ${ }^{\text {(b) }}$ |  | 20 |  |  | 18 \% |  | 16 \% |  | 15 | \% |  | 13 \% |  | 19 \% |  |  | 13 \% |
| Return on tangible common equity ("ROTCE") ${ }^{(a)(b)}$ |  | 25 |  |  | 23 |  | 20 |  | 18 |  |  | 17 |  | 24 |  |  | 16 |
| Return on assets ${ }^{(b)}$ |  | 1.51 |  |  | 1.38 |  | 1.16 |  | 1.01 |  |  | 0.89 |  | 1.45 |  |  | 0.87 |
| Overhead ratio |  | 50 |  |  | 52 |  | 55 |  | 59 |  |  | 61 |  | 51 |  |  | 62 |
| Loans-to-deposits ratio |  | 54 |  |  | 47 |  | 49 |  | 46 |  |  | 45 |  | 54 |  |  | 45 |
| Firm Liquidity coverage ratio ("LCR") (average) ${ }^{(c)}$ |  | 112 |  |  | 114 |  | 112 |  | 113 |  |  | 110 |  | 112 |  |  | 110 |
| JPMorgan Chase Bank, N.A. LCR (average) ${ }^{(\mathrm{c})}$ |  | 129 |  |  | 140 |  | 151 |  | 165 |  |  | 169 |  | 129 |  |  | 169 |
| Common equity Tier 1 ("CET1") capital ratio ${ }^{(d)}$ |  | 13.8 |  |  | 13.8 |  | 13.2 |  | 12.5 |  |  | 12.2 |  | 13.8 |  |  | 12.2 |
| Tier 1 capital ratio ${ }^{(d)}$ |  | 15.4 |  |  | 15.4 |  | 14.9 |  | 14.1 |  |  | 14.1 |  | 15.4 |  |  | 14.1 |
| Total capital ratio ${ }^{(d)}$ |  | 17.3 |  |  | 17.4 |  | 16.8 |  | 16.0 |  |  | 15.7 |  | 17.3 |  |  | 15.7 |
| Tier 1 leverage ratio ${ }^{(c)(d)}$ |  | 6.9 |  |  | 6.9 |  | 6.6 |  | 6.2 |  |  | 6.2 |  | 6.9 |  |  | 6.2 |
| Supplementary leverage ratio ("SLR") ${ }^{(c)(d)}$ |  | 5.8 |  |  | 5.9 |  | 5.6 |  | 5.3 |  |  | 5.3 |  | 5.8 |  |  | 5.3 |
| Selected balance sheet data (period-end) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Trading assets | \$ | 636,996 |  | \$ | 578,892 | \$ | 453,799 | \$ | 506,487 |  | \$ | 465,577 | \$ | 636,996 |  |  | 465,577 |
| Investment securities, net of allowance for credit losses |  | 612,203 |  |  | 610,075 |  | 631,162 |  | 618,246 |  |  | 663,718 |  | 612,203 |  |  | 663,718 |
| Loans |  | 1,300,069 |  |  | ,128,896 |  | 1,135,647 |  | 1,112,633 |  |  | ,104,155 |  | 1,300,069 |  |  | 104,155 |
| Total assets |  | 3,868,240 |  |  | ,744,305 |  | 3,665,743 |  | 3,773,884 |  |  | 3,841,314 |  | 3,868,240 |  |  | ,841,314 |
| Deposits |  | 2,398,962 |  |  | ,377,253 |  | 2,340,179 |  | 2,408,615 |  |  | 2,471,544 |  | 2,398,962 |  |  | 471,544 |
| Long-term debt |  | 364,078 |  |  | 295,489 |  | 295,865 |  | 287,473 |  |  | 288,212 |  | 364,078 |  |  | 288,212 |
| Common stockholders' equity |  | 285,112 |  |  | 275,678 |  | 264,928 |  | 255,180 |  |  | 253,305 |  | 285,112 |  |  | 253,305 |
| Total stockholders' equity |  | 312,516 |  |  | 303,082 |  | 292,332 |  | 288,018 |  |  | 286,143 |  | 312,516 |  |  | 286,143 |
| Headcount |  | 300,066 | (e) |  | 296,877 |  | 293,723 |  | 288,474 |  |  | 278,494 |  | 300,066 | (e) |  | 278,494 |
| Credit quality metrics |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Allowances for credit losses | \$ | 24,288 |  | \$ | 22,774 | \$ | 22,204 | \$ | 20,797 |  | \$ | 20,019 | \$ | 24,288 |  | \$ | 20,019 |
| Allowance for loan losses to total retained loans |  | 1.75 |  |  | 1.85 \% |  | 1.81 \% |  | 1.70 | \% |  | 1.69 \% |  | 1.75 \% |  |  | 1.69 \% |
| Nonperforming assets | \$ | 7,838 |  | \$ | 7,418 | \$ | 7,247 | \$ | 7,243 |  | \$ | 7,845 | \$ | 7,838 |  | \$ | 7,845 |
| Net charge-offs |  | 1,411 |  |  | 1,137 |  | 887 |  | 727 |  |  | 657 |  | 2,548 |  |  | 1,239 |
| Net charge-off rate |  | 0.47 |  |  | 0.43 \% |  | 0.33 \% |  | 0.27 |  |  | 0.25 \% |  | 0.45 \% |  |  | 0.24 \% |

As of and for the period ended June 30, 2023, the results of the Firm include the impact of the First Republic acquisition. Refer to page 24 and Note 28 for additional information.
(a) Pre-provision profit, TBVPS and ROTCE are each non-GAAP financial measures. Tangible common equity ("TCE") is also a non-GAAP financial measure. Refer to Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 20-21 for a further discussion of these measures.
(b) Quarterly ratios are based upon annualized amounts.
(c) For the six months ended June 30, 2023 and 2022, the percentage represents average ratios for the three months ended June 30, 2023 and 2022.
(d) The ratios reflect the Current Expected Credit Losses ("CECL") capital transition provisions. Refer to Capital Risk Management on pages 48-53 of this Form 10-Q and pages 86-96 of JPMorgan Chase's 2022 Form 10-K for additional information.
(e) Excluded 5,132 individuals associated with the First Republic acquisition who became employees effective July 2, 2023.

The following is Management's discussion and analysis of the financial condition and results of operations ("MD\&A") of JPMorgan Chase \& Co. ("JPMorgan Chase" or the "Firm") for the second quarter of 2023.

This Quarterly Report on Form 10-Q for the second quarter of 2023 ("Form 10-Q") should be read together with JPMorgan Chase's Annual Report on Form 10-K for the year ended December 31, 2022 ("2022 Form 10-K"). Refer to the Glossary of terms and acronyms and line of business metrics on pages 200-208 for definitions of terms and acronyms used throughout this Form 10-Q.
This Form 10-Q contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These forward-looking statements are based on the current beliefs and expectations of JPMorgan Chase's management, speak only as of the date of this Form 10-Q and are subject to significant risks and uncertainties. Refer to Forward-looking Statements on page 95 of this Form 10-Q; Part I, Item 1A, Risk Factors on pages 9-32 of the 2022 Form 10-K; and Part II, Item 1A, Risk Factors on page 209 of this Form 10-Q for a discussion of certain of those risks and uncertainties and the factors that could cause JPMorgan Chase's actual results to differ materially because of those risks and uncertainties. There is no assurance that actual results will be in line with any outlook information set forth herein, and the Firm does not undertake to update any forward-looking statements.

JPMorgan Chase \& Co. (NYSE: JPM), a financial holding company incorporated under Delaware law in 1968, is a leading financial services firm based in the United States of America ("U.S."), with operations worldwide. JPMorgan Chase had $\$ 3.9$ trillion in assets and $\$ 312.5$ billion in stockholders' equity as of June 30, 2023. The Firm is a leader in investment banking, financial services for consumers and small businesses, commercial banking, financial transaction processing and asset management. Under the J.P. Morgan and Chase brands, the Firm serves millions of customers, predominantly in the U.S., and many of the world's most prominent corporate, institutional and government clients globally.

JPMorgan Chase's principal bank subsidiary is JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank, N.A."), a national banking association with U.S. branches in 48 states and Washington, D.C. JPMorgan Chase’s principal non-bank subsidiary is J.P. Morgan Securities LLC ("J.P. Morgan Securities"), a U.S. broker-dealer. The bank and nonbank subsidiaries of JPMorgan Chase operate nationally as well as through overseas branches and subsidiaries, representative offices and subsidiary foreign banks. The Firm's principal operating subsidiaries outside the U.S. are J.P. Morgan Securities plc and J.P. Morgan SE ("JPMSE"), which are subsidiaries of JPMorgan Chase Bank, N.A. and are based in the United Kingdom ("U.K.") and Germany, respectively.

For management reporting purposes, the Firm's activities are organized into four major reportable business segments, as well as a Corporate segment. The Firm's consumer business segment is Consumer \& Community Banking ("CCB"). The Firm's wholesale business segments are the Corporate \& Investment Bank ("CIB"), Commercial Banking ("CB"), and Asset \& Wealth Management ("AWM"). Refer to Business Segment Results on pages 22-46 and Note 27 of this Form 10-Q, and Note 32 of JPMorgan Chase's 2022 Form 10-K, for a description of the Firm's business segments and the products and services they provide to their respective client bases. On May 1, 2023, JPMorgan Chase acquired certain assets and assumed certain liabilities of First Republic Bank (the "First Republic acquisition") from the Federal Deposit Insurance Corporation ("FDIC"). Refer to Note 28 for additional information.

The Firm's website is www.jpmorganchase.com. JPMorgan Chase makes available on its website, free of charge, annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934, as soon as reasonably practicable after it electronically files or furnishes such material to the U.S. Securities and Exchange Commission (the "SEC") at www.sec.gov. JPMorgan Chase makes new and important information about the Firm available on its website at https://www.jpmorganchase.com, including on the Investor Relations section of its website at https://www.jpmorganchase.com/ir. Information on the Firm's website is not incorporated by reference into this Form 10-Q or the Firm's other filings with the SEC.

This executive overview of the MD\&A highlights selected information and does not contain all of the information that is important to readers of this Form 10-Q. For a complete description of the trends and uncertainties, as well as the risks and critical accounting estimates affecting the Firm, this Form 10-Q and the 2022 Form 10-K should be read together and in their entirety.

Financial performance of JPMorgan Chase

| (unaudited) <br> As of or for the period ended, (in millions, except per share data and ratios) | Three months ended June 30, |  |  |  |  | Six months ended June 30, |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 2023 |  | 2022 | Change |  | 2023 |  | 2022 | Change |
| Selected income statement data |  |  |  |  |  |  |  |  |  |  |
| Noninterest revenue | \$ | 19,528 | \$ | 15,587 | 25\% | \$ | 37,166 | \$ | 32,432 | 15\% |
| Net interest income |  | 21,779 |  | 15,128 | 44 |  | 42,490 |  | 29,000 | 47 |
| Total net revenue |  | 41,307 |  | 30,715 | 34 |  | 79,656 |  | 61,432 | 30 |
| Total noninterest expense |  | 20,822 |  | 18,749 | 11 |  | 40,929 |  | 37,940 | 8 |
| Pre-provision profit |  | 20,485 |  | 11,966 | 71 |  | 38,727 |  | 23,492 | 65 |
| Provision for credit losses |  | 2,899 |  | 1,101 | 163 |  | 5,174 |  | 2,564 | 102 |
| Net income |  | 14,472 |  | 8,649 | 67 |  | 27,094 |  | 16,931 | 60 |
| Diluted earnings per share |  | 4.75 |  | 2.76 | 72 |  | 8.85 |  | 5.39 | 64 |
| Selected ratios and metrics |  |  |  |  |  |  |  |  |  |  |
| Return on common equity |  | 20 \% |  | 13 \% |  |  | 19 \% |  | 13 \% |  |
| Return on tangible common equity |  | 25 |  | 17 |  |  | 24 |  | 16 |  |
| Book value per share | \$ | 98.11 | \$ | 86.38 | 14 | \$ | 98.11 | \$ | 86.38 | 14 |
| Tangible book value per share |  | 79.90 |  | 69.53 | 15 |  | 79.90 |  | 69.53 | 15 |
| Capital ratios ${ }^{(a)}$ |  |  |  |  |  |  |  |  |  |  |
| CET1 capital |  | 13.8 \% |  | 12.2 \% |  |  | 13.8 \% |  | 12.2 \% |  |
| Tier 1 capital |  | 15.4 |  | 14.1 |  |  | 15.4 |  | 14.1 |  |
| Total capital |  | 17.3 |  | 15.7 |  |  | 17.3 |  | 15.7 |  |
| Memo: |  |  |  |  |  |  |  |  |  |  |
| NII excluding Markets ${ }^{(b)}$ | \$ | 22,370 | \$ | 13,682 | 63 | \$ | 43,306 | \$ | 25,434 | 70 |
| NIR excluding Markets ${ }^{(b)}$ |  | 13,013 |  | 10,158 | 28 |  | 23,031 |  | 21,243 | 8 |
| Markets ${ }^{(b)}$ |  | 7,018 |  | 7,790 | (10) |  | 15,400 |  | 16,543 | (7) |
| Total net revenue - managed basis | \$ | 42,401 | \$ | 31,630 | 34 | \$ | 81,737 | \$ | 63,220 | 29 |

(a) The ratios reflect the CECL capital transition provisions. Refer to Capital Risk Management on pages 48-53 of this Form 10-Q and pages 86-96 of JPMorgan Chase's 2022 Form 10-K for additional information.
(b) NII and NIR refer to net interest income and noninterest revenue, respectively. Markets consists of CIB's Fixed Income Markets and Equity Markets businesses.

Comparisons noted in the sections below are for the second quarter of 2023 versus the second quarter of 2022, unless otherwise specified.

## Firmwide overview

For the second quarter of 2023, JPMorgan Chase reported net income of $\$ 14.5$ billion, up $67 \%$, earnings per share of $\$ 4.75$, ROE of $20 \%$ and ROTCE of $25 \%$. The Firm's results for the second quarter of 2023 included an estimated bargain purchase gain of $\$ 2.7$ billion in Corporate and a net addition to the allowance for credit losses of $\$ 1.2$ billion associated with the First Republic acquisition. The Firm's results also included investment securities losses of \$900 million in Treasury and CIO.

- Total net revenue was $\$ 41.3$ billion, up $34 \%$, reflecting:
- Net interest income of $\$ 21.8$ billion, up $44 \%$, driven by higher rates and, to a lesser extent, the impact of the First Republic acquisition, partially offset by lower Markets net interest income and lower average deposit
balances. Net interest income excluding Markets was $\$ 22.4$ billion, up 63\%.
- Noninterest revenue was $\$ 19.5$ billion, up $25 \%$, driven by the impact of the First Republic acquisition, higher Markets noninterest revenue and the absence of losses on equity investments in Payments in the prior year, partially offset by higher net investment securities losses in Treasury and CIO. The impact of the First Republic acquisition included a $\$ 2.7$ billion estimated bargain purchase gain in Corporate.
- Total Markets revenue declined reflecting lower Markets NII, largely offset by higher NIR.
- Noninterest expense was $\$ 20.8$ billion, up $11 \%$, driven by higher compensation expense due to additional headcount and the impact of wage inflation, $\$ 599$ million expense associated with the First Republic acquisition, higher technology and marketing investments and higher legal expense.
- The provision for credit losses was $\$ 2.9$ billion, reflecting a $\$ 1.5$ billion net addition to the allowance for credit losses and $\$ 1.4$ billion of net charge-offs. The net addition to the allowance for credit losses included $\$ 1.2$ billion to establish the allowance for the First Republic loans and lending-related commitments. The net addition also reflected:
- \$233 million in consumer predominantly in Card Services, and
- $\$ 79$ million in wholesale reflecting $\$ 389$ million in CB, largely offset by a $\$ 243$ million reduction in Corporate.
Net charge-offs increased $\$ 754$ million, predominantly driven by CCB, primarily Card Services, as 30+ day delinquencies have returned to pre-pandemic levels.
The prior year included a $\$ 428$ million net addition to the allowance for credit losses and net charge-offs of $\$ 657$ million.
- The total allowance for credit losses was $\$ 24.3$ billion at June 30, 2023. The Firm had an allowance for loan losses to retained loans coverage ratio of $1.75 \%$, compared with $1.69 \%$ in the prior year.
- The Firm's nonperforming assets totaled $\$ 7.8$ billion at June 30,2023 , relatively flat from the prior year, as lower consumer nonaccrual loans due to loan sales in the prior year were offset by higher wholesale nonaccrual loans, reflecting client-specific downgrades. Refer to Wholesale Credit Portfolio on pages 70-79 for additional information.
- Firmwide average loans of $\$ 1.2$ trillion were up $13 \%$, driven by higher loans in CCB and CB, largely as a result of the First Republic acquisition.
- Firmwide average deposits of $\$ 2.4$ trillion were down $6 \%$, driven by:
- the continued migration into higher-yielding investments in AWM; declines in CIB and CB primarily due to continued deposit attrition, which for CIB included actions to reduce certain deposits; and a net decline in CCB primarily from existing accounts due to increased customer spending,
partially offset by
- the impact of the First Republic acquisition in CCB, and an increase in Corporate related to the Firm's international consumer initiatives.
Refer to Liquidity Risk Management on pages 54-61 for additional information.

Selected capital and other metrics

- CET1 capital was $\$ 236$ billion, and the Standardized and Advanced CET1 ratios were $13.8 \%$ and $13.9 \%$, respectively.
- SLR was $5.8 \%$.
- TBVPS grew $15 \%$, ending the second quarter of 2023 at $\$ 79.90$.
- As of June 30, 2023, the Firm had eligible end-of-period High Quality Liquid Assets ("HQLA") of approximately $\$ 792$ billion and unencumbered marketable securities with a fair value of approximately $\$ 620$ billion, resulting in approximately $\$ 1.4$ trillion of liquidity sources. Refer to Liquidity Risk Management on pages 54-61 for additional information.

Refer to Consolidated Results of Operations and Consolidated Balance Sheets Analysis on pages 10-15 and pages $16-19$, respectively, for a further discussion of the Firm's results; and Business Segment Results on page 24 and Note 28 for additional information on the First Republic acquisition.
Pre-provision profit, ROTCE, TCE, TBVPS, NII and NIR excluding Markets, and total net revenue on a managed basis are non-GAAP financial measures. Refer to Explanation and Reconciliation of the Firm's Use of NonGAAP Financial Measures on pages 20-21 for a further discussion of each of these measures.

## Business segment highlights

Selected business metrics for each of the Firm's four lines of business ("LOB") are presented below for the second quarter of 2023.


AWM
ROE 29\%

- Average deposits down 2\%; client investment assets up 42\%
- Average loans up $19 \%$ year-over-year ("YoY") and 15\% quarter-over-quarter ("QoQ"); Card Services net charge-off rate of 2.41\%
- Debit and credit card sales volume ${ }^{(a)}$ up $7 \%$
- Active mobile customers ${ }^{(\mathrm{b})}$ up $10 \%$
- \#1 ranking for Global Investment Banking fees with $8.4 \%$ wallet share year-to-date
- Total Markets revenue of $\$ 7.0$ billion, down 10\%, with Fixed Income Markets down 3\% and Equity Markets down 20\%
- Gross Investment Banking and Markets revenue of $\$ 767$ million, down $3 \%$
- Average loans up $23 \%$ YoV and $14 \%$ QoQ; average deposits down 8\%
- Assets under management ("AuM") of $\$ 3.2$ trillion, up 16\%
- Average loans up $1 \%$ YoY and $4 \%$ QoQ; average deposits down $21 \%$
(a) Excludes Commercial Card.
(b) Users of all mobile platforms who have logged in within the past 90 days. As of June 30, 2023, excludes the impact of the First Republic acquisition.
Refer to the Business Segment Results on pages 22-46 for a detailed discussion of results by business segment.

Credit provided and capital raised JPMorgan Chase continues to support consumers, businesses and communities around the globe. The Firm provided new and renewed credit and raised capital for wholesale and consumer clients during the first six months of 2023, consisting of:
\$ 1.2
trillion
Total credit provided and capital raised (including loans and commitments)

Credit for consumers
billion
\$17
billion

\$535
billion
\$24
billion

Credit and capital raised for nonprofit and U.S. government entities ${ }^{\text {(a) }}$

## Recent events

- Basel III Finalization: In July 2023, the Federal Reserve, the Office of the Comptroller of the Currency ("OCC") and the FDIC released a proposal to amend the risk-based capital framework, entitled "Regulatory capital rule: Amendments applicable to large banking organizations and to banking organizations with significant trading activity". Under the proposal, changes would include replacement of the advanced approach with an expanded risk-based approach, which would not permit the use of internal models for the calculation of risk-weighted assets, other than for Market risk. In addition, the stress capital buffer requirement would be applicable to both the expanded risk-based approach and the standardized approach. The proposal would significantly revise riskbased capital requirements for all banks with assets of $\$ 100$ billion or more, including the Firm and other U.S. global systemically important banks ("GSIBs"). The proposed effective date is July 1, 2025 with a three year transition period applicable to the expanded risk-based approach.
- GSIB Surcharge: In July 2023, the Federal Reserve also released a proposal to amend the calculation of the GSIB surcharge. If adopted as proposed, these amendments would require the Firm to assess its GSIB surcharge on an annual basis, using the average of the quarterly surcharge calculations throughout the calendar year, with daily averaging required for certain measures within the surcharge calculation. Surcharge increments would be reduced from 50bp to 10bp and there would also be other technical amendments to the Method 2 calculation. The proposed amendments would revise risk-based capital requirements for the Firm and other U.S. GSIBs, and would become effective on two calendar quarters after the adoption of the final rule.
Refer to Capital Risk Management on pages 48-53 for additional information.

Outlook
These current expectations are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Such forward-looking statements are based on the current beliefs and expectations of JPMorgan Chase's management, speak only as of the date of this Form 10-Q, and are subject to significant risks and uncertainties. Refer to Forward-Looking Statements on page 95 of this Form 10-Q; Part I, Item 1A, Risk Factors on pages 9-32 of the 2022 Form 10-K; and Part II, Item 1A, Risk Factors on page 209 of this Form 10-Q for a further discussion of certain of those risks and uncertainties and the other factors that could cause JPMorgan Chase's actual results to differ materially because of those risks and uncertainties. There is no assurance that actual results in 2023 will be in line with the outlook information set forth below, and the Firm does not undertake to update any forward-looking statements.

JPMorgan Chase’s current outlook for full-year 2023 should be viewed against the backdrop of the global and U.S. economies, financial markets activity, the geopolitical environment, the competitive environment, client and customer activity levels, and regulatory and legislative developments in the U.S. and other countries where the Firm does business. Each of these factors will affect the performance of the Firm. The Firm will continue to make appropriate adjustments to its businesses and operations in response to ongoing developments in the business, economic, regulatory and legal environments in which it operates.
In May 2023, the FDIC issued a notice of proposed rulemaking recommending a special assessment related to the systemic risk determination made on March 12, 2023, to recover losses to the Deposit Insurance Fund ("DIF") arising from the protection of uninsured depositors resulting from recent bank resolutions. In its current form, the rule would impose a special assessment at an annual rate of 12.5 basis points on certain banks' estimated uninsured deposits reported as of December 31, 2022. If this rule is finalized as proposed, the Firm expects to recognize an estimated assessment expense of approximately $\$ 3$ billion (pre-tax) in the quarter in which the rule is finalized, which is expected to occur in the second half of 2023.

## Full-year 2023

- Management expects both net interest income and net interest income excluding Markets to be approximately $\$ 87$ billion, market dependent.
- Management expects adjusted expense to be approximately $\$ 84.5$ billion, market dependent and excluding any FDIC special assessment.
- Management expects the net charge-off rate in Card Services to be approximately $2.6 \%$.
Net interest income excluding Markets and adjusted expense are non-GAAP financial measures. Refer to Explanation and Reconciliation of the Firm's Use of NonGAAP Financial Measures on pages 20-21.


## Business Developments

First Republic acquisition
On May 1, 2023, JPMorgan Chase acquired certain assets and assumed certain liabilities of First Republic Bank (the "First Republic acquisition") from the Federal Deposit Insurance Corporation ("FDIC"), as receiver, for \$67.9 billion, resulting in an estimated bargain purchase gain of $\$ 2.7$ billion recorded in other income. In connection with the First Republic acquisition, the Firm issued a five-year, $\$ 50$ billion secured note to the FDIC (the "Purchase Money Note"), and entered into shared-loss agreements with the FDIC with respect to certain loans acquired and lendingrelated commitments assumed in the acquisition. Refer to Note 28 for additional information.
JPMorgan Chase's Consolidated Financial Statements as of and for the period ended June 30, 2023 reflect the impact of the First Republic acquisition. Where meaningful to the disclosure, the impact of the First Republic acquisition is disclosed in various sections of this Form 10-Q. The Firm continues to convert certain operations, and to integrate clients, products and services, associated with the First Republic acquisition, to align with the Firm's businesses and operations. The Firm also continues to evaluate to which segments certain clients, products and services associated with the First Republic acquisition, including deposits, should be allocated. Accordingly, reporting classifications and allocations may change in future periods, including across the Firm's segments.

## Current market and economic conditions

Refer to Part I, Item 1A, Risk Factors on pages 9-32 of JPMorgan Chase's 2022 Form 10-K and Part II, Item 1A, Risk Factors on page 209 of this Form 10-Q for a discussion of material risk factors that could affect the Firm. These risk factors include potential impacts to the Firm associated with current market and economic conditions, including inflationary pressures, higher interest rates and geopolitical tensions (including secondary effects of the war in Ukraine), any or all of which could result in additional market disruption, government actions (including with respect to monetary policies), ongoing impacts to global supply chains, and other geopolitical risks.

Interbank Offered Rate ("IBOR") transition
The publication of the remaining principal tenors of U.S. dollar LIBOR (i.e., overnight, one-month, three-month, sixmonth and 12-month LIBOR) ceased on June 30, 2023 ("LIBOR Cessation"). The one-month, three-month and sixmonth tenors of U.S. dollar LIBOR will continue to be published on a "synthetic" basis, which will allow market participants to use such rates for certain legacy LIBORlinked contracts through September 30, 2024.

In the second quarter of 2023, the Firm successfully converted predominantly all of its cleared derivatives contracts linked to U.S. dollar LIBOR to the Secured Overnight Financing Rate (SOFR) as part of initiatives by the principal central counterparties ("CCPs") to convert cleared derivatives prior to LIBOR Cessation. Nearly all of the Firm's other U.S. dollar LIBOR-linked products that remained outstanding at LIBOR Cessation will be remediated through contractual fallback provisions or through the framework provided by the Adjustable Interest Rate (LIBOR) Act ("LIBOR Act"). The Firm continues its client outreach activities with respect to the limited amount of contracts that continue to reference "synthetic" U.S. dollar LIBOR in order to complete remediation by September 30, 2024.
Refer to Business Developments on page 50 of JPMorgan Chase's 2022 Form 10-K for additional information.

This section provides a comparative discussion of JPMorgan Chase's Consolidated Results of Operations on a reported basis for the three and six months ended June 30, 2023 and 2022, unless otherwise specified. Factors that relate primarily to a single business segment are discussed in more detail within that business segment's results. Refer to pages 91-93 of this Form 10-Q and pages 149-152 of JPMorgan Chase's 2022 Form 10-K for a discussion of the Critical Accounting Estimates Used by the Firm that affect the Consolidated Results of Operations.
Revenue

| (in millions) | Three months ended June 30, |  |  |  |  | Six months ended June 30, |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  |  | 2022 | Change | 2023 |  | 2022 |  | Change |
| Investment banking fees | \$ | 1,513 | \$ | 1,586 | (5)\% | \$ | 3,162 | \$ | 3,594 | (12)\% |
| Principal transactions |  | 6,910 |  | 4,990 | 38 |  | 14,525 |  | 10,095 | 44 |
| Lending- and deposit-related fees |  | 1,828 |  | 1,873 | (2) |  | 3,448 |  | 3,712 | (7) |
| Asset management fees |  | 3,774 |  | 3,517 | 7 |  | 7,239 |  | 7,169 | 1 |
| Commissions and other fees |  | 1,739 |  | 1,723 | 1 |  | 3,434 |  | 3,433 | - |
| Investment securities losses |  | (900) |  | (153) | (488) |  | $(1,768)$ |  | (547) | (223) |
| Mortgage fees and related income |  | 278 |  | 378 | (26) |  | 499 |  | 838 | (40) |
| Card income |  | 1,094 |  | 1,133 | (3) |  | 2,328 |  | 2,108 | 10 |
| Other income ${ }^{(\mathrm{a})(\mathrm{b})}$ |  | 3,292 |  | 540 | NM |  | 4,299 |  | 2,030 | 112 |
| Noninterest revenue |  | 19,528 |  | 15,587 | 25 |  | 37,166 |  | 32,432 | 15 |
| Net interest income |  | 21,779 |  | 15,128 | 44 |  | 42,490 |  | 29,000 | 47 |
| Total net revenue | \$ | 41,307 | \$ | 30,715 | 34 \% | \$ | 79,656 | \$ | 61,432 | $30 \%$ |

(a) Included operating lease income of $\$ 716$ million and $\$ 945$ million for the three months ended June 30, 2023 and 2022, respectively, and $\$ 1.5$ billion and $\$ 2.0$ billion for the six months ended June 30, 2023 and 2022, respectively, and an estimated bargain purchase gain of $\$ 2.7$ billion associated with the First Republic acquisition in Corporate for the three and six months ended June 30, 2023. Refer to Business Segment Results on page 24, and Notes 6 and 28 for additional information.
(b) Includes losses on tax-oriented investments. Refer to Note 6 for additional information.

Quarterly results
Investment banking fees decreased in CIB, reflecting:

- Iower advisory fees due to a lower level of announced deals in prior periods amid a challenging environment,
largely offset by
- higher equity underwriting fees primarily due to higher convertible securities offerings and, in the second half of the quarter, follow-on offerings that benefited from the lower equity market volatility.
Refer to CIB segment results on pages 30-36 and Note 6 for additional information.
Principal transactions revenue increased, reflecting:
- higher Equity Markets revenue in principal transactions, primarily in Prime Finance,
- higher Fixed Income Markets revenue in principal transactions, driven by Securitized Products and Fixed Income Financing, partially offset by lower revenue in Rates and Currencies \& Emerging Markets,
- the increase in Markets principal transactions revenue was more than offset by a decline in Markets NII, primarily due to higher funding costs
- the absence of $\$ 337$ million of markdowns in the prior year on held-for-sale positions, primarily unfunded commitments, in the bridge financing portfolio in CIB and CB,
- a gain of $\$ 36$ million in Credit Adjustments \& Other in CIB, compared with a loss of $\$ 218$ million in the prior year, and
- higher revenue related to cash deployment transactions in Treasury and CIO ,
partially offset by
- net losses on certain legacy private equity investments in Corporate, compared with net gains in the prior year.
Principal transactions revenue in CIB generally has offsets across other revenue lines, including net interest income. The Firm assesses the performance of its Markets business on a total net revenue basis.
Refer to CIB, CB and Corporate segment results on pages $30-36$, pages $37-40$ and pages $45-46$, respectively, and Note 6 for additional information.

Lending- and deposit-related fees decreased due to:

- lower cash management fees in CIB and CB associated with the higher level of credits earned by clients that reduce such fees,
largely offset by
- higher lending-related fees driven by the impact of the First Republic acquisition in AWM and CCB.
Refer to CIB, CB and AWM segment results on pages 30-36, pages 37-40 and pages 41-44, respectively, and Note 6 for additional information.
Asset management fees increased driven by:
- higher management fees on strong net inflows in AWM, and
- the impact of the First Republic acquisition in CCB.

Refer to CCB and AWM segment results on pages 25-29 and
pages 41-44, respectively, and Note 6 for additional information; and Business Segment Results on page 24 for additional information on the First Republic acquisition.
Investment securities losses reflected higher net losses on sales of U.S. Treasuries and U.S. GSE and government agency MBS, associated with repositioning the investment securities portfolio in Treasury and CIO. Refer to Corporate segment results on pages 45-46 and Note 10 for additional information.
Mortgage fees and related income decreased in Home Lending, reflecting lower production revenue due to a decline in volume, and lower net mortgage servicing revenue. Refer to CCB segment results on pages 25-29 and Notes 6 and 15 for additional information.
Card income decreased driven by:

- lower net interchange income as a result of an increase to the rewards liability due to adjustments to the terms of certain reward programs in CCB,
largely offset by
- higher payments-related revenue, reflecting growth in Commercial Card in CIB and CB.

Refer to CCB, CIB and CB segment results on pages 25-29, pages 30-36 and pages 37-40, respectively, Critical Accounting Estimates on pages 91-93, and Note 6 for additional information.

Other income increased, reflecting:

- the $\$ 2.7$ billion estimated bargain purchase gain associated with the First Republic acquisition in Corporate,
- the absence of losses on equity investments in Payments in the prior year, and
- the impact of net investment hedges in Treasury and CIO, partially offset by
- Iower auto operating lease income in CCB due to a decline in volume, and
- the absence of a gain in the prior year on an equitymethod investment received in partial satisfaction of a Ioan in CB.
Refer to Business Segment Results on page 24 and Note 28 for additional information on the First Republic acquisition; and Note 5 for additional information on net investment hedges.
Net interest income increased driven by higher rates and, to a lesser extent, the impact from the First Republic acquisition, partially offset by lower Markets net interest income and lower average deposit balances.

The Firm's average interest-earning assets were \$3.3 trillion, down $\$ 42$ billion, and the yield was $5.01 \%$, up 279 basis points ("bps"). The net yield on these assets, on an FTE basis, was $2.62 \%$, an increase of 82 bps. The net yield excluding Markets was $3.83 \%$, up 157 bps.
Refer to the Consolidated average balance sheets, interest and rates schedule on page 198 for further information; and Business Segment Results on page 24 and Note 28 for
additional information on the First Republic acquisition.
Net yield excluding Markets is a non-GAAP financial measure. Refer to Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 20-21 for a further discussion of Net yield excluding Markets.

## Year-to-date results

Investment banking fees decreased in CIB, reflecting:

- lower debt underwriting fees as challenging market conditions resulted in lower issuance activity in acquisition financing, and
- lower advisory fees due to a lower level of announced deals in prior periods amid a challenging environment,
partially offset by
- higher equity underwriting fees primarily due to higher convertible securities offerings and, in the second half of the second quarter, follow-on offerings that benefited from the lower equity market volatility.
Principal transactions revenue increased, reflecting:
- higher Fixed Income Markets net revenue in principal transactions, driven by Securitized Products and Fixed Income Financing, partially offset by lower revenue in Currencies \& Emerging Markets and Rates,
- higher Equity Markets revenue in principal transactions, primarily in Prime Finance,
- the increase in Markets principal transactions revenue was more than offset by a decline in Markets NII, primarily due to higher funding costs
- losses of $\$ 117$ million in Credit Adjustments \& Other in CIB, driven by losses on certain components of fair value option elected liabilities, compared with losses of \$742 million in the prior year, and
- higher revenue related to cash deployment transactions in Treasury and CIO.
Lending- and deposit-related fees decreased due to:
- lower cash management fees in CB and CIB associated with the higher level of credits earned by clients that reduce such fees,
partially offset by
- higher lending-related fees driven by the impact of the First Republic acquisition in AWM and CCB.
Asset management fees increased driven by the impact of the First Republic acquisition in CCB.
Asset management fees in AWM was relatively flat, as the decline in market levels was predominantly offset by the removal of most money market fund fee waivers and the impact of net inflows.
Commissions and other fees was relatively flat. Refer to CIB and AWM segment results on pages 30-36 and pages 41-44, respectively, and Note 6 for additional information. Investment securities losses reflected higher net losses on sales of U.S. Treasuries and U.S. GSE and government agency MBS, associated with repositioning the investment securities portfolio in both periods in Treasury and CIO.
Mortgage fees and related income decreased driven by

Home Lending, reflecting lower production revenue due to a decline in volume, and lower net mortgage servicing revenue due to lower net gains in MSR risk management. Card income increased driven by higher payments-related revenue, reflecting growth in Commercial Card in CIB and CB.

Net interchange income in CCB was relatively flat as the benefit in partner payments in the first quarter of 2023 related to a periodic tax refund on airline miles redeemed was offset by an increase to the rewards liability due to adjustments to the terms of certain reward programs.
Other income increased, reflecting:

- the $\$ 2.7$ billion estimated bargain purchase gain associated with the First Republic acquisition in Corporate,
- the impact of net investment hedges in Treasury and CIO, and
- a gain of $\$ 339$ million recognized in first quarter of 2023 in AWM on the original minority interest in CIFM upon the Firm's acquisition of the remaining $51 \%$ interest in the entity,
partially offset by
- lower auto operating lease income in CCB due to a decline in volume,
- the absence of proceeds in the prior year from an insurance settlement,
- the absence of a gain in the prior year on an equitymethod investment received in partial satisfaction of a Ioan in CB, and
- Iower net gains related to certain other Corporate investments.
Net interest income increased driven by higher rates and, to a lesser extent, higher revolving balances in Card Services and the impact from the First Republic acquisition, partially offset by lower Markets net interest income and lower average deposit balances.
The Firm's average interest-earning assets were \$3.3 trillion, down $\$ 113$ billion, and the yield was $4.85 \%$, up 281 basis points ("bps"). The net yield on these assets, on an FTE basis, was $2.63 \%$, an increase of 89 bps . The net yield excluding Markets was $3.82 \%$, up 171 bps.

Provision for credit losses

| (in millions) | Three months ended June 30, |  |  |  |  | Six months ended June 30, |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  | 2022 |  | Change | 2023 |  | 2022 |  | Change |
| Consumer, excluding credit card | \$ | 555 | \$ | 62 | NM | \$ | 803 | \$ | 235 | 242 \% |
| Credit card |  | 1,324 |  | 730 | 81 \% |  | 2,546 |  | 1,236 | 106 |
| Total consumer |  | 1,879 |  | 792 | 137 |  | 3,349 |  | 1,471 | 128 |
| Wholesale |  | 1,007 |  | 303 | 232 |  | 1,811 |  | 1,088 | 66 |
| Investment securities |  | 13 |  | 6 | 117 |  | 14 |  | 5 | 180 |
| Total provision for credit losses | \$ | 2,899 | \$ | 1,101 | 163 \% | \$ | 5,174 | \$ | 2,564 | 102 \% |

## Quarterly results

The provision for credit losses was $\$ 2.9$ billion, reflecting a $\$ 1.5$ billion net addition to the allowance for credit losses and $\$ 1.4$ billion of net charge-offs.
The net addition to the allowance for credit losses included $\$ 1.2$ billion to establish the allowance for the First Republic loans and lending-related commitments, composed of \$763 million in wholesale and $\$ 400$ million in consumer.
The net addition also reflected:

- $\$ 233$ million in consumer predominantly in Card Services, and
- \$79 million in wholesale reflecting \$389 million in CB, largely offset by a $\$ 243$ million reduction in Corporate.
Net charge-offs increased $\$ 754$ million, predominantly driven by CCB, primarily Card Services, as 30+ day delinquencies have returned to pre-pandemic levels.
The prior year included a $\$ 428$ million net addition to the allowance for credit losses and net charge-offs of \$657 million.

Refer to CCB segment results on pages 25-29, CIB on pages $30-36$, CB on pages 37-40, AWM on pages 41-44, Corporate on pages 45-46; Allowance for Credit Losses on pages 80-82; Notes 10 and 13 for additional information on the credit portfolio and the allowance for credit losses; and Business segment results on page 24 for additional information on the First Republic acquisition.

Year-to-date results
The provision for credit losses was $\$ 5.2$ billion, reflecting a $\$ 2.6$ billion net addition to the allowance for credit losses and $\$ 2.5$ billion of net charge-offs.
The net addition to the allowance for credit losses included $\$ 1.5$ billion, consisting of:

- $\$ 800$ million in wholesale, predominantly driven by net downgrade activity, updates to certain assumptions related to office real estate in CB in the second quarter of 2023, and the impact of the additional weight placed on the adverse scenarios in the first quarter of 2023, and
- \$649 million in consumer, predominantly driven by Card Services, reflecting loan growth, the net effect of changes in the Firm's macroeconomic outlook, including the impact from the weighted average U.S. unemployment rate peaking in the third quarter of 2024, and the additional weight placed on the adverse scenarios in the first quarter of 2023, partially offset by reduced borrower uncertainty.
The net addition also included $\$ 1.2$ billion to establish the allowance for the First Republic loans and lending-related commitments, in the second quarter of 2023.
Net charge-offs increased $\$ 1.3$ billion, predominantly driven by CCB, primarily Card Services, as 30+ day delinquencies have returned to pre-pandemic levels.
The prior year included a $\$ 1.3$ billion net addition to the allowance for credit losses and net charge-offs of $\$ 1.2$ billion.

Noninterest expense

| (in millions) | Three months ended June 30, |  |  |  |  | Six months ended June 30, |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  | 2022 |  | Change | 2023 |  | 2022 |  | Change |
| Compensation expense | \$ | 11,216 | \$ | 10,301 | 9 \% | \$ | 22,892 | \$ | 21,088 | 9 \% |
| Noncompensation expense: |  |  |  |  |  |  |  |  |  |  |
| Occupancy |  | 1,070 |  | 1,129 | (5) |  | 2,185 |  | 2,263 | (3) |
| Technology, communications and equipment ${ }^{(a)}$ |  | 2,267 |  | 2,376 | (5) |  | 4,451 |  | 4,736 | (6) |
| Professional and outside services |  | 2,561 |  | 2,469 | 4 |  | 5,009 |  | 5,041 | (1) |
| Marketing |  | 1,122 |  | 881 | 27 |  | 2,167 |  | 1,801 | 20 |
| Other expense ${ }^{(b)(c)}$ |  | 2,586 |  | 1,593 | 62 |  | 4,225 |  | 3,011 | 40 |
| Total noncompensation expense |  | 9,606 |  | 8,448 | 14 |  | 18,037 |  | 16,852 | 7 |
| Total noninterest expense | \$ | 20,822 | \$ | 18,749 | 11 \% | \$ | 40,929 | \$ | 37,940 | 8 \% |

(a) Includes depreciation expense associated with auto operating lease assets.
(b) Included Firmwide legal expense of $\$ 420$ million and $\$ 73$ million for the three months ended June 30, 2023 and 2022, respectively, and $\$ 596$ million and $\$ 192$ million for the six months ended June 30,2023 and 2022, respectively; as well as FDIC-related expense of $\$ 338$ million and $\$ 216$ million for the three months ended June 30, 2023 and 2022, respectively, and $\$ 655$ million and $\$ 414$ million for the six months ended June 30 , 2023 and 2022 , respectively. Refer to Note 6 for additional information.
(c) Included expense associated with the First Republic acquisition of $\$ 599$ million for the three and six months ended June 30, 2023. Refer to Business Segment Results on page 24 for additional information.

Quarterly results
Compensation expense increased driven by:

- additional headcount, primarily in technology and front office, as well as the impact of wage inflation, and
- higher revenue-related compensation in AWM, partially offset by a decline in revenue-related compensation in CIB.
Noncompensation expense increased as a result of:
- \$599 million expense associated with the First Republic acquisition, substantially all of which is in Corporate,
- higher investments in the businesses, including marketing and technology,
- higher legal expense, largely in Corporate, and
- higher structural expense, including the impact of the increase in the FDIC assessment that was announced in October 2022,
partially offset by
- lower volume-related expense, reflecting lower depreciation expense on lower Auto lease assets.
Refer to Business Segment Results on page 24 for additional information on the First Republic acquisition.


## Year-to-date results

Compensation expense increased driven by:

- additional headcount, primarily in technology and front office, as well as the impact of wage inflation, and
- higher revenue-related compensation in AWM, partially offset by a decline in revenue-related compensation in CIB.
Noncompensation expense increased as a result of:
- expense associated with the First Republic acquisition, substantially all of which is in Corporate,
- higher investments in the business, including marketing and technology,
- higher legal expense across the LOBs and Corporate, and
- higher structural expense, including the impact of the increase in the FDIC assessment that was announced in October 2022, and higher travel and entertainment expense,
partially offset by
- Iower volume-related expense, reflecting lower depreciation expense on lower Auto lease assets.

Income tax expense

| (in millions) | Three months ended June 30, |  |  | Six months ended June 30, |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 | 2022 | Change | 2023 | 2022 | Change |
| Income before income tax expense | \$ 17,586 | \$ 10,865 | 62 \% | \$ 33,553 | \$ 20,928 | 60 \% |
| Income tax expense | 3,114 | 2,216 | 41 | 6,459 | 3,997 | 62 |
| Effective tax rate | 17.7 \% | 20.4 \% |  | 19.3 \% | 19.1 \% |  |

Quarterly results
The effective tax rate decreased, reflecting:

- the impact of the income tax expense associated with the First Republic acquisition that was reflected in the estimated bargain purchase gain, which resulted in a reduction in the Firm's effective tax rate of 3.4 percentage points,
partially offset by
- the higher level of pre-tax income and changes in the mix of income and expenses subject to U.S. federal and state and local taxes.


## Year-to-date results

The effective tax rate was relatively flat, reflecting:

- the higher level of pre-tax income and changes in the mix of income and expenses subject to U.S. federal and state and local taxes, as well as the lower benefits related to vesting of employee stock based awards,
predominantly offset by
- the impact of the income tax expense associated with the First Republic acquisition that was reflected in the estimated bargain purchase gain, which resulted in a reduction in the Firm's effective tax rate.


## Consolidated balance sheets analysis

The following is a discussion of the significant changes between June 30, 2023, and December 31, 2022.
Selected Consolidated balance sheets data

| (in millions) |  | $\begin{array}{r} \text { June } 30, \\ 2023 \end{array}$ | December 31,2022 |  | Change |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Assets |  |  |  |  |  |
| Cash and due from banks | \$ | 26,064 | \$ | 27,697 | (6)\% |
| Deposits with banks |  | 469,059 |  | 539,537 | (13) |
| Federal funds sold and securities purchased under resale agreements |  | 325,628 |  | 315,592 | 3 |
| Securities borrowed |  | 163,563 |  | 185,369 | (12) |
| Trading assets |  | 636,996 |  | 453,799 | 40 |
| Available-for-sale securities |  | 203,262 |  | 205,857 | (1) |
| Held-to-maturity securities |  | 408,941 |  | 425,305 | (4) |
| Investment securities, net of allowance for credit losses |  | 612,203 |  | 631,162 | (3) |
| Loans |  | 1,300,069 |  | 1,135,647 | 14 |
| Allowance for loan losses |  | $(21,980)$ |  | $(19,726)$ | (11) |
| Loans, net of allowance for loan losses |  | 1,278,089 |  | 1,115,921 | 15 |
| Accrued interest and accounts receivable |  | 111,561 |  | 125,189 | (11) |
| Premises and equipment |  | 29,493 |  | 27,734 | 6 |
| Goodwill, MSRs and other intangible assets |  | 64,238 |  | 60,859 | 6 |
| Other assets |  | 151,346 |  | 182,884 | (17) |
| Total assets | \$ | 3,868,240 | \$ | 3,665,743 | $6 \%$ |

Cash and due from banks and deposits with banks decreased primarily as a result of the First Republic acquisition, which included the impact of the repayment of deposits provided to First Republic Bank in March 2023 by the consortium of large U.S. banks and amounts paid to the FDIC, as well as CIB Markets activities. Deposits with banks reflect the Firm's placement of its excess cash with various central banks, including the Federal Reserve Banks.
Federal funds sold and securities purchased under resale agreements increased due to the impact of a lower level of netting on a reduced level of resale balances in Markets.
Securities borrowed decreased driven by Markets, reflecting lower client-driven activities and lower demand for securities to cover short positions.
Refer to Note 11 for additional information on securities purchased under resale agreements and securities borrowed.

Trading assets increased due to higher levels of debt and equity instruments in Markets, in response to demand from client-driven market-making activities, and when compared with the seasonally lower levels at year-end. Refer to Notes 2 and 5 for additional information.
Investment securities decreased due to:

- lower available-for-sale ("AFS") securities driven by paydowns, maturities and net sales, partially offset by $\$ 25.8$ billion of securities associated with the First Republic acquisition as well as the transfer of securities from held-to-maturity in the first quarter of 2023 ("HTM"), and
- lower HTM securities driven by paydowns, maturities and the transfer of securities to AFS.
Refer to Corporate segment results on pages 45-46,

Investment Portfolio Risk Management on page 83, and Notes 2 and 10 for additional information.
Loans increased, reflecting:

- $\$ 150$ billion of loans associated with the First Republic acquisition, primarily reflected in CCB, CB and AWM.
The increase also included:
- growth in new accounts and revolving balances which continued to normalize to pre-pandemic levels in Card Services, and
- higher revolver utilization and originations in CB, partially offset by
- lower securities-based lending in AWM.

The allowance for loan losses increased, reflecting:

- a net addition to the allowance for loan losses of $\$ 1.8$ billion, consisting of:
- $\$ 1.1$ billion in wholesale, predominantly driven by net downgrade activity, updates to certain assumptions related to office real estate in CB in the second quarter of 2023, and the impact of the additional weight placed on the adverse scenarios in the first quarter of 2023, and
- $\$ 620$ million in consumer, predominantly driven by Card Services, reflecting loan growth, the net effect of changes in the Firm's macroeconomic outlook, including the impact from the weighted average U.S. unemployment rate peaking in the third quarter of 2024, and the additional weight placed on the adverse scenarios in the first quarter of 2023, partially offset by reduced borrower uncertainty, and
- \$1.1 billion to establish the allowance for the First Republic loans in the second quarter of 2023.

The allowance for loan losses also reflected a reduction of $\$ 587$ million, on January 1,2023 , as a result of the adoption of the Financial Instruments - Credit Losses: Troubled Debt Restructurings accounting guidance. References in this Form 10-Q to "changes to the TDR accounting guidance" pertain to the Firm's adoption of this guidance.
There was also a $\$ 196$ million net reduction in the allowance for lending-related commitments recognized in other liabilities on the Consolidated balance sheets, which included a $\$ 97$ million addition to establish the allowance for the First Republic lending-related commitments.
Refer to Credit and Investment Risk Management on pages 62-83, and Notes 2, 3, 12 and 13 for additional information on loans and the total allowance for credit losses; and Business Segment Results on page 24 and Note 28 for additional information on the First Republic acquisition.

Accrued interest and accounts receivable decreased primarily due to lower client receivables related to clientdriven activities in Markets.
Premises and equipment increased as a result of the First Republic acquisition, largely lease right-of-use assets, and the construction-in-process associated with the Firm's headquarters. Refer to Note 17 for information on leases.
Goodwill, MSRs and other intangible assets increased predominantly due to the other intangibles and goodwill related to the Firm's acquisition of the remaining $51 \%$ interest in CIFM, and the core deposit intangibles associated with the First Republic acquisition. Refer to Note 15 and 28 for additional information.
Other assets decreased reflecting lower cash collateral placed with central counterparties ("CCPs").

Selected Consolidated balance sheets data (continued)

| (in millions) |  | $\begin{array}{r} \text { June } 30, \\ 2023 \end{array}$ | $\begin{array}{r} \text { December 31, } \\ 2022 \end{array}$ |  | Change |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Liabilities |  |  |  |  |  |
| Deposits | \$ | 2,398,962 | \$ | 2,340,179 | 3 \% |
| Federal funds purchased and securities loaned or sold under repurchase agreements |  | 266,272 |  | 202,613 | 31 |
| Short-term borrowings |  | 41,022 |  | 44,027 | (7) |
| Trading liabilities |  | 178,809 |  | 177,976 | - |
| Accounts payable and other liabilities |  | 286,934 |  | 300,141 | (4) |
| Beneficial interests issued by consolidated variable interest entities ("VIEs") |  | 19,647 |  | 12,610 | 56 |
| Long-term debt |  | 364,078 |  | 295,865 | 23 |
| Total liabilities |  | 3,555,724 |  | 3,373,411 | 5 |
| Stockholders' equity |  | 312,516 |  | 292,332 | 7 |
| Total liabilities and stockholders' equity | \$ | 3,868,240 | \$ | 3,665,743 | 6 \% |

## Deposits increased, reflecting:

- increases in CIB due to deposit inflows related to clientdriven activities and net issuances of structured notes as a result of client demand,
- $\$ 68$ billion of deposits in CCB associated with the First Republic acquisition, partially offset by a net decline primarily in existing accounts due to increased customer spending, and
- an increase in Corporate related to the Firm's international consumer initiatives,
partially offset by
- the continued migration into higher-yielding investments in AWM as a result of the rising interest rate environment, and
- ongoing attrition in CB driven by higher rates and seasonal outflows, predominantly offset by inflows as a result of disruptions in the market in the first quarter of 2023.

Federal funds purchased and securities loaned or sold under repurchase agreements increased due to higher secured financing of trading assets and the impact of a lower level of netting on client-driven market-making activities in Markets.

Short-term borrowings decreased predominantly as a result of lower financing requirements in Markets, partially offset by short-term FHLB advances associated with the First Republic acquisition in Treasury and CIO.
Refer to Liquidity Risk Management on pages 54-61 for additional information on deposits, federal funds purchased and securities loaned or sold under repurchase agreements, and short-term borrowings; Notes 2 and 16 for deposits and Note 11 for federal funds purchased and securities loaned or sold under repurchase agreements; Business Segment Results on page 24 and Note 28 for additional information on the First Republic acquisition.
Trading liabilities: refer to Notes 2 and 5 for additional information.
Accounts payable and other liabilities decreased primarily due to lower client payables related to client-driven activities in Markets.

Beneficial interests issued by consolidated VIEs increased driven by higher levels of Firm-administered multi-seller conduit commercial paper held by third parties, reflecting changes in the Firm's short-term liquidity management, and an increase in loans in the conduits in CIB. Refer to Liquidity Risk Management on pages 54-61 and Notes 14 and 24 for additional information, specifically Firm-sponsored VIEs and Ioan securitization trusts.

Long-term debt increased, reflecting the impact of the First Republic acquisition, which included the Purchase Money Note issued to the FDIC, and $\$ 25$ billion of FHLB advances, partially offset by maturities and redemptions in Treasury and CIO. Refer to Liquidity Risk Management on pages 54-61; and Note 28 for additional information on the First Republic acquisition.
Stockholders' equity: refer to Consolidated statements of changes in stockholders' equity on page 99, Capital Actions on page 52, and Note 21 for additional information.

## Consolidated cash flows analysis

The following is a discussion of cash flow activities during the six months ended June 30, 2023 and 2022.

| (in millions) | Six months ended June 30, |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  | 2022 |  |
| Net cash provided by/(used in) |  |  |  |  |
| Operating activities | \$ | $(92,376)$ | \$ | 24,101 |
| Investing activities |  | 5,551 |  | $(125,811)$ |
| Financing activities |  | 14,642 |  | 48,970 |
| Effect of exchange rate changes on cash |  | 72 |  | $(18,834)$ |
| Net increase/(decrease) in cash and due from banks and deposits with banks | \$ | $(72,111)$ | \$ | (71,574) |

## Operating activities

- In 2023, cash used resulted from higher trading assets and lower accounts payable, partially offset by lower other assets, securities borrowed and accrued interest and accounts receivable.
- In 2022, cash provided reflected higher accounts payable and other liabilities, trading liabilities, and net proceeds from loans held-for-sale, predominantly offset by higher trading assets and accrued interest and accounts receivable.


## Investing activities

- In 2023, cash provided reflected net proceeds from investment securities, largely offset by higher net originations of loans, higher securities purchased under resale agreements, and net cash used in the First Republic acquisition.
- In 2022, cash used resulted from higher securities purchased under resale agreements, net originations of loans, and net purchases of investment securities.

Financing activities

- In 2023, cash provided reflected higher securities loaned or sold under repurchase agreements, largely offset by net activity in deposits, which included the impact of the repayment of the deposits provided to First Republic Bank by the consortium of large U.S. banks that the Firm assumed as part of the First Republic acquisition, as well as net payments on long- and short-term borrowings.
- In 2022, cash provided reflected higher securities loaned or sold under repurchase agreements and net proceeds from long- and short-term borrowings.
- For both periods, cash was used for repurchases of common stock and cash dividends on common and preferred stock.

Refer to Consolidated Balance Sheets Analysis on pages 16-19, Capital Risk Management on pages 48-53, and Liquidity Risk Management on pages 54-61, and the Consolidated Statements of Cash Flows on page 100 of this Form 10-Q, and pages 97-104 of JPMorgan Chase's 2022 Form 10-K for a further discussion of the activities affecting the Firm's cash flows.

## EXPLANATION AND RECONCILIATION OF THE FIRM'S USE OF NON-GAAP FINANCIAL MEASURES

The Firm prepares its Consolidated Financial Statements in accordance with U.S. GAAP and this presentation is referred to as "reported" basis; these financial statements appear on pages 96-100.

In addition to analyzing the Firm's results on a reported basis, the Firm also reviews and uses certain non-GAAP financial measures at the Firmwide and segment level. These non-GAAP measures include:

- Firmwide "managed" basis results, including the overhead ratio, which include certain reclassifications to present total net revenue from investments that receive tax credits and tax-exempt securities on a basis comparable to taxable investments and securities ("FTE" basis);
- Pre-provision profit, which represents total net revenue less total noninterest expense;
- Net interest income, net yield, and noninterest revenue excluding Markets;
- TCE, ROTCE, and TBVPS;
- Adjusted expense, which represents noninterest expense excluding Firmwide legal expense; and
- Allowance for loan losses to period-end loans retained, excluding trade finance and conduits.
Refer to Explanation and Reconciliation of the Firm's Use Of Non-GAAP Financial Measures and Key Performance Measures on pages 58-60 of JPMorgan Chase's 2022 Form 10-K for a further discussion of management's use of nonGAAP financial measures.

The following summary tables provide a reconciliation from the Firm's reported U.S. GAAP results to managed basis.

| (in millions, except ratios) | Three months ended June 30, |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  |  |  |  |  | 2022 |  |  |  |  |  |
|  | Reported |  | Fully taxableequivalent adjustments ${ }^{(\mathrm{a})}$ |  | Managed basis |  | Reported |  | Fully taxableequivalent adjustments ${ }^{(\mathrm{a})}$ |  | Managed basis |  |
| Other income | \$ | 3,292 | \$ | 990 | \$ | 4,282 | \$ | 540 | \$ | 812 |  | 1,352 |
| Total noninterest revenue |  | 19,528 |  | 990 |  | 20,518 |  | 15,587 |  | 812 |  | 16,399 |
| Net interest income |  | 21,779 |  | 104 |  | 21,883 |  | 15,128 |  | 103 |  | 15,231 |
| Total net revenue |  | 41,307 |  | 1,094 |  | 42,401 |  | 30,715 |  | 915 |  | 31,630 |
| Total noninterest expense |  | 20,822 |  | NA |  | 20,822 |  | 18,749 |  | NA |  | 18,749 |
| Pre-provision profit |  | 20,485 |  | 1,094 |  | 21,579 |  | 11,966 |  | 915 |  | 12,881 |
| Provision for credit losses |  | 2,899 |  | NA |  | 2,899 |  | 1,101 |  | NA |  | 1,101 |
| Income before income tax expense |  | 17,586 |  | 1,094 |  | 18,680 |  | 10,865 |  | 915 |  | 11,780 |
| Income tax expense |  | 3,114 |  | 1,094 |  | 4,208 |  | 2,216 |  | 915 |  | 3,131 |
| Net income | \$ | 14,472 |  | NA | \$ | 14,472 | \$ | 8,649 |  | NA |  | 8,649 |
| Overhead ratio |  | 50 |  | NM |  | 49 \% |  | 61 \% |  | NM |  | 59 \% |
|  | Six months ended June 30, |  |  |  |  |  |  |  |  |  |  |  |
|  | 2023 |  |  |  |  |  | 2022 |  |  |  |  |  |
| (in millions, except ratios) | Reported |  | Fully taxableequivalent adjustments ${ }^{(\mathrm{a})}$ |  | Managed basis |  | Reported |  | Fully taxableequivalent adjustments ${ }^{(a)}$ |  | Managed basis |  |
| Other income | \$ | 4,299 | \$ | 1,857 | \$ | 6,156 | \$ | 2,030 | \$ | 1,587 |  | 3,617 |
| Total noninterest revenue |  | 37,166 |  | 1,857 |  | 39,023 |  | 32,432 |  | 1,587 |  | 34,019 |
| Net interest income |  | 42,490 |  | 224 |  | 42,714 |  | 29,000 |  | 201 |  | 29,201 |
| Total net revenue |  | 79,656 |  | 2,081 |  | 81,737 |  | 61,432 |  | 1,788 |  | 63,220 |
| Total noninterest expense |  | 40,929 |  | NA |  | 40,929 |  | 37,940 |  | NA |  | 37,940 |
| Pre-provision profit |  | 38,727 |  | 2,081 |  | 40,808 |  | 23,492 |  | 1,788 |  | 25,280 |
| Provision for credit losses |  | 5,174 |  | NA |  | 5,174 |  | 2,564 |  | NA |  | 2,564 |
| Income before income tax expense |  | 33,553 |  | 2,081 |  | 35,634 |  | 20,928 |  | 1,788 |  | 22,716 |
| Income tax expense |  | 6,459 |  | 2,081 |  | 8,540 |  | 3,997 |  | 1,788 |  | 5,785 |
| Net Income | \$ | 27,094 |  | NA | \$ | 27,094 | \$ | 16,931 |  | NA |  | 16,931 |
| Overhead ratio |  | 51 |  | NM |  | 50 \% |  | 62 \% |  | NM |  | $60 \%$ |

(a) Predominantly recognized in CIB, CB and Corporate.

The following table provides information on net interest income, net yield, and noninterest revenue excluding Markets.

| (in millions, except rates) | Three months ended June 30, |  |  |  |  | Six months ended June 30, |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  |  | 2022 | Change |  | 2023 |  | 2022 | Change |
| Net interest income - reported | \$ | 21,779 | \$ | 15,128 | 44 \% | \$ | 42,490 | \$ | 29,000 | 47 \% |
| Fully taxable-equivalent adjustments | 104 |  |  | 103 | 1 |  | 224 |  | 201 | 11 |
| Net interest income - managed basis ${ }^{(a)}$ | \$ | 21,883 | \$ | 15,231 | 44 | \$ | 42,714 | \$ | 29,201 | 46 |
| Less: Markets net interest income ${ }^{(b)}$ | (487) |  | 1,549 |  | NM | (592) |  | 3,767 |  | NM |
| Net interest income excluding Markets ${ }^{(\mathrm{a})}$ | \$ | 22,370 | \$ | 13,682 | 63 | \$ | 43,306 | \$ | 25,434 | 70 |
| Average interest-earning assets | \$ 3,343,780 |  | \$ 3,385,894 |  | (1) | \$ 3,280,619 |  | \$ 3,393,879 |  | (3) |
| Less: Average Markets interest-earning assets ${ }^{(b)}$ | 1,003,877 |  | 957,304 |  | 5 | 993,283 |  | 960,556 |  | 3 |
| Average interest-earning assets excluding Markets | \$ 2,339,903 |  | \$ 2,428,590 |  | (4)\% | \$ 2,287,336 |  | \$ 2,433,323 |  | (6)\% |
| Net yield on average interest-earning assets - managed basis | 2.62 \% |  |  | 1.80 \% |  |  | 2.63 \% |  | 1.74 \% |  |
| Net yield on average Markets interest-earning assets ${ }^{(b)}$ | (0.19) |  |  | 0.65 |  |  | (0.12) |  | 0.79 |  |
| Net yield on average interest-earning assets excluding Markets | 3.83 \% |  |  | 2.26 \% |  |  | 3.82 \% |  | 2.11 \% |  |
| Noninterest revenue - reported | \$ | 19,528 | \$ | 15,587 | 25 \% | \$ | 37,166 | \$ | 32,432 | 15 \% |
| Fully taxable-equivalent adjustments | 990 |  |  | 812 | 22 |  | 1,857 |  | 1,587 | 17 |
| Noninterest revenue - managed basis | \$ | 20,518 | \$ | 16,399 | 25 | \$ | 39,023 | \$ | 34,019 | 15 |
| Less: Markets noninterest revenue ${ }^{(b)}$ |  | 7,505 |  | 6,241 | 20 | 15,992 |  |  | 12,776 | 25 |
| Noninterest revenue excluding Markets | \$ | 13,013 | \$ | 10,158 | 28 | \$ | 23,031 | \$ | 21,243 | 8 |
| Memo: Total Markets net revenue ${ }^{(b)}$ | \$ | 7,018 | \$ | 7,790 | (10) | \$ | 15,400 | \$ | 16,543 | (7) |

(a) Interest includes the effect of related hedges. Taxable-equivalent amounts are used where applicable.
(b) Refer to page 35 for further information on Markets.

The following summary table provides a reconciliation from the Firm's common stockholders' equity to TCE.

| (in millions, except per share and ratio data) | Period-end |  |  |  | Average |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{array}{r} \text { Jun 30, } \\ 2023 \end{array}$ |  | $\begin{array}{r} \text { Dec 31, } \\ 2022 \end{array}$ |  | Three months ended June 30, |  |  |  | Six months ended June 30, |  |  |  |
|  |  |  |  | 2023 |  | 2022 |  | 202 |  | 2022 |
| Common stockholders' equity | \$ | 285,112 |  |  | \$ | 264,928 | \$ | 277,885 | \$ | 247,986 | \$ | 274,560 | \$ | 250,234 |
| Less: Goodwill |  | 52,380 |  | 51,662 |  | 52,342 |  | 50,575 |  | 52,031 |  | 50,442 |
| Less: Other intangible assets |  | 3,629 |  | 1,224 |  | 2,191 |  | 1,119 |  | 1,746 |  | 1,007 |
| Add: Certain deferred tax liabilities ${ }^{(\mathrm{a})}$ |  | 3,097 |  | 2,510 |  | 2,902 |  | 2,503 |  | 2,727 |  | 2,500 |
| Tangible common equity | \$ | 232,200 | \$ | 214,552 | \$ | 226,254 | \$ | 198,795 | \$ | 223,510 | \$ | 201,285 |
| Return on tangible common equity |  | NA |  | NA |  | 25 |  | 17 |  | 24 |  | 16 \% |
| Tangible book value per share | \$ | 79.90 | \$ | 73.12 |  |  |  |  |  |  |  | NA |

[^142]The Firm is managed on an LOB basis. There are four major reportable business segments - Consumer \& Community Banking, Corporate \& Investment Bank, Commercial Banking and Asset \& Wealth Management. In addition, there is a Corporate segment.
The business segments are determined based on the products and services provided, or the type of customer served, and they reflect the manner in which financial information is currently evaluated by the Firm's Operating Committee. Segment results are presented on a managed basis. Refer to Explanation and Reconciliation of the Firm's use of Non-GAAP Financial Measures on pages 20-21 for a definition of managed basis.

Description of business segment reporting methodology Results of the business segments are intended to present each segment as if it were a stand-alone business. The management reporting process that derives business segment results includes the allocation of certain income and expense items. The Firm periodically assesses the assumptions, methodologies and reporting classifications used for segment reporting, and further refinements may be implemented in future periods. The Firm also assesses the level of capital required for each LOB on at least an annual basis. The Firm's LOBs also provide various business metrics which are utilized by the Firm and its investors and analysts in assessing performance.

## Revenue sharing

When business segments join efforts to sell products and services to the Firm's clients and customers, the participating business segments may agree to share revenue from those transactions. Revenue is generally recognized in the segment responsible for the related product or service, with allocations to the other segment(s) involved in the transaction. The segment results reflect these revenue-sharing agreements.

## Funds transfer pricing

Funds transfer pricing ("FTP") is the process by which the Firm allocates interest income and expense to the LOBs and Other Corporate and transfers the primary interest rate risk and liquidity risk to Treasury and CIO.
The funds transfer pricing process considers the interest rate risk and liquidity risk characteristics of assets and liabilities and off-balance sheet products. Periodically the methodology and assumptions utilized in the FTP process are adjusted to reflect economic conditions and other factors, which may impact the allocation of net interest income to the segments.

Foreign exchange risk
Foreign exchange risk is transferred from the LOBs and Other Corporate to Treasury and CIO for certain revenues and expenses. Treasury and CIO manages these risks centrally and reports the impact of foreign exchange rate movements related to the transferred risk in its results. Refer to Market Risk Management on pages 84-89 for additional information.

## Capital allocation

The amount of capital assigned to each business segment is referred to as equity. At least annually, the assumptions, judgments and methodologies used to allocate capital are reassessed and, as a result, the capital allocated to the LOBs may change. As of June 30, 2023, the Firm updated its line of business capital allocations to reflect the impact of the First Republic acquisition. Refer to Line of business equity on page 51, and page 93 of JPMorgan Chase’s 2022 Form 10-K for additional information on capital allocation.
Refer to Business Segment Results - Description of business segment reporting methodology on pages 61-62 and Note 32 of JPMorgan Chase's 2022 Form 10-K for a further discussion of those methodologies.

Segment results - managed basis
The following tables summarize the Firm's results by segment for the periods indicated.

(a) In the first quarter of 2023, the allocations of revenue and expense to CCB associated with a Merchant Services revenue sharing agreement were discontinued and are now retained in Payments in CIB. Prior-period amounts have been revised to conform with the current presentation.

The following sections provide a comparative discussion of the Firm's results by segment as of or for the three and six months ended June 30, 2023 versus the corresponding period in the prior year, unless otherwise specified.

## Selected Firmwide Metrics

The following tables present key metrics for Wealth Management, which consists of the Global Private Bank in AWM and J.P. Morgan Wealth Management in CCB; and total revenue and key metrics for J.P. Morgan Payments, which consists of payments activities in CIB and CB. This presentation is intended to provide investors with additional information concerning Wealth Management and J.P. Morgan Payments, each of which consists of similar business activities conducted across LOBs to serve different types of clients and customers.

Selected metrics - Wealth Management

|  | June 30, <br> 2023 | June 30, <br> 2022 |  |  |
| :--- | :---: | :---: | :---: | :---: |
| Client assets (in billions) $^{(\mathrm{a})}$ | $\mathbf{\$}$ | $\mathbf{2 , 8 6 2}$ | (b) | $\$$ |
| Number of client advisors |  | $\mathbf{8 , 3 6 7}$ |  | $\mathbf{2 , 1 7 7}$ |

(a) Consists of Global Private Bank in AWM and client investment assets in J.P. Morgan Wealth Management in CCB.
(b) As of June 30, 2023, included $\$ 150.9$ billion of client investment assets associated with the First Republic acquisition.

| (in millions, except where otherwise noted) | Three months ended June 30, |  | Six months ended June 30, |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2023 | 2022 | 2023 | 2022 |
| Total net revenue ${ }^{\text {(a) }}$ | \$ 4,729 | \$ 3,130 | \$ 9,187 | \$ 5,725 |
| Merchant processing volume (in billions) | 600.1 | 539.6 | 1,158.9 | 1,029.8 |
| Average deposits (in billions) | 720 | 816 | 714 | 819 |

(a) Excludes the net impact of equity investments.

Segment information related to the First Republic acquisition
The following table presents selected impacts to CCB, CB, AWM and Corporate associated with the First Republic acquisition.

(a) Reflects the estimated bargain purchase gain of $\$ 2.7$ billion recorded in other income. Refer to Note 28 for additional information.
(b) Excluded $\$ 1.9$ billion of loans transferred to the CIB.

The following sections provide a comparative discussion of the Firm's results by segment as of or for the three and six months ended June 30, 2023 and 2022.

Refer to pages 63-66 of JPMorgan Chase's 2022 Form 10-K and Line of Business Metrics on page 206 for a further discussion of the business profile of CCB.
Selected income statement data

| (in millions, except ratios) | Three months ended June 30, |  |  |  |  |  |  | Six months ended June 30, |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  |  | 2022 |  | Change |  | 2023 |  |  | 2022 |  |  | Change |
| Revenue |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Lending- and deposit-related fees | \$ | 841 |  | \$ | 855 |  | (2)\% | \$ | 1,664 |  | \$ | 1,660 |  | - \% |
| Asset management fees |  | 816 | (d) |  | 684 |  | 19 |  | 1,492 | (d) |  | 1,410 |  | 6 |
| Mortgage fees and related income |  | 274 |  |  | 377 |  | (27) |  | 497 |  |  | 833 |  | (40) |
| Card income |  | 483 |  |  | 621 | (f) | (22) |  | 1,222 |  |  | 1,162 | (f) | 5 |
| All other income ${ }^{(a)}$ |  | 1,129 | (d) |  | 1,313 | (f) | (14) |  | 2,291 | (d) |  | 2,640 | (f) | (13) |
| Noninterest revenue |  | 3,543 |  |  | 3,850 |  | (8) |  | 7,166 |  |  | 7,705 |  | (7) |
| Net interest income |  | 13,690 | (d) |  | 8,708 |  | 57 |  | 26,523 | (d) |  | 17,035 |  | 56 |
| Total net revenue |  | 17,233 |  |  | 12,558 |  | 37 |  | 33,689 |  |  | 24,740 |  | 36 |
| Provision for credit losses |  | 1,862 | (d) |  | 761 |  | 145 |  | 3,264 | (d) |  | 1,439 |  | 127 |
| Noninterest expense |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Compensation expense |  | 3,628 |  |  | 3,237 |  | 12 |  | 7,173 |  |  | 6,408 |  | 12 |
| Noncompensation expense ${ }^{(\text {b })}$ |  | 4,685 | (d) |  | 4,421 | (f) | 6 |  | 9,205 | (d) |  | 8,905 | (f) | 3 |
| Total noninterest expense |  | 8,313 |  |  | 7,658 |  | 9 |  | 16,378 |  |  | 15,313 |  | 7 |
| Income before income tax expense |  | 7,058 |  |  | 4,139 |  | 71 |  | 14,047 |  |  | 7,988 |  | 76 |
| Income tax expense |  | 1,752 |  |  | 1,031 | (f) | 70 |  | 3,498 |  |  | 1,972 | (f) | 77 |
| Net income |  | 5,306 |  | \$ | 3,108 |  | 71 |  | 10,549 |  | \$ | 6,016 |  | 75 |
| Revenue by line of business |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Banking \& Wealth Management |  | 10,936 | (e) | \$ | 6,502 | (f) | 68 | \$ | 20,977 | (e) | \$ | 12,517 | (f) | 68 |
| Home Lending |  | 1,007 | (e) |  | 1,001 |  | 1 |  | 1,727 | (e) |  | 2,170 |  | (20) |
| Card Services \& Auto |  | 5,290 |  |  | 5,055 |  | 5 |  | 10,985 |  |  | 10,053 |  | 9 |
| Mortgage fees and related income details: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Production revenue |  | 102 |  |  | 150 |  | (32) |  | 177 |  |  | 361 |  | (51) |
| Net mortgage servicing revenue ${ }^{(c)}$ |  | 172 |  |  | 227 |  | (24) |  | 320 |  |  | 472 |  | (32) |
| Mortgage fees and related income | \$ | 274 |  | \$ | 377 |  | (27)\% | \$ | 497 |  | \$ | 833 |  | (40)\% |
| Financial ratios |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Return on equity |  | 38 \% |  |  | 24 \% |  |  |  | 39 \% |  |  | 23 \% |  |  |
| Overhead ratio |  | 48 |  |  | 61 |  |  |  | 49 |  |  | 62 |  |  |

(a) Primarily includes operating lease income and commissions and other fees. For the three months ended June 30, 2023 and 2022, operating lease income was $\$ 704$ million and $\$ 929$ million, respectively, and $\$ 1.4$ billion and $\$ 2.0$ billion for the six months ended June 30, 2023 and 2022, respectively.
(b) Included depreciation expense on leased assets of $\$ 445$ million and $\$ 652$ million for the three months ended June 30, 2023 and 2022 , respectively, and $\$ 852$ million and $\$ 1.3$ billion for the six months ended June 30,2023 and 2022, respectively.
(c) Included MSR risk management results of $\$ 25$ million and $\$ 28$ million for the three months ended June 30, 2023 and 2022, respectively, and $\$ 13$ million and $\$ 137$ million for the six months ended June 30, 2023 and 2022, respectively.
(d) Includes the impact of the First Republic acquisition. Refer to page 24 for additional information.
(e) For the three and six months ended June 30, 2023, included $\$ 596$ million and $\$ 235$ million for Banking \& Wealth Management and Home Lending, respectively, associated with the First Republic acquisition.
(f) In the first quarter of 2023, the allocations of revenue and expense to CCB associated with a Merchant Services revenue sharing agreement were discontinued and are now retained in Payments in CIB. Prior-period amounts have been revised to conform with the current presentation.

## Quarterly results

Net income was $\$ 5.3$ billion, up $71 \%$.
Net revenue was $\$ 17.2$ billion, an increase of $37 \%$. Net interest income was $\$ 13.7$ billion, up $57 \%$, driven by:

- deposit margin expansion on higher rates in Banking \& Wealth Management ("BWM"), and
- higher NII in Card Services driven by increased revolving balances.

Noninterest revenue was $\$ 3.5$ billion, down 8\%, driven by:

- lower auto operating lease income as a result of a decline in volume, and
- a decrease in card income driven by lower net interchange, as a result of an increase to the rewards liability due to adjustments to certain reward program terms,
partially offset by
- higher asset management fees in BWM predominantly driven by the impact of the First Republic acquisition.
Refer to Note 6 for additional information on card income, asset management fees, and commissions and other fees; and Critical Accounting Estimates on pages 91-93 for card income.

Refer to Note 15 for further information regarding changes in the value of the MSR asset and related hedges, and mortgage fees and related income.

Noninterest expense was $\$ 8.3$ billion, up 9\%, driven by:

- higher compensation expense, including wage inflation and headcount growth, as well as higher marketing and technology,
partially offset by
- lower auto lease depreciation on lower auto lease assets.

The provision for credit losses was $\$ 1.9$ billion, and included:

- net charge-offs of $\$ 1.3$ billion, up $\$ 640$ million, predominantly driven by Card Services, as 30+ day delinquencies have returned to pre-pandemic levels, and
- a $\$ 611$ million net addition to the allowance for credit losses, reflecting $\$ 408$ million to establish the allowance for the First Republic loans and lending-related commitments. The net addition also included $\$ 203$ million driven by Card Services, reflecting loan growth, and the net effect of changes in the Firm's macroeconomic outlook, including the impact from the weighted average U.S. unemployment rate peaking in the third quarter of 2024, largely offset by reduced borrower uncertainty.
The prior year included a $\$ 150$ million addition to the allowance for credit losses in Card Services.
Refer to Credit and Investment Risk Management on pages 62-83 and Allowance for Credit Losses on pages 80-82 for a further discussion of the credit portfolios and the allowance for credit losses.


## Year-to-date results

Net income was $\$ 10.5$ billion, up $75 \%$.
Net revenue was $\$ 33.7$ billion, an increase of $36 \%$.
Net interest income was $\$ 26.5$ billion, up $56 \%$, driven by:

- deposit margin expansion on higher rates, partially offset by lower average deposits in BWM, and
- higher NII in Card Services driven by increased revolving balances,
partially offset by
- the impact of lower PPP loan forgiveness in BWM.

Noninterest revenue was $\$ 7.2$ billion, down 7\%, driven by:

- lower auto operating lease income as a result of a decline in volume and
- in Home Lending, lower production revenue from a decline in volume and lower net mortgage servicing revenue predominantly driven by lower net gains on MSR risk management,
partially offset by
- higher travel-related commissions in Card Services,
- higher asset management fees in BWM driven by the impact of the First Republic acquisition.
Card income was relatively flat as the increase in net interchange in the first quarter of 2023 due to a reduction in rewards costs and partner payments related to a periodic tax refund on airline miles redeemed was offset by an increase to the rewards liability due to adjustments to certain reward program terms in the second quarter of 2023.
Noninterest expense was $\$ 16.4$ billion, up $7 \%$, driven by:
- higher compensation expense, including wage inflation and headcount growth, as well as higher marketing and technology,
partially offset by
- Iower auto lease depreciation on lower auto lease assets.

The provision for credit losses was $\$ 3.3$ billion, and included:

- net charge-offs of $\$ 2.3$ billion, up $\$ 1.1$ billion, predominantly driven by Card Services, as 30+ day delinquencies have returned to pre-pandemic levels, and
- a $\$ 553$ million net addition, predominantly driven by Card Services, reflecting loan growth, the net effect of changes in the Firm's macroeconomic outlook, including the impact from the weighted average U.S. unemployment rate peaking in the third quarter of 2024, and the additional weight placed on the adverse scenarios in the first quarter of 2023, partially offset by reduced borrower uncertainty, and
- a $\$ 408$ million net addition to the allowance for credit losses to establish the allowance for the First Republic loans and lending-related commitments, in the second quarter of 2023.
The prior year included a $\$ 275$ million addition to the allowance for credit losses in Card Services and Home Lending.

Selected metrics

| (in millions, except headcount) | As of or for the three months ended June 30 , |  |  |  | As of or for the six months ended June 30, |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  | 2022 | Change | 2023 |  | 2022 | Change |
| Selected balance sheet data (period-end) |  |  |  |  |  |  |  |  |
| Total assets | \$ 620,193 |  | \$ 500,219 | 24 \% | \$ 620,193 |  | \$ 500,219 | 24 \% |
| Loans: |  |  |  |  |  |  |  |  |
| Banking \& Wealth Management ${ }^{(a)}$ | 30,959 | (d) | 31,494 | (2) | 30,959 | (d) | 31,494 | (2) |
| Home Lending ${ }^{(b)}$ | 262,432 | (d) | 176,939 | 48 | 262,432 | (d) | 176,939 | 48 |
| Card Services | 191,353 |  | 165,494 | 16 | 191,353 |  | 165,494 | 16 |
| Auto | 73,587 |  | 67,842 | 8 | 73,587 |  | 67,842 | 8 |
| Total loans | 558,331 |  | 441,769 | 26 | 558,331 |  | 441,769 | 26 |
| Deposits | 1,173,514 | (e) | 1,178,825 | - | 1,173,514 |  | 1,178,825 | - |
| Equity | 55,500 |  | 50,000 | 11 | 55,500 |  | 50,000 | 11 |
| Selected balance sheet data (average) |  |  |  |  |  |  |  |  |
| Total assets | \$ 576,417 |  | \$ 496,177 | 16 | \$ 541,788 |  | \$ 492,592 | 10 |
| Loans: |  |  |  |  |  |  |  |  |
| Banking \& Wealth Management | 30,628 | (f) | 32,294 | (5) | 29,572 | (f) | 33,014 | (10) |
| Home Lending ${ }^{(c)}$ | 229,569 | (f) | 177,330 | 29 | 201,005 | (f) | 176,911 | 14 |
| Card Services | 187,028 |  | 158,434 | 18 | 183,758 |  | 153,941 | 19 |
| Auto | 71,083 |  | 68,569 | 4 | 69,920 |  | 68,908 | 1 |
| Total loans | 518,308 |  | 436,627 | 19 | 484,255 |  | 432,774 | 12 |
| Deposits | 1,157,309 | (g) | 1,180,453 | (2) | 1,135,261 | (g) | 1,167,057 | (3) |
| Equity | 54,346 |  | 50,000 | 9 | 53,180 |  | 50,000 | 6 |
| Headcount | 137,087 |  | 130,907 | 5 \% | 137,087 |  | 130,907 | 5 \% |

(a) At June 30, 2023 and 2022, included $\$ 163$ million and $\$ 1.5$ billion of loans, respectively, in Business Banking under the PPP. Refer to Credit Portfolio on pages 108-109 of JPMorgan Chase's 2022 Form 10-K for a further discussion of the PPP.
(b) At June 30, 2023 and 2022, Home Lending loans held-for-sale and loans at fair value were $\$ 3.9$ billion and $\$ 5.2$ billion, respectively.
(c) Average Home Lending loans held-for sale and loans at fair value were $\$ 5.3$ billion and $\$ 8.1$ billion for the three months ended June 30 , 2023 and 2022 , respectively, and $\$ 4.4$ billion and $\$ 9.5$ billion for the six months ended June 30, 2023 and 2022, respectively.
(d) As of June 30, 2023, included $\$ 3.4$ billion and $\$ 91.3$ billion for Banking \& Wealth Management and Home Lending, respectively, associated with the First Republic acquisition.
(e) Includes the impact of the First Republic acquisition. Refer to page 24 for additional information.
(f) For the three months ended June 30, 2023, included $\$ 2.7$ billion and $\$ 57.2$ billion for Banking \& Wealth Management and Home Lending, respectively, and for the six months ended June 30, 2023, included $\$ 1.4$ billion and $\$ 28.7$ billion for Banking \& Wealth Management and Home Lending, respectively, associated with the First Republic acquisition.
(g) For the three and six months ended June 30, 2023, included $\$ 47.2$ billion and $\$ 23.7$ billion, respectively, associated with the First Republic acquisition.

| (in millions, except ratio data) | As of or for the three months ended June 30, |  |  |  |  |  |  | As of or for the six months ended June 30, |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  |  | 2022 |  | Change |  | 2023 |  |  | 2022 |  | Change |  |
| Credit data and quality statistics |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Nonaccrual loans ${ }^{(a)(b)}$ | \$ | 3,823 |  | \$ | 4,217 |  | (9)\% | \$ | 3,823 |  | \$ | 4,217 |  | (9)\% |
| Net charge-offs/(recoveries) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Banking \& Wealth Management |  | 92 |  |  | 81 |  | 14 |  | 171 |  |  | 170 |  | 1 |
| Home Lending |  | (28) |  |  | (68) |  | 59 |  | (46) |  |  | (137) |  | 66 |
| Card Services |  | 1,124 |  |  | 580 |  | 94 |  | 2,046 |  |  | 1,086 |  | 88 |
| Auto |  | 63 |  |  | 18 |  | 250 |  | 132 |  |  | 45 |  | 193 |
| Total net charge-offs/(recoveries) | \$ | 1,251 |  | \$ | 611 |  | 105 | \$ | 2,303 |  | \$ | 1,164 |  | 98 |
| Net charge-off/(recovery) rate |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Banking \& Wealth Management ${ }^{(\mathrm{c})}$ |  | 1.20 | \% |  | 1.01 | \% |  |  | 1.17 | \% |  | 1.04 | \% |  |
| Home Lending |  | (0.05) |  |  | (0.16) |  |  |  | (0.05) |  |  | (0.16) |  |  |
| Card Services |  | 2.41 |  |  | 1.47 |  |  |  | 2.25 |  |  | 1.42 |  |  |
| Auto |  | 0.36 |  |  | 0.11 |  |  |  | 0.38 |  |  | 0.13 |  |  |
| Total net charge-off/(recovery) rate |  | 0.98 | \% |  | 0.57 | \% |  |  | 0.97 | \% |  | 0.55 | \% |  |
| 30+ day delinquency rate |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Home Lending ${ }^{(d)(e)}$ |  | 0.58 | \% |  | 0.85 | \% |  |  | 0.58 | \% |  | 0.85 | \% |  |
| Card Services |  | 1.70 |  |  | 1.05 |  |  |  | 1.70 |  |  | 1.05 |  |  |
| Auto |  | 0.92 |  |  | 0.69 |  |  |  | 0.92 |  |  | 0.69 |  |  |
| 90+ day delinquency rate - Card Services |  | 0.84 | \% |  | 0.51 | \% |  |  | 0.84 | \% |  | 0.51 | \% |  |
| Allowance for loan losses |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Banking \& Wealth Management | \$ | 731 |  | \$ | 697 |  | 5 | \$ | 731 |  | \$ | 697 |  | 5 |
| Home Lending |  | 777 | (f) |  | 785 |  | (1) |  | 777 | (f) |  | 785 |  | (1) |
| Card Services |  | 11,600 |  |  | 10,400 |  | 12 |  | 11,600 |  |  | 10,400 |  | 12 |
| Auto |  | 717 |  |  | 740 |  | (3) |  | 717 |  |  | 740 |  | (3) |
| Total allowance for loan losses | \$ | 13,825 | (g) | \$ | 12,622 |  | 10 \% | \$ | 13,825 | (g) | \$ | 12,622 |  | $10 \%$ |

(a) At June 30, 2023 and 2022, nonaccrual loans excluded mortgage loans 90 or more days past due and insured by U.S. government agencies of $\$ 139$ million and $\$ 257$ million, respectively. These amounts have been excluded based upon the government guarantee. In addition, the Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance.
(b) At June 30, 2023 and 2022, generally excludes loans that were under payment deferral programs offered in response to the COVID-19 pandemic. Refer to Credit Portfolio on pages 108-109 of JPMorgan Chase's 2022 Form 10-K for further information on consumer assistance.
(c) At June 30, 2023 and 2022, included $\$ 163$ million and $\$ 1.5$ billion of loans, respectively, in Business Banking under the PPP. The Firm does not expect to realize material credit losses on PPP loans because the Ioans are guaranteed by the SBA. Refer to Credit Portfolio on pages 108-109 of JPMorgan Chase's 2022 Form 10-K for a further discussion of the PPP.
(d) At June 30, 2023 and 2022, the principal balance of loans under payment deferral programs offered in response to the COVID-19 pandemic was $\$ 177$ million and $\$ 513$ million in Home Lending, respectively. Loans that are performing according to their modified terms are generally not considered delinquent. Refer to Credit Portfolio on pages 108-109 of JPMorgan Chase's 2022 Form 10-K for further information on consumer assistance.
(e) At June 30, 2023 and 2022, excluded mortgage loans insured by U.S. government agencies of $\$ 195$ million and $\$ 315$ million, respectively, that are 30 or more days past due. These amounts have been excluded based upon the government guarantee.
(f) As of June 30, 2023, included a $\$ 377$ million allowance established as part of the First Republic acquisition.
(g) On January 1, 2023, the Firm adopted changes to the TDR accounting guidance. The adoption of this guidance resulted in a net decrease in the allowance for loan losses of $\$ 591$ million, driven by residential real estate and credit card. Refer to Note 1 for further information.

Selected metrics


## Home Lending

Mortgage origination volume by channel

| Retail | \$ | 7.3 | (h) | \$ | 11.0 | (34) | \$ | 10.9 | (h) | \$ | 26.1 | (58) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Correspondent |  | 3.9 |  |  | 10.9 | (64) |  | 6.0 |  |  | 20.5 | (71) |
| Total mortgage origination volume ${ }^{(e)}$ | \$ | 11.2 |  | \$ | 21.9 | (49) | \$ | 16.9 |  | \$ | 46.6 | (64) |
| Third-party mortgage loans serviced (period-end) | \$ | 604.5 |  | \$ | 575.6 | 5 |  | 604.5 |  | \$ | 575.6 | 5 |
| MSR carrying value (period-end) |  | 8.2 |  |  | 7.4 | 11 |  | 8.2 |  |  | 7.4 | 11 |
| Card Services |  |  |  |  |  |  |  |  |  |  |  |  |
| Sales volume, excluding commercial card | \$ | 294.0 |  | \$ | 271.2 | 8 | \$ | 560.2 |  | \$ | 507.6 | 10 |
| Net revenue rate |  | 9.11 \% |  |  | 9.59 \% |  |  | 9.73 \% |  |  | 9.72 \% |  |
| Net yield on average loans |  | 9.31 |  |  | 9.50 |  |  | 9.60 |  |  | 9.73 |  |
| Auto |  |  |  |  |  |  |  |  |  |  |  |  |
| Loan and lease origination volume | \$ | 12.0 |  | \$ | 7.0 | 71 | \$ | 21.2 |  | \$ | 15.4 | 38 |
| Average auto operating lease assets |  | 11.0 |  |  | 14.9 | (26)\% |  | 11.3 |  |  | 15.6 | (28)\% |

(a) Users of all web and/or mobile platforms who have logged in within the past 90 days.
(b) Users of all mobile platforms who have logged in within the past 90 days.
(c) Total payments transaction volume includes debit and credit card sales volume and gross outflows of ACH, ATM, teller, wires, BillPay, PayChase, Zelle, person-to-person and checks.
(d) Includes assets invested in managed accounts and J.P. Morgan mutual funds where AWM is the investment manager. Refer to AWM segment results on pages 41-44 for additional information. As of June 30, 2023, included $\$ 150.9$ billion of client investment assets associated with the First Republic acquisition.
(e) Firmwide mortgage origination volume was $\$ 13.0$ billion and $\$ 27.9$ billion for the three months ended June 30 , 2023 and 2022 , respectively, and $\$ 19.8$ billion and $\$ 58.1$ billion for the six months ended June 30, 2023 and 2022, respectively.
(f) Excludes the impact of the First Republic acquisition.
(g) For the three and six months ended June 30, 2023, included $\$ 47.2$ billion and $\$ 23.7$ billion, respectively, associated with the First Republic acquisition.
(h) For the three and six months ended June 30, 2023, included $\$ 1.1$ billion associated with the First Republic acquisition.

Refer to pages 67-72 of JPMorgan Chase's 2022 Form 10-K and Line of Business Metrics on page 206 for a further discussion of the business profile of CIB.
Selected income statement data

(a) Includes CB's share of revenue from investment banking products sold to CB clients through the CIB that is subject to a revenue sharing arrangement which is reported as a reduction in All other income.
(b) Includes tax-equivalent adjustments, predominantly due to income tax credits and other tax benefits related to alternative energy investments; income tax credits and amortization of the cost of investments in affordable housing projects; and tax-exempt income from municipal bonds of $\$ 953$ million and $\$ 772$ million for the three months ended June 30,2023 and 2022, respectively and $\$ 1.8$ billion and $\$ 1.5$ billion for the six months ended June 30 , 2023 and 2022, respectively.
(c) In the first quarter of 2023, the allocations of revenue and expense to CCB associated with a Merchant Services revenue sharing agreement were discontinued and are now retained in Payments in CIB. Prior-period amounts have been revised to conform with the current presentation.

## Selected income statement data

| (in millions) | Three months ended June 30, |  |  |  |  |  | Six months ended June 30, |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  | 2022 |  | Change |  | 2023 | 2022 |  | Change |  |
| Revenue by business |  |  |  |  |  |  |  |  |  |  |  |
| Investment Banking | \$ | 1,494 | \$ | 1,351 |  | 11 \% \$ | 3,054 | \$ | 3,408 |  | (10)\% |
| Payments |  | 2,451 |  | 1,519 | (b) | 61 | 4,847 |  | 3,420 | (b) | 42 |
| Lending |  | 299 |  | 410 |  | (27) | 566 |  | 731 |  | (23) |
| Total Banking |  | 4,244 |  | 3,280 |  | 29 | 8,467 |  | 7,559 |  | 12 |
| Fixed Income Markets |  | 4,567 |  | 4,711 |  | (3) | 10,266 |  | 10,409 |  | (1) |
| Equity Markets |  | 2,451 |  | 3,079 |  | (20) | 5,134 |  | 6,134 |  | (16) |
| Securities Services |  | 1,221 |  | 1,151 |  | 6 | 2,369 |  | 2,219 |  | 7 |
| Credit Adjustments \& Other ${ }^{(a)}$ |  | 36 |  | (218) |  | NM | (117) |  | (742) |  | 84 |
| Total Markets \& Securities Services |  | 8,275 |  | 8,723 |  | (5) | 17,652 |  | 18,020 |  | (2) |
| Total net revenue | \$ | 12,519 | \$ | 12,003 |  | 4 \% \$ | 26,119 | \$ | 25,579 |  | 2 \% |

(a) Consists primarily of centrally managed credit valuation adjustments ("CVA"), funding valuation adjustments ("FVA") on derivatives, other valuation adjustments, and certain components of fair value option elected liabilities, which are primarily reported in principal transactions revenue. Results are presented net of associated hedging activities and net of CVA and FVA amounts allocated to Fixed Income Markets and Equity Markets.
(b) In the first quarter of 2023, the allocations of revenue and expense to CCB associated with a Merchant Services revenue sharing agreement were discontinued and are now retained in Payments in CIB. Prior-period amounts have been revised to conform with the current presentation.

## Quarterly results

Net income was $\$ 4.1$ billion, up 10\%.
Net revenue was $\$ 12.5$ billion, up 4\%.
Banking revenue was $\$ 4.2$ billion, up $29 \%$.

- Investment Banking revenue was $\$ 1.5$ billion, up $11 \%$. Excluding $\$ 257$ million of markdowns on held-for-sale positions, primarily unfunded commitments, in the bridge financing portfolio recorded in the prior year, Investment Banking revenue was down 7\%. Investment Banking fees were down 6\%, driven by lower advisory fees. The Firm ranked \#1 for Global Investment Banking fees, according to Dealogic.
- Advisory fees were $\$ 540$ million, down 19\%, due to a lower level of announced deals in prior periods amid a challenging environment.
- Debt underwriting fees were $\$ 699$ million, down 6\%, as challenging market conditions resulted in lower issuance activity in the leveraged loan market primarily related to acquisition financing.
- Equity underwriting fees were \$318 million, up 30\%, primarily due to higher convertible securities offerings and, in the second half of the quarter, follow-on offerings that benefited from the lower equity market volatility.
- Payments revenue was $\$ 2.5$ billion, up $61 \%$. Excluding the net impact of equity investments, Payments revenue was up $32 \%$, driven by deposit margin expansion on higher rates, partially offset by lower average deposits.
- Lending revenue was \$299 million, down 27\%, and included $\$ 80$ million of fair value losses on hedges of retained loans.
Markets \& Securities Services revenue was $\$ 8.3$ billion, down $5 \%$. Markets revenue was $\$ 7.0$ billion, down $10 \%$.
- Fixed Income Markets revenue was $\$ 4.6$ billion, down 3\%, reflecting lower revenue in Currencies \& Emerging Markets, Commodities and Rates as the macro businesses substantially normalized from the prior year's elevated levels of volatility and client activity, largely offset by higher revenue in the Securitized Products Group and Credit Trading.
- Equity Markets revenue was $\$ 2.5$ billion, down 20\%, predominantly driven by lower revenue in Equity Derivatives, compared to a strong second quarter in the prior year.
- Securities Services revenue was \$1.2 billion, up 6\%, driven by deposit margin expansion on higher rates, largely offset by lower fees and lower average deposits.
- Credit Adjustments \& Other was a gain of \$36 million, compared with a loss of $\$ 218$ million in the prior year, largely driven by funding spread widening.
Noninterest expense was $\$ 6.9$ billion, up $1 \%$, driven by higher non-compensation expense, as well as wage inflation and headcount growth, largely offset by lower revenuerelated compensation.

The provision for credit losses was $\$ 38$ million, including net charge-offs of $\$ 56$ million.
The prior year provision was $\$ 59$ million.
Refer to Credit and Investment Risk Management on pages 62-83 and Allowance for Credit Losses on pages 80-82 for a further discussion of the credit portfolios and the allowance for credit losses.

Year-to-date results
Net income was $\$ 8.5$ billion, up $5 \%$.
Net revenue was $\$ 26.1$ billion, up $2 \%$.
Banking revenue was $\$ 8.5$ billion, up $12 \%$.

- Investment Banking revenue was $\$ 3.1$ billion, down $10 \%$. Excluding \$257 million of markdowns on held-for-sale positions, primarily unfunded commitments, in the bridge financing portfolio recorded in the second quarter of 2022, Investment Banking revenue was down 17\%. Investment Banking fees were down 13\%, driven by lower debt underwriting and advisory fees. The Firm ranked \#1 for Global Investment Banking fees, according to Dealogic.
- Debt underwriting fees were \$1.4 billion, down 22\%, as challenging market conditions resulted in lower issuance activity in acquisition financing.
- Advisory fees were $\$ 1.3$ billion, down $12 \%$, due to a lower level of announced deals in prior periods amid a challenging environment.
- Equity underwriting fees were \$553 million, up $12 \%$, primarily due to higher convertible securities offerings and, in the second half of the second quarter, follow-on offerings that benefited from the lower equity market volatility.
- Payments revenue was $\$ 4.8$ billion, up $42 \%$, driven by deposit margin expansion on higher rates, partially offset by lower average deposits.
- Lending revenue was $\$ 566$ million, down $23 \%$, driven by $\$ 183$ million of fair value losses on hedges of retained loans, compared to $\$ 112$ million of gains in the prior year, partially offset by higher net interest income.
Markets \& Securities Services revenue was $\$ 17.7$ billion, down $2 \%$. Markets revenue was $\$ 15.4$ billion, down $7 \%$.
- Fixed Income Markets revenue was $\$ 10.3$ billion, down $1 \%$, reflecting lower revenue in Currencies \& Emerging Markets and Commodities, largely offset by higher revenue in Rates, the Securitized Products Group and Credit Trading.
- Equity Markets revenue was \$5.1 billion, down 16\%, predominantly driven by lower revenue in Equity Derivatives.
- Securities Services revenue was \$2.4 billion, up 7\%, driven by deposit margin expansion on higher rates, largely offset by lower fees and lower average deposits.
- Credit Adjustments \& Other was a loss of $\$ 117$ million, driven by losses on certain components of fair value option elected liabilities, compared with a loss of \$742 million in the prior year, which was predominantly driven
by funding spread widening, and to a lesser extent losses on exposure relating to commodities and Russia and Russia-associated counterparties.

Noninterest expense was \$14.4 billion, up 1\%, driven by headcount growth, wage inflation and higher noncompensation expense, largely offset by lower revenuerelated compensation.
The provision for credit losses was $\$ 96$ million, driven by net charge-offs of $\$ 106$ million.
The prior year provision was $\$ 504$ million.

Selected metrics

| (in millions, except headcount) | As of or for the three months ended June 30, |  |  |  |  | As of or for the six months ended June 30, |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 2023 |  | 2022 | Change |  | 2023 |  | 2022 | Change |
| Selected balance sheet data (period-end) |  |  |  |  |  |  |  |  |  |  |
| Total assets | \$ | 1,432,054 | \$ | 1,403,558 | 2 \% | \$ | 1,432,054 | \$ | 1,403,558 | 2 \% |
| Loans: |  |  |  |  |  |  |  |  |  |  |
| Loans retained ${ }^{(\mathrm{a})}$ |  | 194,450 |  | 171,219 | 14 |  | 194,450 |  | 171,219 | 14 |
| Loans held-for-sale and loans at fair value ${ }^{(b)}$ |  | 38,959 |  | 46,032 | (15) |  | 38,959 |  | 46,032 | (15) |
| Total loans |  | 233,409 |  | 217,251 | 7 |  | 233,409 |  | 217,251 | 7 |
| Equity |  | 108,000 |  | 103,000 | 5 |  | 108,000 |  | 103,000 | 5 |
| Selected balance sheet data (average) |  |  |  |  |  |  |  |  |  |  |
| Total assets | \$ | 1,461,857 | \$ | 1,429,953 | 2 | \$ | 1,445,848 | \$ | 1,418,955 | 2 |
| Trading assets-debt and equity instruments |  | 533,082 |  | 411,079 | 30 |  | 511,047 |  | 415,190 | 23 |
| Trading assets-derivative receivables |  | 63,094 |  | 83,582 | (25) |  | 63,553 |  | 75,184 | (15) |
| Loans: |  |  |  |  |  |  |  |  |  |  |
| Loans retained ${ }^{(a)}$ | \$ | 189,153 | \$ | 169,909 | 11 | \$ | 187,372 | \$ | 165,467 | 13 |
| Loans held-for-sale and loans at fair value ${ }^{(b)}$ |  | 38,132 |  | 48,048 | (21) |  | 40,339 |  | 49,714 | (19) |
| Total loans | \$ | 227,285 | \$ | 217,957 | 4 | \$ | 227,711 | \$ | 215,181 | 6 |
| Deposits |  | 722,818 |  | 773,664 | (7) |  | 711,266 |  | 765,200 | (7) |
| Equity |  | 108,000 |  | 103,000 | 5 |  | 108,000 |  | 103,000 | 5 |
| Headcount |  | 74,822 |  | 69,447 | 8 \% |  | 74,822 |  | 69,447 | 8 \% |

(a) Loans retained includes credit portfolio loans, loans held by consolidated Firm-administered multi-seller conduits, trade finance loans, other held-forinvestment loans and overdrafts.
(b) Loans held-for-sale and loans at fair value primarily reflect lending-related positions originated and purchased in Markets, including loans held for securitization.

| (in millions, except ratios) | As of or for the three months ended June 30, |  |  |  |  | As of or for the six months ended June 30, |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  | 2022 |  | Change | 2023 |  | 2022 |  | Change |
| Credit data and quality statistics |  |  |  |  |  |  |  |  |  |  |
| Net charge-offs/(recoveries) | \$ | 56 | \$ | 38 | 47 \% | \$ | 106 | \$ | 58 | 83 \% |
| Nonperforming assets: |  |  |  |  |  |  |  |  |  |  |
| Nonaccrual loans: |  |  |  |  |  |  |  |  |  |  |
| Nonaccrual loans retained ${ }^{(a)}$ | \$ | 924 | \$ | 697 | 33 | \$ | 924 | \$ | 697 | 33 |
| Nonaccrual loans held-for-sale and loans at fair value ${ }^{(b)}$ |  | 818 |  | 840 | (3) |  | 818 |  | 840 | (3) |
| Total nonaccrual loans |  | 1,742 |  | 1,537 | 13 |  | 1,742 |  | 1,537 | 13 |
| Derivative receivables |  | 286 |  | 447 | (36) |  | 286 |  | 447 | (36) |
| Assets acquired in loan satisfactions |  | 133 |  | 84 | 58 |  | 133 |  | 84 | 58 |
| Total nonperforming assets | \$ | 2,161 | \$ | 2,068 | 4 | \$ | 2,161 | \$ | 2,068 | 4 |
| Allowance for credit losses: |  |  |  |  |  |  |  |  |  |  |
| Allowance for loan losses | \$ | 2,531 | \$ | 1,809 | 40 | \$ | 2,531 | \$ | 1,809 | 40 |
| Allowance for lending-related commitments |  | 1,207 |  | 1,358 | (11) |  | 1,207 |  | 1,358 | (11) |
| Total allowance for credit losses | \$ | 3,738 | \$ | 3,167 | 18 \% | \$ | 3,738 | \$ | 3,167 | 18 \% |
| Net charge-off/(recovery) rate ${ }^{(c)}$ |  | 0.12 \% |  | 0.09 \% |  |  | 0.11 \% |  | 0.07 |  |
| Allowance for loan losses to period-end loans retained |  | 1.30 |  | 1.06 |  |  | 1.30 |  | 1.06 |  |
| Allowance for loan losses to period-end loans retained, excluding trade finance and conduits ${ }^{(d)}$ |  | 1.86 |  | 1.38 |  |  | 1.86 |  | 1.38 |  |
| Allowance for loan losses to nonaccrual loans retained ${ }^{(a)}$ |  | 274 |  | 260 |  |  | 274 |  | 260 |  |
| Nonaccrual loans to total period-end loans |  | 0.75 \% |  | 0.71 \% |  |  | 0.75 \% |  | 0.71 |  |

(a) Allowance for loan losses of $\$ 145$ million and $\$ 130$ million were held against these nonaccrual loans at June 30, 2023 and 2022, respectively.
(b) At June 30, 2023 and 2022, nonaccrual loans excluded mortgage loans 90 or more days past due and insured by U.S. government agencies of $\$ 76$ million and $\$ 196$ million, respectively. These amounts have been excluded based upon the government guarantee.
(c) Loans held-for-sale and loans at fair value were excluded when calculating the net charge-off/(recovery) rate.
(d) Management uses allowance for loan losses to period-end loans retained, excluding trade finance and conduits, a non-GAAP financial measure, to provide a more meaningful assessment of CIB's allowance coverage ratio. Refer to Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 20-21.

## Investment banking fees

| (in millions) | Three months ended June 30, |  |  |  |  | Six months ended June 30, |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  |  | 2022 | Change | 2023 |  |  | 2022 | Change |
| Advisory | \$ | 540 | \$ | 664 | (19)\% | \$ | 1,296 | \$ | 1,465 | (12)\% |
| Equity underwriting |  | 318 |  | 245 | 30 |  | 553 |  | 494 | 12 |
| Debt underwriting ${ }^{(a)}$ |  | 699 |  | 741 | (6) |  | 1,362 |  | 1,741 | (22) |
| Total investment banking fees | \$ | 1,557 | \$ | 1,650 | (6)\% | \$ | 3,211 | \$ | 3,700 | (13)\% |

(a) Represents long-term debt and loan syndications.

|  | Three months ended June 30, |  |  |  |  | Six months ended June 30, |  |  |  |  |  | Full-year 2022 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  | 2022 |  |  | 2023 |  |  | 2022 |  |  |  |  |  |
|  | Rank | Share | Rank |  | Share | Rank |  | Share | Rank |  | Share | Rank |  | Share |
| Based on fees ${ }^{(\mathrm{a})}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $M \& A^{(b)}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Global | \# 2 | 8.7 \% | \# | 2 | 7.5 \% | \# | 2 | 9.3 \% | \# | 2 | 7.4 \% | \# | 2 | 8.0 \% |
| U.S. | 2 | 11.5 |  | 2 | 8.3 |  | 2 | 11.8 |  | 2 | 8.4 |  | 2 | 9.0 |
| Equity and equity-related ${ }^{(c)}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Global | 1 | 7.6 |  | 1 | 6.0 |  | 1 | 7.1 |  | 1 | 5.6 |  | 2 | 5.7 |
| U.S. | 1 | 14.7 |  | 1 | 15.1 |  | 1 | 13.3 |  | 1 | 13.2 |  | 1 | 13.8 |
| Long-term debt ${ }^{(\mathrm{d})}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Global | 2 | 6.8 |  | 1 | 7.2 |  | 1 | 6.7 |  | 1 | 7.6 |  | 1 | 6.9 |
| U.S. | 2 | 10.4 |  | 1 | 12.5 |  | 2 | 10.0 |  | 1 | 12.3 |  | 1 | 12.2 |
| Loan syndications |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Global | 1 | 12.4 |  | 1 | 12.2 |  | 1 | 12.6 |  | 1 | 11.3 |  | 1 | 11.0 |
| U.S. | 1 | 15.7 |  | 1 | 13.9 |  | 1 | 16.1 |  | 1 | 11.9 |  | 1 | 12.7 |
| Global investment banking fees ${ }^{(\text {e) }}$ | \# 1 | 8.3 \% | \# | 2 | 8.1 \% | \# | 1 | 8.4 \% | \# | 1 | 7.9 \% | \# | 1 | 7.8 \% |

(a) Source: Dealogic as of July 3, 2023. Reflects the ranking of revenue wallet and market share.
(b) Global M\&A excludes any withdrawn transactions. U.S. M\&A revenue wallet represents wallet from client parents based in the U.S.
(c) Global equity and equity-related ranking includes rights offerings and Chinese A-Shares.
(d) Long-term debt rankings include investment-grade, high-yield, supranationals, sovereigns, agencies, covered bonds, asset-backed securities ("ABS") and mortgage-backed securities ("MBS"); and exclude money market, short-term debt and U.S. municipal securities.
(e) Global investment banking fees exclude money market, short-term debt and shelf securities.

## Markets revenue

The following table summarizes selected income statement data for the Markets businesses. Markets includes both Fixed Income Markets and Equity Markets. Markets revenue consists of principal transactions, fees, commissions and other income, as well as net interest income. The Firm assesses its Markets business performance on a total revenue basis, as offsets may occur across revenue line items. For example, securities that generate net interest income may be risk-managed by derivatives that are
reflected at fair value in principal transactions revenue. Refer to Notes 6 and 7 for a description of the composition of these income statement line items. Refer to Markets revenue on page 70 of JPMorgan Chase's 2022 Form 10-K for further information.
For the periods presented below, the primary source of principal transactions revenue was the amount recognized upon executing new transactions.

| (in millions) | Three months ended June 30, |  |  |  |  |  | Three months ended June 30, |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  |  |  |  |  | 2022 |  |  |  |  |  |
|  | Fixed Income Markets |  | Equity Markets |  | Total Markets |  | Fixed Income Markets |  | Equity Markets |  | Total Markets |  |
| Principal transactions | \$ | 3,120 | \$ | 3,350 | \$ | 6,470 | \$ | 2,934 | \$ | 2,448 | \$ | 5,382 |
| Lending- and deposit-related fees |  | 76 |  | 7 |  | 83 |  | 76 |  | 4 |  | 80 |
| Commissions and other fees |  | 151 |  | 472 |  | 623 |  | 128 |  | 516 |  | 644 |
| All other income |  | 369 |  | (40) |  | 329 |  | 166 |  | (31) |  | 135 |
| Noninterest revenue |  | 3,716 |  | 3,789 |  | 7,505 |  | 3,304 |  | 2,937 |  | 6,241 |
| Net interest income ${ }^{(a)}$ |  | 851 |  | $(1,338)$ |  | (487) |  | 1,407 |  | 142 |  | 1,549 |
| Total net revenue | \$ | 4,567 | \$ | 2,451 | \$ | 7,018 | \$ | 4,711 | \$ | 3,079 | \$ | 7,790 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| (in millions) | Six months ended June 30, |  |  |  |  |  | Six months ended June 30, |  |  |  |  |  |
|  | 2023 |  |  |  |  |  | 2022 |  |  |  |  |  |
|  | Fixed Income Markets |  | Equity Markets |  | Total <br> Markets |  | Fixed Income Markets |  | Equity Markets |  | Total Markets |  |
| Principal transactions | \$ | 7,518 | \$ | 6,379 | \$ | 13,897 | \$ | 6,323 | \$ | 4,732 | \$ | 11,055 |
| Lending- and deposit-related fees |  | 146 |  | 14 |  | 160 |  | 154 |  | 8 |  | 162 |
| Commissions and other fees |  | 295 |  | 994 |  | 1,289 |  | 284 |  | 1,063 |  | 1,347 |
| All other income |  | 700 |  | (54) |  | 646 |  | 283 |  | (71) |  | 212 |
| Noninterest revenue |  | 8,659 |  | 7,333 |  | 15,992 |  | 7,044 |  | 5,732 |  | 12,776 |
| Net interest income ${ }^{(a)}$ |  | 1,607 |  | $(2,199)$ |  | (592) |  | 3,365 |  | 402 |  | 3,767 |
| Total net revenue | \$ | 10,266 | \$ | 5,134 | \$ | 15,400 | \$ | 10,409 | \$ | 6,134 | \$ | 16,543 |

(a) The decline in Markets net interest income was driven by higher funding costs.

Selected metrics

| (in millions, except where otherwise noted) | As of or for the three months ended June 30, |  |  |  |  | As of or for the six months ended June 30, |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  | 2022 |  | Change | 2023 |  | 2022 |  | Change |
| Assets under custody ("AUC") by asset class (period-end) (in billions): |  |  |  |  |  |  |  |  |  |  |
| Fixed Income | \$ | 14,708 | \$ | 14,720 | - \% | \$ | 14,708 | \$ | 14,720 | - \% |
| Equity |  | 11,892 |  | 10,359 | 15 |  | 11,892 |  | 10,359 | 15 |
| Other ${ }^{(a)}$ |  | 3,824 |  | 3,500 | 9 |  | 3,824 |  | 3,500 | 9 |
| Total AuC | \$ | 30,424 | \$ | 28,579 | 6 | \$ | 30,424 | \$ | 28,579 | 6 |
| Merchant processing volume (in billions) ${ }^{(b)}$ | \$ | 600.1 | \$ | 539.6 | 11 | \$ | 1,158.9 | \$ | 1,029.8 | 13 |
| Client deposits and other third-party liabilities (average) ${ }^{(\mathrm{c})}$ | \$ | 647,479 | \$ | 722,388 | (10)\% | \$ | 640,642 | \$ | 715,791 | (10)\% |

(a) Consists of mutual funds, unit investment trusts, currencies, annuities, insurance contracts, options and other contracts.
(b) Represents Firmwide merchant processing volume.
(c) Client deposits and other third-party liabilities pertain to the Payments and Securities Services businesses.

International metrics

| (in millions, except where otherwise noted) | As of or for the three months ended June 30, |  |  |  |  |  | As of or for the six months ended June 30, |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  | 2022 |  | Change |  | 2023 |  | 2022 |  | Change |  |
| Total net revenue ${ }^{(a)}$ |  |  |  |  |  |  |  |  |  |  |  |  |
| Europe/Middle East/Africa | \$ | 3,813 | \$ | 4,280 |  | (11)\% | \$ | 8,081 | \$ | 8,972 |  | (10)\% |
| Asia-Pacific |  | 1,889 |  | 2,023 |  | (7) |  | 4,022 |  | 4,008 |  | - |
| Latin America/Caribbean |  | 543 |  | 464 |  | 17 |  | 1,105 |  | 1,141 |  | (3) |
| Total international net revenue |  | 6,245 |  | 6,767 |  | (8) |  | 13,208 |  | 14,121 |  | (6) |
| North America |  | 6,274 |  | 5,236 | (c) | 20 |  | 12,911 |  | 11,458 | (c) | 13 |
| Total net revenue | \$ | 12,519 | \$ | 12,003 |  | 4 | \$ | 26,119 | \$ | 25,579 |  | 2 |
| Loans retained (period-end) ${ }^{(\mathrm{a})}$ |  |  |  |  |  |  |  |  |  |  |  |  |
| Europe/Middle East/Africa | \$ | 39,752 | \$ | 35,524 |  | 12 | \$ | 39,752 | \$ | 35,524 |  | 12 |
| Asia-Pacific |  | 14,789 |  | 16,427 |  | (10) |  | 14,789 |  | 16,427 |  | (10) |
| Latin America/Caribbean |  | 8,704 |  | 7,961 |  | 9 |  | 8,704 |  | 7,961 |  | 9 |
| Total international loans |  | 63,245 |  | 59,912 |  | 6 |  | 63,245 |  | 59,912 |  | 6 |
| North America |  | 131,205 |  | 111,307 |  | 18 |  | 131,205 |  | 111,307 |  | 18 |
| Total loans retained | \$ | 194,450 | \$ | 171,219 |  | 14 | \$ | 194,450 | \$ | 171,219 |  | 14 |
| Client deposits and other third-party liabilities (average) ${ }^{(b)}$ |  |  |  |  |  |  |  |  |  |  |  |  |
| Europe/Middle East/Africa | \$ | 228,490 | \$ | 272,919 |  | (16) | \$ | 229,655 | \$ | 259,781 |  | (12) |
| Asia-Pacific |  | 128,253 |  | 129,514 |  | (1) |  | 127,146 |  | 132,126 |  | (4) |
| Latin America/Caribbean |  | 38,911 |  | 41,785 |  | (7) |  | 38,825 |  | 42,720 |  | (9) |
| Total international | \$ | 395,654 | \$ | 444,218 |  | (11) | \$ | 395,626 | \$ | 434,627 |  | (9) |
| North America |  | 251,825 |  | 278,170 |  | (9) |  | 245,016 |  | 281,164 |  | (13) |
| Total client deposits and other third-party liabilities | \$ | 647,479 | \$ | 722,388 |  | (10) | \$ | 640,642 | \$ | 715,791 |  | (10) |
| $\begin{aligned} & \text { AUC (period-end) }{ }^{\text {(b) }} \\ & \text { (in billions) } \end{aligned}$ |  |  |  |  |  |  |  |  |  |  |  |  |
| North America | \$ | 20,512 | \$ | 18,816 |  | 9 | \$ | 20,512 | \$ | 18,816 |  | 9 |
| All other regions |  | 9,912 |  | 9,763 |  | 2 |  | 9,912 |  | 9,763 |  | 2 |
| Total AuC | \$ | 30,424 | \$ | 28,579 |  | 6 \% | \$ | 30,424 | \$ | 28,579 |  | 6 \% |

(a) Total net revenue and loans retained (excluding loans held-for-sale and loans at fair value) are based on the location of the trading desk, booking location, or domicile of the client, as applicable.
(b) Client deposits and other third-party liabilities pertaining to the Payments and Securities Services businesses, and Auc, are based on the domicile of the client.
(c) In the first quarter of 2023, the allocations of revenue and expense to CCB associated with a Merchant Services revenue sharing agreement were discontinued and are now retained in Payments in CIB. Prior-period amounts have been revised to conform with the current presentation.

Refer to pages 73-75 of JPMorgan Chase's 2022 Form 10-K and Line of Business Metrics on page 207 for a discussion of the business profile of CB.

Selected income statement data

(a) Total net revenue included tax-equivalent adjustments from income tax credits related to equity investments in designated community development entities and in entities established for rehabilitation of historic properties, as well as tax-exempt income related to municipal financing activities of $\$ 89$ million and $\$ 73$ million for the three months ended June 30,2023 and 2022, respectively and $\$ 171$ million and $\$ 142$ million for the six months ended June 30, 2023 and 2022, respectively.
(b) Includes the impact of the First Republic acquisition. Refer to page 24 for additional information.

## Selected income statement data (continued)

| (in millions, except ratios) | Three months ended June 30, |  |  |  |  |  | Six months ended June 30, |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  |  | 2022 |  | Change | 2023 |  | 2022 |  |  | Change |
| Revenue by product |  |  |  |  |  |  |  |  |  |  |  |  |
| Lending | \$ | 1,480 | (c) | \$ | 1,058 | 40 \% | \$ | 2,702 | (c) | \$ | 2,163 | 25 \% |
| Payments |  | 2,248 |  |  | 1,253 | 79 |  | 4,276 |  |  | 2,275 | 88 |
| Investment banking ${ }^{(\mathrm{a})}$ |  | 213 |  |  | 234 | (9) |  | 463 |  |  | 453 | 2 |
| Other |  | 47 |  |  | 138 | (66) |  | 58 |  |  | 190 | (69) |
| Total net revenue | \$ | 3,988 |  | \$ | 2,683 | 49 | \$ | 7,499 |  | \$ | 5,081 | 48 |
| Investment Banking and Markets revenue, gross ${ }^{(\text {b) }}$ | \$ | 767 |  | \$ | 788 | (3) | \$ | 1,648 |  | \$ | 1,517 | 9 |
| Revenue by client segments |  |  |  |  |  |  |  |  |  |  |  |  |
| Middle Market Banking | \$ | 1,916 | (d) | \$ | 1,169 | 64 | \$ | 3,597 | (d) | \$ | 2,149 | 67 |
| Corporate Client Banking |  | 1,229 |  |  | 927 | 33 |  | 2,405 |  |  | 1,757 | 37 |
| Commercial Real Estate Banking |  | 806 | (d) |  | 590 | 37 |  | 1,448 | (d) |  | 1,171 | 24 |
| Other |  | 37 |  |  | (3) | NM |  | 49 |  |  | 4 | NM |
| Total net revenue | \$ | 3,988 |  | \$ | 2,683 | 49 \% | \$ | 7,499 |  | \$ | 5,081 | 48 \% |
| Financial ratios |  |  |  |  |  |  |  |  |  |  |  |  |
| Return on equity |  | 16 |  |  | 15 |  |  | 17 |  |  | 14 |  |
| Overhead ratio |  | 33 |  |  | 43 |  |  | 35 |  |  | 45 |  |

(a) Includes CB's share of revenue from investment banking products sold to CB clients through the CIB which is reported in All other income.
(b) Includes gross revenues earned by the Firm that are subject to a revenue sharing arrangement between CB and the CIB for Investment Banking and Markets' products sold to CB clients. This includes revenues related to fixed income and equity markets products. Refer to Business Segment Results on page 22 for discussion of revenue sharing.
(c) Includes the impact of the First Republic acquisition. Refer to page 24 for additional information.
(d) For the three and six months ended June 30, 2023, included $\$ 48$ million and $\$ 130$ million for Middle Market Banking and Commercial Real Estate Banking, respectively, associated with the First Republic acquisition.

## Quarterly results

Net income was $\$ 1.2$ billion, up $22 \%$.
Net revenue was $\$ 4.0$ billion, up $49 \%$. Net interest income was $\$ 3.2$ billion, up $77 \%$, predominantly driven by deposit margin expansion on higher rates and higher average loans, partially offset by lower average deposits.
Noninterest revenue was $\$ 835$ million, down 8\%, driven by lower deposit-related fees due to the higher level of credits earned by clients that reduce such fees, partially offset by higher card income.

Noninterest expense was $\$ 1.3$ billion, up $12 \%$, predominantly driven by higher compensation expense, including headcount growth, as well as higher volumerelated expense.

The provision for credit losses was \$1.1 billion, reflecting an addition of $\$ 608$ million to establish the allowance for the First Republic loans and lending-related commitments. The net addition also reflected $\$ 389$ million driven by updates to certain assumptions related to office real estate, as well as net downgrade activity in Middle Market Banking. The prior year provision was $\$ 209$ million.
Refer to Credit and Investment Risk Management on pages 62-83 and Allowance for Credit Losses on pages 80-82 for further discussions of the credit portfolios and the allowance for credit losses.

Year-to-date results
Net income was $\$ 2.6$ billion, up 39\%.
Net revenue was $\$ 7.5$ billion, up $48 \%$. Net interest income was $\$ 5.9$ billion, up $78 \%$, driven by deposit margin expansion on higher rates and higher average loans, partially offset by lower average deposits.
Noninterest revenue was $\$ 1.6$ billion, down $9 \%$, driven by lower deposit-related fees due to the higher level of credits earned by clients that reduce such fees, partially offset by higher card income.

Noninterest expense was $\$ 2.6$ billion, up 14\%, largely driven by higher compensation expense, including headcount growth, as well as higher volume-related expense.
The provision for credit losses was \$1.5 billion, reflecting an addition of $\$ 608$ million to establish the allowance for the First Republic loans and lending-related commitments, in the second quarter of 2023. The net addition also reflected $\$ 768$ million driven by a deterioration in the Firm's weighted-average economic outlook, including updates to certain assumptions related to office real estate, as well as net downgrade activity.
The prior year provision was $\$ 366$ million.

Selected metrics

| (in millions, except headcount) | As of or for the three months ended June 30, |  |  |  |  |  | As of or for the six months ended June 30, |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  |  | 2022 |  | Change | 2023 |  |  | 2022 |  | Change |
| Selected balance sheet data (period-end) |  |  |  |  |  |  |  |  |  |  |  |  |
| Total assets | \$ | 305,280 |  | \$ | 242,456 | 26 \% | \$ | 305,280 |  | \$ | 242,456 | 26 \% |
| Loans: |  |  |  |  |  |  |  |  |  |  |  |  |
| Loans retained |  | 282,124 | (b) |  | 223,541 | 26 |  | 282,124 | (b) |  | 223,541 | 26 |
| Loans held-for-sale and loans at fair value |  | 1,540 |  |  | 566 | 172 |  | 1,540 |  |  | 566 | 172 |
| Total loans | \$ | 283,664 |  | \$ | 224,107 | 27 | \$ | 283,664 |  | \$ | 224,107 | 27 |
| Equity |  | 30,000 |  |  | 25,000 | 20 |  | 30,000 |  |  | 25,000 | 20 |
| Period-end loans by client segment |  |  |  |  |  |  |  |  |  |  |  |  |
| Middle Market Banking ${ }^{(a)}$ | \$ | 79,885 | (c) | \$ | 68,535 | 17 | \$ | 79,885 | (c) | \$ | 68,535 | 17 |
| Corporate Client Banking |  | 60,511 |  |  | 49,503 | 22 |  | 60,511 |  |  | 49,503 | 22 |
| Commercial Real Estate Banking |  | 142,897 | (c) |  | 105,982 | 35 |  | 142,897 | (c) |  | 105,982 | 35 |
| Other |  | 371 |  |  | 87 | 326 |  | 371 |  |  | 87 | 326 |
| Total loans ${ }^{(\mathrm{a})}$ | \$ | 283,664 |  | \$ | 224,107 | 27 | \$ | 283,664 |  | \$ | 224,107 | 27 |
| Selected balance sheet data (average) |  |  |  |  |  |  |  |  |  |  |  |  |
| Total assets | \$ | 290,875 |  | \$ | 239,381 | 22 | \$ | 273,269 |  | \$ | 236,444 | 16 |
| Loans: |  |  |  |  |  |  |  |  |  |  |  |  |
| Loans retained |  | 270,091 | (d) |  | 218,478 | 24 |  | 253,542 | (d) |  | 213,536 | 19 |
| Loans held-for-sale and loans at fair value |  | 726 |  |  | 1,004 | (28) |  | 939 |  |  | 1,572 | (40) |
| Total loans | \$ | 270,817 |  | \$ | 219,482 | 23 | \$ | 254,481 |  | \$ | 215,108 | 18 |
| Average loans by client segment |  |  |  |  |  |  |  |  |  |  |  |  |
| Middle Market Banking | \$ | 78,037 | (e) | \$ | 66,640 | 17 | \$ | 75,547 | (e) | \$ | 64,550 | 17 |
| Corporate Client Banking |  | 59,159 |  |  | 47,832 | 24 |  | 57,877 |  |  | 46,720 | 24 |
| Commercial Real Estate Banking |  | 133,394 | (e) |  | 104,890 | 27 |  | 120,838 | (e) |  | 103,701 | 17 |
| Other |  | 227 |  |  | 120 | 89 |  | 219 |  |  | 137 | 60 |
| Total loans | \$ | 270,817 |  | \$ | 219,482 | 23 | \$ | 254,481 |  | \$ | 215,108 | 18 |
| Deposits |  | 275,196 |  |  | 300,339 | (8) |  | 270,595 |  |  | 308,518 | (12) |
| Equity |  | 29,505 |  |  | 25,000 | 18 |  | 29,005 |  |  | 25,000 | 16 |
| Headcount |  | 15,991 |  |  | 13,811 | 16 \% |  | 15,991 |  |  | 13,811 | $16 \%$ |

(a) At June 30, 2023 and 2022, total loans included $\$ 65$ million and $\$ 335$ million of loans, respectively, under the PPP, of which $\$ 60$ million and $\$ 306$ million were in Middle Market Banking, respectively. Refer to Credit Portfolio on pages 108-109 of JPMorgan Chase's 2022 Form 10-K for a further discussion of the PPP.
(b) Includes the impact of the First Republic acquisition. Refer to page 24 for additional information.
(c) As of June 30, 2023, included $\$ 6.2$ billion and $\$ 33.3$ billion for Middle Market Banking and Commercial Real Estate Banking, respectively, associated with the First Republic acquisition.
(d) For the three and six months ended June 30, 2023, included $\$ 28.6$ billion and $\$ 14.4$ billion, respectively, associated with the First Republic acquisition.
(e) For the three months ended June 30, 2023, included $\$ 4.4$ billion and $\$ 24.2$ billion for Middle Market Banking and Commercial Real Estate Banking, respectively, and for the six months ended June 30, 2023, included $\$ 2.2$ billion and $\$ 12.2$ billion for Middle Market Banking and Commercial Real Estate Banking, respectively, associated with the First Republic acquisition.

Selected metrics (continued)

| (in millions, except ratios) | As of or for the three months ended June 30, |  |  |  |  |  | As of or for the six months ended June 30, |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  | 2022 |  |  | Change | 2023 |  | 2022 |  |  | Change |
| Credit data and quality statistics |  |  |  |  |  |  |  |  |  |  |  |  |
| Net charge-offs/(recoveries) | \$ | 100 | \$ | \$ | 1 | NM | \$ | 137 |  | \$ | 7 | NM |
| Nonperforming assets |  |  |  |  |  |  |  |  |  |  |  |  |
| Nonaccrual loans: |  |  |  |  |  |  |  |  |  |  |  |  |
| Nonaccrual loans retained ${ }^{(a)}$ | \$ | 1,068 | \$ | \$ | 761 | 40 \% | \$ | 1,068 |  | \$ | 761 | 40 \% |
| Nonaccrual loans held-for-sale and loans at fair value |  | - |  |  | - | - |  | - |  |  | - | - |
| Total nonaccrual loans | \$ | 1,068 | \$ | \$ | 761 | 40 | \$ | 1,068 |  | \$ | 761 | 40 |
| Assets acquired in loan satisfactions |  | - |  |  | 8 | NM |  | - |  |  | 8 | NM |
| Total nonperforming assets | \$ | 1,068 | \$ | \$ | 769 | 39 | \$ | 1,068 |  | \$ | 769 | 39 |
| Allowance for credit losses: |  |  |  |  |  |  |  |  |  |  |  |  |
| Allowance for loan losses | \$ | 4,729 | \$ | \$ | 2,602 | 82 | \$ | 4,729 |  | \$ | 2,602 | 82 |
| Allowance for lending-related commitments |  | 801 |  |  | 725 | 10 |  | 801 |  |  | 725 | 10 |
| Total allowance for credit losses | \$ | 5,530 | (c) \$ | \$ | 3,327 | 66 \% | \$ | 5,530 | (c) | \$ | 3,327 | 66 \% |
| Net charge-off/(recovery) rate ${ }^{\text {(b) }}$ |  | 0.15 \% |  |  |  |  |  | 0.11 \% |  |  | 0.01 |  |
| Allowance for loan losses to period-end loans retained |  | 1.68 |  |  | 1.16 |  |  | 1.68 |  |  | 1.16 |  |
| Allowance for loan losses to nonaccrual loans retained ${ }^{(a)}$ |  | 443 |  |  | 342 |  |  | 443 |  |  | 342 |  |
| Nonaccrual loans to period-end total loans |  | 0.38 |  |  | 0.34 |  |  | 0.38 |  |  | 0.34 |  |

[^143]Refer to pages 76-78 of JPMorgan Chase's 2022 Form 10-K and Line of Business Metrics on pages 207-208 for a discussion of the business profile of AWM.
Selected income statement data

| (in millions, except ratios) | Three months ended June 30, |  |  |  |  |  | Six months ended June 30, |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  |  | 2022 |  | Change | 2023 |  | 2022 |  | Change |
| Revenue |  |  |  |  |  |  |  |  |  |  |  |
| Asset management fees | \$ | 2,930 |  | \$ | 2,797 | 5 \% | \$ | 5,691 | \$ | 5,696 | - \% |
| Commissions and other fees |  | 196 |  |  | 240 | (18) |  | 377 |  | 456 | (17) |
| All other income |  | 232 | (a) |  | 47 | 394 |  | 623 | (a) | 171 | 264 |
| Noninterest revenue |  | 3,358 |  |  | 3,084 | 9 |  | 6,691 |  | 6,323 | 6 |
| Net interest income |  | 1,585 | (a) |  | 1,222 | 30 |  | 3,036 | (a) | 2,298 | 32 |
| Total net revenue |  | 4,943 |  |  | 4,306 | 15 |  | 9,727 |  | 8,621 | 13 |
| Provision for credit losses |  | 145 | (a) |  | 44 | 230 |  | 173 | (a) | 198 | (13) |
| Noninterest expense |  |  |  |  |  |  |  |  |  |  |  |
| Compensation expense |  | 1,746 |  |  | 1,508 | 16 |  | 3,481 |  | 3,038 | 15 |
| Noncompensation expense |  | 1,417 |  |  | 1,411 | - |  | 2,773 |  | 2,741 | 1 |
| Total noninterest expense |  | 3,163 |  |  | 2,919 | 8 |  | 6,254 |  | 5,779 | 8 |
| Income before income tax expense |  | 1,635 |  |  | 1,343 | 22 |  | 3,300 |  | 2,644 | 25 |
| Income tax expense |  | 409 |  |  | 339 | 21 |  | 707 |  | 632 | 12 |
| Net income | \$ | 1,226 |  | \$ | 1,004 | 22 | \$ | 2,593 | \$ | 2,012 | 29 |
| Revenue by line of business |  |  |  |  |  |  |  |  |  |  |  |
| Asset Management | \$ | 2,128 |  | \$ | 2,137 | - | \$ | 4,562 | \$ | 4,451 | 2 |
| Global Private Bank |  | 2,815 | (a) |  | 2,169 | 30 |  | 5,165 | (a) | 4,170 | 24 |
| Total net revenue | \$ | 4,943 |  | \$ | 4,306 | 15 \% | \$ | 9,727 | \$ | 8,621 | 13 \% |
| Financial ratios |  |  |  |  |  |  |  |  |  |  |  |
| Return on equity |  | 29 \% |  |  | 23 \% |  |  | 31 \% |  | 23 \% |  |
| Overhead ratio |  | 64 |  |  | 68 |  |  | 64 |  | 67 |  |
| Pre-tax margin ratio: |  |  |  |  |  |  |  |  |  |  |  |
| Asset Management |  | 27 |  |  | 29 |  |  | 32 |  | 31 |  |
| Global Private Bank |  | 37 |  |  | 33 |  |  | 35 |  | 30 |  |
| Asset \& Wealth Management |  | 33 |  |  | 31 |  |  | 34 |  | 31 |  |

(a) Includes the impact of the First Republic acquisition. Refer to page 24 for additional information.

## Quarterly results

Net income was $\$ 1.2$ billion, up 22\%.
Net revenue was $\$ 4.9$ billion, up $15 \%$. Net interest income was $\$ 1.6$ billion, up $30 \%$. Noninterest revenue was $\$ 3.4$ billion, up 9\%.
Revenue from Asset Management was $\$ 2.1$ billion, flat compared to the prior year, driven by:

- lower NII due to higher funding costs,
largely offset by
- higher management fees on strong net inflows.

Revenue from Global Private Bank was $\$ 2.8$ billion, up $30 \%$, predominantly driven by:

- deposit margin expansion reflecting higher rates on lower average deposit balances, and
- higher lending-related fees and average loans driven by the impact of the First Republic acquisition.
Noninterest expense was $\$ 3.2$ billion, up 8\%, driven by higher compensation, including growth in private banking advisor teams, higher revenue-related compensation and
the impact from the acquisitions of Global Shares and J.P. Morgan Asset Management China.
The provision for credit losses was $\$ 145$ million, driven by a $\$ 146$ million addition to the allowance for credit losses to establish the allowance for the First Republic loans and lending-related commitments.
Refer to Credit and Investment Risk Management on pages 62-83 and Allowance for Credit Losses on pages 80-82 for further discussions of the credit portfolios and the allowance for credit losses.
Year-to-date results
Net income was $\$ 2.6$ billion, up 29\%.
Net revenue was $\$ 9.7$ billion, up $13 \%$. Net interest income was $\$ 3.0$ billion, up $32 \%$. Noninterest revenue was $\$ 6.7$ billion, up 6\%.
Revenue from Asset Management was $\$ 4.6$ billion, up 2\%, driven by:
- a gain of $\$ 339$ million on the original minority interest in CIFM upon the Firm's acquisition of the remaining $51 \%$ interest in the entity,


## largely offset by

- lower NII driven by higher funding costs,
- lower performance fees, and
- lower asset management fees reflecting a decline in market levels predominantly offset by the removal of most money market fund fee waivers in the prior year and the impact of net inflows.
Revenue from Global Private Bank was $\$ 5.2$ billion, up 24\%, driven by:
- deposit margin expansion reflecting higher rates on lower average deposit balances, and
- higher lending-related fees and average loans driven by the impact of the First Republic acquisition,
partially offset by
- an investment valuation loss in the first quarter of 2023.

Noninterest expense was $\$ 6.3$ billion, up $8 \%$, predominantly driven by higher compensation, including growth in private banking advisor teams, higher revenue-related compensation and the impact from the acquisitions of Global Shares and J.P. Morgan Asset Management China.
The provision for credit losses was $\$ 173$ million, predominantly driven by a $\$ 146$ million addition to the allowance for credit losses to establish the allowance for the First Republic loans and lending-related commitments, in the second quarter of 2023.

The prior year provision was $\$ 198$ million.

## Selected metrics

| (in millions, except ranking data, headcount and ratios) | As of or for the three months ended June 30, |  |  | As of or for the six months ended June 30 , |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 | 2022 | Change | 2023 | 2022 | Change |
| \% of JPM mutual fund assets rated as 4- or 5-star ${ }^{(\mathrm{a})}$ | 69 \% | 72 \% |  | 69 \% | 72 \% |  |
| $\%$ of JPM mutual fund assets ranked in $1^{\text {st }}$ or $2^{\text {nd }}$ quartile: ${ }^{(b)}$ |  |  |  |  |  |  |
| 1 year | 59 | 64 |  | 59 | 64 |  |
| 3 years | 66 | 73 |  | 66 | 73 |  |
| 5 years | 80 | 79 |  | 80 | 79 |  |



[^144]
## Client assets

Assets under management of $\$ 3.2$ trillion were up $16 \%$, while client assets of $\$ 4.6$ trillion were up $20 \%$, driven by continued net inflows, higher market levels and the impact of the acquisition of Global Shares.
Client assets

| (in billions) | As of June 30, |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  |  | 2022 |  | Change |
| Assets by asset class |  |  |  |  |  |  |
| Liquidity | \$ | 826 |  | \$ | 654 | 26 \% |
| Fixed income |  | 718 |  |  | 624 | 15 |
| Equity |  | 792 |  |  | 641 | 24 |
| Multi-asset |  | 647 |  |  | 615 | 5 |
| Alternatives |  | 205 |  |  | 209 | (2) |
| Total assets under management |  | 3,188 |  |  | 2,743 | 16 |
| Custody/brokerage/administration/deposits |  | 1,370 | (b) |  | 1,055 | 30 |
| Total client assets ${ }^{\text {(a) }}$ | \$ | 4,558 |  | \$ | 3,798 | 20 |
| Assets by client segment |  |  |  |  |  |  |
| Private Banking | \$ | 881 |  | \$ | 712 | 24 |
| Global Institutional |  | 1,423 |  |  | 1,294 | 10 |
| Global Funds |  | 884 |  |  | 737 | 20 |
| Total assets under management | \$ | 3,188 |  | \$ | 2,743 | 16 |
| Private Banking | \$ | 2,170 | (b) | \$ | 1,715 | 27 |
| Global Institutional |  | 1,497 |  |  | 1,339 | 12 |
| Global Funds |  | 891 |  |  | 744 | 20 |
| Total client assets ${ }^{(1)}$ | \$ | 4,558 |  | \$ | 3,798 | 20 \% |

(a) Includes CCB client investment assets invested in managed accounts and J.P. Morgan mutual funds where AWM is the investment manager.
(b) Includes the impact of the acquisition of Global Shares.

## Client assets (continued)

| (in billions) | Three months ended June 30, |  |  |  | Six months ended June 30, |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  | 2022 |  | 2023 |  | 2022 |  |
| Assets under management rollforward |  |  |  |  |  |  |  |  |
| Beginning balance | \$ | 3,006 | \$ | 2,960 | \$ | 2,766 | \$ | 3,113 |
| Net asset flows: |  |  |  |  |  |  |  |  |
| Liquidity |  | 60 |  | - |  | 153 |  | (52) |
| Fixed income |  | 37 |  | (1) |  | 63 |  | (4) |
| Equity |  | 20 |  | 9 |  | 42 |  | 20 |
| Multi-asset |  | 3 |  | (3) |  | 1 |  | 3 |
| Alternatives |  | 1 |  | 1 |  | 2 |  | 6 |
| Market/performance/other impacts |  | 61 |  | (223) |  | 161 |  | (343) |
| Ending balance, June 30 | \$ | 3,188 | \$ | 2,743 | \$ | 3,188 | \$ | 2,743 |
| Client assets rollforward |  |  |  |  |  |  |  |  |
| Beginning balance | \$ | 4,347 | \$ | 4,116 | \$ | 4,048 | \$ | 4,295 |
| Net asset flows |  | 112 |  | (1) |  | 264 |  | (6) |
| Market/performance/other impacts |  | 99 |  | (317) |  | 246 |  | (491) |
| Ending balance, June 30 | \$ | 4,558 | \$ | 3,798 | \$ | 4,558 | \$ | 3,798 |

International

| (in millions) | Three months ended June 30, |  |  |  |  | Six months ended June 30, |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  | 2022 |  | Change | 2023 |  | 2022 |  | Change |
| Total net revenue ${ }^{(\mathrm{a})}$ |  |  |  |  |  |  |  |  |  |  |
| Europe/Middle East/Africa | \$ | 853 | \$ | 719 | 19 \% | \$ | 1,700 | \$ | 1,489 | 14 \% |
| Asia-Pacific |  | 497 |  | 452 | 10 |  | 974 |  | 912 | 7 |
| Latin America/Caribbean |  | 247 |  | 248 | - |  | 487 |  | 499 | (2) |
| Total international net revenue |  | 1,597 |  | 1,419 | 13 |  | 3,161 |  | 2,900 | 9 |
| North America |  | 3,346 |  | 2,887 | 16 |  | 6,566 |  | 5,721 | 15 |
| Total net revenue ${ }^{(\mathrm{a})}$ | \$ | 4,943 | \$ | 4,306 | 15 \% | \$ | 9,727 | \$ | 8,621 | 13 \% |

(a) Regional revenue is based on the domicile of the client.

| (in billions) | As of June 30, |  |  |  |  | As of June 30, |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  | 2022 |  | Change | 2023 |  | 2022 |  | Change |
| Assets under management |  |  |  |  |  |  |  |  |  |  |
| Europe/Middle East/Africa | \$ | 527 | \$ | 481 | 10 \% | \$ | 527 | \$ | 481 | 10 \% |
| Asia-Pacific |  | 252 |  | 214 | 18 |  | 252 |  | 214 | 18 |
| Latin America/Caribbean |  | 79 |  | 68 | 16 |  | 79 |  | 68 | 16 |
| Total international assets under management |  | 858 |  | 763 | 12 |  | 858 |  | 763 | 12 |
| North America |  | 2,330 |  | 1,980 | 18 |  | 2,330 |  | 1,980 | 18 |
| Total assets under management | \$ | 3,188 | \$ | 2,743 | 16 | \$ | 3,188 | \$ | 2,743 | 16 |
| Client assets |  |  |  |  |  |  |  |  |  |  |
| Europe/Middle East/Africa | \$ | 663 | \$ | 595 | 11 | \$ | 663 | \$ | 595 | 11 |
| Asia-Pacific |  | 378 |  | 324 | 17 |  | 378 |  | 324 | 17 |
| Latin America/Caribbean |  | 217 |  | 184 | 18 |  | 217 |  | 184 | 18 |
| Total international client assets |  | 1,258 |  | 1,103 | 14 |  | 1,258 |  | 1,103 | 14 |
| North America |  | 3,300 |  | 2,695 | 22 |  | 3,300 |  | 2,695 | 22 |
| Total client assets | \$ | 4,558 | \$ | 3,798 | 20 \% | \$ | 4,558 | \$ | 3,798 | 20 \% |

Refer to pages 79-80 of JPMorgan Chase's 2022 Form 10-K for a discussion of Corporate.
Selected income statement and balance sheet data

(a) Included tax-equivalent adjustments, driven by tax-exempt income from municipal bonds, of $\$ 45$ million and $\$ 60$ million for the three months ended June 30,2023 and 2022, respectively, and $\$ 101$ million and $\$ 118$ million for the six months ended June 30, 2023 and 2022, respectively.
(b) Predominantly relates to the Firm's international consumer initiatives.
(c) Includes the impacts of the First Republic acquisition. Refer to Note 28 for additional information.
(d) Income taxes associated with the First Republic acquisition are reflected in the estimated bargain purchase gain.

## Quarterly results

Net income was $\$ 2.6$ billion, compared with a net loss of $\$ 174$ million in the prior year.
Net revenue was $\$ 3.7$ billion, compared with $\$ 80$ million in the prior year, driven by higher net interest income due to higher rates, partially offset by lower Firmwide average deposit balances available for deployment in Treasury and CIO .
Noninterest revenue was $\$ 2.0$ billion, compared with a loss of $\$ 244$ million in the prior year, driven by:

- a $\$ 2.7$ billion estimated bargain purchase gain associated with the First Republic acquisition
- higher revenue related to cash deployment transactions in Treasury and CIO, and
- higher losses in the prior year on certain revenues associated with foreign exchange rate movements,
partially offset by
- higher net investment securities losses on sales of U.S. Treasuries and U.S. GSE and government agency MBS, associated with repositioning the investment securities portfolio, and
- net losses on certain legacy private equity investments in Corporate, compared with net gains in the prior year

Noninterest expense of $\$ 1.2$ billion was up $\$ 946$ million driven by expense of $\$ 562$ million associated with the First Republic acquisition, higher legal expense, and a greater benefit in the prior year on certain expenses associated with foreign exchange rate movements.
The net impact of movements in foreign exchange rates associated with the foreign exchange risk that was transferred to Treasury and CIO on certain revenues and
expense were not material to net income. Refer to Foreign Exchange Risk on page 22 for additional information.
The provision for credit losses was a net benefit of \$243 million, reflecting a reduction in the allowance for credit losses associated with the deposit placed with First Republic Bank in the first quarter of 2023.
Refer to Note 10 for additional information on the investment securities portfolio, and Note 13 for additional information on the allowance for credit losses.
The current period tax expense benefited from the income tax expense associated with the First Republic acquisition reflected in the estimated bargain purchase gain, partially offset by changes in the level and mix of income and expenses subject to U.S. federal and state and local taxes that also impact the Firm's tax reserves.

## Year-to-date results

Net income was $\$ 2.9$ billion, compared with a net loss of $\$ 1.0$ billion in the prior year.

Net revenue was $\$ 4.7$ billion, compared with a loss of $\$ 801$ million in the prior year, driven by higher net interest income due to higher rates, partially offset by lower Firmwide average deposit balances available for deployment in Treasury and CIO.
Noninterest revenue was $\$ 1.2$ billion, compared with a loss of $\$ 589$ million, driven by:

- a $\$ 2.7$ billion estimated bargain purchase gain associated with the First Republic acquisition,
- higher revenue related to cash deployment transactions in Treasury and CIO, and
- higher losses in the prior year on certain revenues associated with foreign exchange rate movements,
partially offset by
- higher net investment securities losses related to the sales of U.S. Treasuries and U.S. GSE and government agency MBS, associated with repositioning the investment securities portfolio,
- the absence of proceeds in the prior year from an insurance settlement, and
- lower net gains related to certain other Corporate investments.
Noninterest expense of $\$ 1.3$ billion was up $\$ 922$ million driven by expense of $\$ 562$ million associated with the First Republic acquisition, higher legal expense, and a greater benefit in the prior year on certain expenses associated with foreign exchange rate movements.
The net impact of movements in foreign exchange rates associated with the foreign exchange risk that was transferred to Treasury and CIO on certain revenues and expense were not material to net income. Refer to Foreign Exchange Risk on page 22 for additional information.
The current period tax expense benefited from the income tax expense associated with the First Republic acquisition reflected in the estimated bargain purchase gain, largely offset by changes in the level and mix of income and expenses subject to U.S. federal and state and local taxes that also impact the Firm's tax reserves.
Other Corporate also reflects the Firm's international consumer initiatives, which includes Chase U.K., the Firm's digital retail bank in the U.K.; Nutmeg, a digital wealth manager in the U.K.; and a 40\% ownership stake in C6 Bank, a digital bank in Brazil.


## Treasury and CIO overview

At June 30, 2023, the average credit rating of the Treasury and CIO investment securities comprising the portfolio in the table below was AA+ (based upon external ratings where available and, where not available, based primarily upon internal risk ratings). Refer to Note 10 for further information on the Firm's investment securities portfolio and internal risk ratings. Refer to Liquidity Risk Management on pages 54-61 for further information on liquidity and funding risk. Refer to Market Risk Management on pages 84-89 for information on interest rate and foreign exchange risks.
Selected income statement and balance sheet data

| (in millions) | As of or for the three months ended June 30, |  |  |  |  |  | As of or for the six months ended June 30 , |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  |  | 2022 |  | Change | 2023 |  | 2022 |  |  | Change |
| Investment securities losses | \$ | (900) |  | \$ | (153) | (488)\% | \$ | $(1,768)$ |  | \$ | (547) | (223)\% |
| Available-for-sale securities (average) | \$ | 198,620 |  | \$ | 252,121 | (21) | \$ | 200,687 |  | \$ | 278,073 | (28) |
| Held-to-maturity securities (average) ${ }^{(a)}$ |  | 410,594 |  |  | 418,843 | (2) |  | 413,953 |  |  | 391,978 | 6 |
| Investment securities portfolio (average) | \$ | 609,214 |  | \$ | 670,964 | (9) | \$ | 614,640 |  | \$ | 670,051 | (8) |
| Available-for-sale securities (period-end) | \$ | 201,211 | (c) | \$ | 220,213 | (9) | \$ | 201,211 | (c) | \$ | 220,213 | (9) |
| Held-to-maturity securities (period-end) ${ }^{(\mathrm{a})}$ |  | 408,941 |  |  | 441,649 | (7) |  | 408,941 |  |  | 441,649 | (7) |
| Investment securities portfolio, net of allowance for credit losses (period-end) ${ }^{(b)}$ | \$ | 610,152 |  | \$ | 661,862 | (8)\% | \$ | 610,152 |  | \$ | 661,862 | (8)\% |

[^145]Risk is an inherent part of JPMorgan Chase's business activities. When the Firm extends a consumer or wholesale Ioan, advises customers and clients on their investment decisions, makes markets in securities, or offers other products or services, the Firm takes on some degree of risk. The Firm's overall objective is to manage its business, and the associated risks, in a manner that balances serving the interests of its clients, customers and investors, and protecting the safety and soundness of the Firm.
The Firm believes that effective risk management requires, among other things:

- Acceptance of responsibility, including identification and escalation of risks by all individuals within the Firm;
- Ownership of risk identification, assessment, data and management within each of the LOBs and Corporate; and
- A Firmwide risk governance and oversight structure.

The Firm follows a disciplined and balanced compensation framework with strong internal governance and independent oversight by the Board of Directors (the "Board"). The impact of risk and control issues is carefully considered in the Firm's performance evaluation and incentive compensation processes.

## Risk governance framework

The Firm's risk governance framework involves understanding drivers of risks, types of risks, and impacts of risks.

Refer to pages 81-84 of JPMorgan Chase's 2022 Form 10-K for a further discussion of Firmwide risk management governance and oversight.


Risk governance and oversight functions
The following sections of this Form 10-Q and the 2022 Form 10-K discuss the risk governance and oversight functions in place to manage the risks inherent in the Firm's business activities.

|  | Form 10-Q <br> page <br> reference | Form 10-K <br> page <br> reference |
| :--- | :---: | :---: |
| Risk governance and oversight functions |  | 85 |
| Strategic Risk | $48-53$ | $86-96$ |
| Capital Risk | $54-61$ | $97-104$ |
| Liquidity Risk | $65-69$ | $110-115$ |
| Reputation Risk | $70-79$ | $116-126$ |
| Consumer Credit Risk | 83 | 130 |
| Wholesale Credit Risk | $84-89$ | $131-138$ |
| Investment Portfolio Risk | 90 | $139-140$ |
| Market Risk |  | 141 |
| Country Risk |  | $142-148$ |
| Climate Risk |  | 145 |
| Operational Risk |  | 146 |
| Compliance Risk |  | 147 |
| Conduct Risk |  | 148 |
| Legal Risk |  |  |
| Estimations and Model Risk |  |  |

Capital risk is the risk the Firm has an insufficient level or composition of capital to support the Firm's business activities and associated risks during normal economic environments and under stressed conditions.

Refer to pages 86-96 of JPMorgan Chase's 2022 Form 10K, Note 23 of this Form 10-Q and the Firm's Pillar 3 Regulatory Capital Disclosures reports, which are available on the Firm's website, for a further discussion of the Firm's capital risk.

## Basel III Overview

The capital rules under Basel III establish minimum capital ratios and overall capital adequacy standards for large and internationally active U.S. Bank Holding Companies ("BHCs") and banks, including the Firm and its insured depository institution ("IDI") subsidiaries, including JPMorgan Chase Bank, N.A. The minimum amount of regulatory capital that must be held by BHCs and banks is determined by calculating risk-weighted assets ("RWA"), which are on-balance sheet assets and off-balance sheet exposures, weighted according to risk. Two comprehensive approaches are prescribed for calculating RWA: a standardized approach ("Basel III Standardized"), and an advanced approach ("Basel III Advanced"). For each of the risk-based capital ratios, the capital adequacy of the Firm is evaluated against the lower of the Standardized or Advanced approaches compared to their respective regulatory capital ratio requirements. The Firm's Basel III Standardized risk-based ratios are currently more binding than the Basel III Advanced risk-based ratios.

Basel III also includes a requirement for Advanced Approaches banking organizations, including the Firm, to calculate its SLR. Refer to SLR on page 51 for additional information.

## Key Regulatory Developments

## CECL regulatory capital transition

Beginning January 1,2022 , the $\$ 2.9$ billion CECL capital benefit, provided by the Federal Reserve in response to the COVID-19 pandemic, is being phased out at $25 \%$ per year over a three-year period. As of June 30, 2023, the Firm's CET1 capital reflected the remaining $\$ 1.4$ billion benefit associated with the CECL capital transition provisions.

Additionally, effective January 1, 2023, the Firm phased out $50 \%$ of the other CECL capital transition provisions which impacted Tier 2 capital, adjusted average assets, total leverage exposure and RWA, as applicable.
Refer to Capital Risk Management on pages 86-96 and Note 1 of JPMorgan Chase's 2022 Form 10-K for further information on CECL capital transition provisions and the CECL accounting guidance.

Risk-based Capital Targets
The Firm's target for its Basel III Standardized CET1 capital ratio for the first quarter of 2024 remains at $13.5 \%$. The Firm's quarterly capital ratios may vary from the target dependent on market conditions. The target is based on the Basel III capital rules currently in effect.

## Basel III Finalization

In July 2023, the Federal Reserve, the OCC and the FDIC released a proposal to amend the risk-based capital framework, entitled "Regulatory capital rule: Amendments applicable to large banking organizations and to banking organizations with significant trading activity". Under the proposal, changes would include replacement of the advanced approach with an expanded risk-based approach, which would not permit the use of internal models for the calculation of risk-weighted assets, other than for Market risk. In addition, the stress capital buffer requirement would be applicable to both the expanded risk-based approach and the standardized approach. The proposal would significantly revise risk-based capital requirements for all banks with assets of $\$ 100$ billion or more, including the Firm and other U.S. GSIBs. The proposed effective date is July 1, 2025 with a three year transition period applicable to the expanded risk-based approach.

## GSIB Surcharge

In July 2023, the Federal Reserve also released a proposal to amend the calculation of the GSIB surcharge. If adopted as proposed, these amendments would require the Firm to assess its GSIB surcharge on an annual basis, using the average of the quarterly surcharge calculations throughout the calendar year, with daily averaging required for certain measures within the surcharge calculation. Surcharge increments would be reduced from 50bp to 10bp and there would also be other technical amendments to the Method 2 calculation. The proposed amendments would revise riskbased capital requirements for the Firm and other U.S. GSIBs, and would become effective on two calendar quarters after the adoption of the final rule. Refer to Riskbased Capital Regulatory Requirements on pages 89-90 of JPMorgan Chase's 2022 Form 10-K for further information on the GSIB surcharge.

The following tables present the Firm's risk-based capital metrics under both the Basel III Standardized and Advanced approaches and leverage-based capital metrics. Refer to Capital Risk Management on pages 86-96 of JPMorgan Chase’s 2022 Form 10-K for a further discussion of these capital metrics. Refer to Note 23 for JPMorgan Chase Bank, N.A.'s risk-based and leverage-based capital metrics. First Republic Bank was not subject to Advanced approach regulatory capital requirements. As a result, for certain exposures associated with the First Republic acquisition, Advanced RWA and any impact on Advanced Total capital is calculated under the Standardized approach as permitted by the transition provisions in the U.S. capital rules. Refer to Note 28 for additional information on the First Republic acquisition.

| (in millions, except ratios) | Standardized |  |  |  |  | Advanced |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | June 30, 2023 |  | December 31, 2022 | Capital ratio requirements ${ }^{(b)}$ |  | June 30, 2023 |  | December 31, 2022 | Capital ratio requirements ${ }^{(b)}$ |
| Risk-based capital metrics: ${ }^{\text {(a) }}$ |  |  |  |  |  |  |  |  |  |  |
| CET1 capital | \$ | 235,827 | \$ | 218,934 |  | \$ | 235,827 |  | \$ 218,934 |  |
| Tier 1 capital |  | 262,585 |  | 245,631 |  |  | 262,585 |  | 245,631 |  |
| Total capital |  | 295,281 |  | 277,769 |  |  | 281,953 | (c) | 264,583 |  |
| Risk-weighted assets |  | 1,706,927 |  | 1,653,538 |  |  | 1,694,714 | (c) | 1,609,773 |  |
| CET1 capital ratio |  | 13.8 \% |  | 13.2 \% | 12.5 \% |  | 13.9 \% |  | 13.6 \% | 11.0 \% |
| Tier 1 capital ratio |  | 15.4 |  | 14.9 | 14.0 |  | 15.5 |  | 15.3 | 12.5 |
| Total capital ratio |  | 17.3 |  | 16.8 | 16.0 |  | 16.6 |  | 16.4 | 14.5 |

(a) The capital metrics reflect the CECL capital transition provisions.
(b) Represents minimum requirements and regulatory buffers applicable to the Firm for the period ended June 30, 2023. For the period ended December 31, 2022, the Basel III Standardized CET1, Tier 1, and Total capital ratio requirements applicable to the Firm were $12.0 \%$, $13.5 \%$, and $15.5 \%$, respectively; the Basel III Advanced CET1, Tier 1, and Total capital ratio requirements applicable to the Firm were $10.5 \%, 12.0 \%$, and $14.0 \%$, respectively. Refer to Note 23 for additional information.
(c) Includes the impacts of certain assets associated with the First Republic acquisition to which the Standardized approach has been applied as permitted by the transition provisions in the U.S. capital rules.

(a) The capital metrics reflect the CECL capital transition provisions.
(b) Adjusted average assets, for purposes of calculating the leverage ratios, includes quarterly average assets adjusted for on-balance sheet assets that are subject to deduction from Tier 1 capital, predominantly goodwill, inclusive of estimated equity method goodwill, and other intangible assets.
(c) Represents minimum requirements and regulatory buffers applicable to the Firm. Refer to Note 23 for additional information.

## Capital components

The following table presents reconciliations of total stockholders' equity to Basel III CET1 capital, Tier 1 capital and Total capital as of June 30, 2023 and December 31, 2022.

| (in millions) |  | $\begin{array}{r} \text { June } 30, \\ 2023 \end{array}$ |  | $\begin{aligned} & \text { December } \\ & 31,2022 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| Total stockholders' equity | \$ | 312,516 | \$ | 292,332 |
| Less: Preferred stock |  | 27,404 |  | 27,404 |
| Common stockholders' equity |  | 285,112 |  | 264,928 |
| Add: |  |  |  |  |
| Certain deferred tax liabilities ${ }^{\left({ }^{(a)}\right.}$ |  | 3,097 |  | 2,510 |
| Other CET1 capital adjustments ${ }^{(b)}$ |  | 5,586 |  | 6,221 |
| Less: |  |  |  |  |
| Goodwill ${ }^{(\mathrm{c})}$ |  | 54,339 |  | 53,501 |
| Other intangible assets |  | 3,629 |  | 1,224 |
| Standardized/Advanced CET1 capital | \$ | 235,827 | \$ | 218,934 |
| Add: Preferred stock |  | 27,404 |  | 27,404 |
| Less: Other Tier 1 adjustments |  | 646 |  | 707 |
| Standardized/Advanced Tier 1 capital | \$ | 262,585 | \$ | 245,631 |
| Long-term debt and other instruments qualifying as Tier 2 capital | \$ | 13,424 | \$ | 13,569 |
| Qualifying allowance for credit losses ${ }^{(d)}$ |  | 20,459 |  | 19,353 |
| Other |  | $(1,187)$ |  | (784) |
| Standardized Tier 2 capital | \$ | 32,696 | \$ | 32,138 |
| Standardized Total capital | \$ | 295,281 | \$ | 277,769 |
| Adjustment in qualifying allowance for credit Iosses for Advanced Tier 2 capital ${ }^{(\mathrm{e})}$ |  | $(13,328){ }^{(f)}$ |  | $(13,186)$ |
| Advanced Tier 2 capital | \$ | 19,368 | \$ | 18,952 |
| Advanced Total capital | \$ | 281,953 | \$ | 264,583 |

(a) Represents deferred tax liabilities related to tax-deductible goodwill and to identifiable intangibles created in nontaxable transactions, which are netted against goodwill and other intangibles when calculating CET1 capital.
(b) As of June 30, 2023 and December 31, 2022, included a net benefit associated with cash flow hedges and debit valuation adjustments ("DVA") related to structured notes recorded in AOCI of $\$ 5.3$ billion and $\$ 5.2$ billion and the benefit from the CECL capital transition provisions of $\$ 1.4$ billion and $\$ 2.2$ billion, respectively.
(c) Goodwill deducted from capital includes goodwill associated with equity method investments in nonconsolidated financial institutions based on regulatory requirements. Refer to Principal investment risk on page 83 for additional information.
(d) Represents the allowance for credit losses eligible for inclusion in Tier 2 capital up to $1.25 \%$ of credit risk RWA, including the impact of the CECL capital transition provision with any excess deducted from RWA.
(e) Represents an adjustment to qualifying allowance for credit losses for the excess of eligible credit reserves over expected credit losses up to $0.6 \%$ of credit risk RWA, including the impact of the CECL capital transition provision with any excess deducted from RWA.
(f) Included an incremental $\$ 714$ million allowance for credit losses on certain assets associated with the First Republic acquisition to which the Standardized approach has been applied, as permitted by the transition provisions in the U.S. capital rules.

## Capital rollforward

The following table presents the changes in Basel III CET1 capital, Tier 1 capital and Tier 2 capital for the six months ended June 30, 2023.

| Six months ended June 30, (in millions) | 2023 |
| :---: | :---: |
| Standardized/Advanced CET1 capital at December 31, 2022 | \$ 218,934 |
| Net income applicable to common equity | 26,365 |
| Dividends declared on common stock | $(5,911)$ |
| Net purchase of treasury stock | $(4,304)$ |
| Changes in additional paid-in capital | 534 |
| Changes related to AOCI applicable to capital: |  |
| Unrealized gains/(losses) on investment securities | 2,969 |
| Translation adjustments, net of hedges ${ }^{(a)}$ | 267 |
| Fair value hedges | (10) |
| Defined benefit pension and other postretirement employee benefit ("OPEB") plans | (61) |
| Changes related to other CET1 capital adjustments ${ }^{(b)}$ | $(2,956)$ |
| Change in Standardized/Advanced CET1 capital | 16,893 |
| Standardized/Advanced CET1 capital at June 30, 2023 | \$ 235,827 |
| Standardized/Advanced Tier 1 capital at December 31, 2022 | \$ 245,631 |
| Change in CET1 capital ${ }^{(b)}$ | 16,893 |
| Redemptions of noncumulative perpetual preferred stock | - |
| Other | 61 |
| Change in Standardized/Advanced Tier 1 capital | 16,954 |
| Standardized/Advanced Tier 1 capital at June 30, 2023 | \$ 262,585 |
| Standardized Tier 2 capital at December 31, 2022 | \$ 32,138 |
| Change in long-term debt and other instruments qualifying as Tier 2 | (145) |
| Change in qualifying allowance for credit losses ${ }^{(b)}$ | 1,106 |
| Other | (403) |
| Change in Standardized Tier 2 capital | 558 |
| Standardized Tier 2 capital at June 30,2023 | \$ 32,696 |
| Standardized Total capital at June 30, 2023 | \$ 295,281 |
| Advanced Tier 2 capital at December 31, 2022 | \$ 18,952 |
| Change in long-term debt and other instruments qualifying as Tier 2 | (145) |
| Change in qualifying allowance for credit losses ${ }^{(b)(c)}$ | 964 |
| Other | (403) |
| Change in Advanced Tier 2 capital | 416 |
| Advanced Tier 2 capital at June 30, 2023 | \$ 19,368 |
| Advanced Total capital at June 30, 2023 | \$ 281,953 |

(a) Includes foreign currency translation adjustments and the impact of related derivatives.
(b) Includes the impact of the CECL capital transition provisions and the cumulative effect of changes in accounting principles. Refer to Note 1 for additional information.
(c) Included an incremental $\$ 714$ million allowance for credit losses on certain assets associated with the First Republic acquisition to which the Standardized approach has been applied, as permitted by the transition provisions in the U.S. capital rules.

## RWA rollforward

The following table presents changes in the components of RWA under Basel III Standardized and Advanced approaches for the six months ended June 30, 2023. The amounts in the rollforward categories are estimates, based on the predominant driver of the change.

| Six months ended June 30, 2023 (in millions) | Standardized |  |  |  |  |  | Advanced |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \text { Credit risk } \\ & \text { RWA } \end{aligned}$ |  | Market risk RWA |  | Total RWA |  | Credit risk$\text { RWA }^{(c)(d)}$ |  | Market risk RWA |  | Operational risk RWA |  | Total RWA |  |
| December 31, 2022 | \$ | 1,568,536 | \$ | 85,002 | \$ | 1,653,538 | \$ | 1,078,076 | \$ | 85,432 | \$ | 446,265 | \$ | 1,609,773 |
| Model \& data changes ${ }^{(2)}$ |  | $(6,013)$ |  | $(3,592)$ |  | $(9,605)$ |  | $(3,772)$ |  | $(3,592)$ |  | - |  | $(7,364)$ |
| Movement in portfolio levels ${ }^{(b)}$ |  | 70,207 |  | $(7,213)$ |  | 62,994 |  | 102,745 |  | $(7,487)$ |  | $(2,953)$ |  | 92,305 |
| Changes in RWA |  | 64,194 |  | $(10,805)$ |  | 53,389 |  | 98,973 |  | $(11,079)$ |  | $(2,953)$ |  | 84,941 |
| June 30, 2023 | \$ | 1,632,730 | \$ | 74,197 | \$ | 1,706,927 | \$ | 1,177,049 | \$ | 74,353 | \$ | 443,312 | \$ | 1,694,714 |

(a) Model \& data changes refer to material movements in levels of RWA as a result of revised methodologies and/or treatment per regulatory guidance (exclusive of rule changes).
(b) Movement in portfolio levels (inclusive of rule changes) refers to: for Credit risk RWA, changes in book size, impacts associated with the First Republic acquisition including the benefit of the shared-loss agreements entered into with the FDIC, position rolloffs in legacy portfolios in Home Lending, changes in composition and credit quality, market movements, and deductions for excess eligible credit reserves not eligible for inclusion in Tier 2 capital; for Market risk RWA, changes in position, market movements, and changes in the Firm's regulatory multiplier from Regulatory VaR backtesting exceptions; and for Operational risk RWA, updates to cumulative losses and macroeconomic model inputs.
(c) As of June 30, 2023 and December 31, 2022, the Basel III Standardized Credit risk RWA included wholesale and retail off balance-sheet RWA of $\$ 221.2$ billion and $\$ 210.1$ billion, respectively; and the Basel III Advanced Credit risk RWA included wholesale and retail off balance-sheet RWA of $\$ 199.0$ billion and $\$ 180.8$ billion, respectively.
(d) As of June 30, 2023, Credit risk RWA reflected approximately $\$ 57.1$ billion of RWA calculated under the Standardized approach for certain assets associated with the First Republic acquisition as permitted by the transition provisions in the U.S. capital rules.

Refer to the Firm's Pillar 3 Regulatory Capital Disclosures reports, which are available on the Firm's website, for further information on Credit risk RWA, Market risk RWA and Operational risk RWA.

## Supplementary leverage ratio

Refer to Supplementary Leverage Ratio on page 93 of JPMorgan Chase's 2022 Form 10-K for additional information.

The following table presents the components of the Firm's SLR.

| Three months ended <br> (in millions, except ratio) |  | June 30, <br> $\mathbf{2 0 2 3}$ | December 31, <br> 2022 |
| :--- | ---: | ---: | ---: |
| Tier 1 capital | $\mathbf{\$}$ | $\mathbf{2 6 2 , 5 8 5}$ | $\$$ |
| 245,631 |  |  |  |
| Total average assets | $3,851,388$ | $3,755,271$ |  |
| Less: Regulatory capital adjustments $^{(\mathrm{ar})}$ | 54,809 | 51,398 |  |
| ${\text { Total adjusted average } \text { assets }^{(\mathrm{b})}}^{\text {Add: Off-balance sheet exposures }}{ }^{(\mathrm{c})}$ | $\mathbf{3 , 7 9 6 , 5 7 9}$ | $3,703,873$ |  |
| Total leverage exposure | $\mathbf{6 9 6 , 1 8 2}$ | 663,219 |  |
| SLR | $\mathbf{4 , 4 9 2 , 7 6 1}$ | $\$ 4,367,092$ |  |

(a) For purposes of calculating the SLR, includes quarterly average assets adjusted for on-balance sheet assets that are subject to deduction from Tier 1 capital, predominantly goodwill, inclusive of estimated equity method goodwill, other intangible assets and adjustments for the CECL capital transition provisions.
(b) Adjusted average assets used for the calculation of Tier 1 leverage ratio.
(c) Off-balance sheet exposures are calculated as the average of the three month-end spot balances on applicable regulatory exposures during the reporting quarter. Refer to the Firm's Pillar 3 Regulatory Capital Disclosures reports for additional information.

## Line of business equity

Each business segment is allocated capital by taking into consideration a variety of factors including capital levels of similarly rated peers and applicable regulatory capital requirements. As of June 30, 2023, the Firm updated its line of business capital allocations to reflect the impact of the First Republic acquisition.

Refer to line of business equity on page 93 of JPMorgan Chase's 2022 Form 10-K for additional information on capital allocation.
The following table presents the capital allocated to each business segment.

Line of business equity (Allocated capital)

| (in billions) | $\begin{array}{r} \text { June } 30, \\ 2023 \end{array}$ |  | $\begin{array}{r} \hline \text { March } 31, \\ 2023 \\ \hline \end{array}$ |  | $\begin{array}{r} \text { December 31, } \\ 2022 \end{array}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Consumer \& Community Banking | \$ | 55.5 | \$ | 52.0 | \$ | 50.0 |
| Corporate \& Investment Bank |  | 108.0 |  | 108.0 |  | 103.0 |
| Commercial Banking |  | 30.0 |  | 28.5 |  | 25.0 |
| Asset \& Wealth Management |  | 17.0 |  | 16.0 |  | 17.0 |
| Corporate |  | 74.6 |  | 71.2 |  | 69.9 |
| Total common stockholders' equity | \$ | 285.1 | \$ | 275.7 | \$ | 264.9 |

## Capital actions

Common stock dividends
The Firm's quarterly common stock dividend is currently $\$ 1.00$ per share. On June 30, 2023, the Firm announced that its Board of Directors intends to increase the quarterly common stock dividend to $\$ 1.05$ per share, effective in the third quarter of 2023. The Firm's dividends are subject to approval by the Board of Directors on a quarterly basis.

## Common stock

The Firm is authorized to purchase up to $\$ 30$ billion under its common share repurchase program previously approved by the Board of Directors.
The following table sets forth the Firm's repurchases of common stock for the three and six months ended June 30, 2023 and 2022.

|  | Three months ended <br> June 30, | Six months ended <br> June 30, |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| (in millions) | $\mathbf{2 0 2 3}$ | 2022 | $\mathbf{2 0 2 3}$ | 2022 |  |
| Total number of shares of <br> common stock repurchased | $\mathbf{1 6 . 7}$ | 5.0 | $\mathbf{3 8 . 7}$ | 23.1 |  |
| Aggregate purchase price of <br> common stock repurchases | $\mathbf{\$}$ | $\mathbf{2 , 2 9 3}$ | $\mathbf{\$}$ | 622 | $\mathbf{\$}$ |

Refer to Capital actions on page 94 of JPMorgan Chase's 2022 Form 10-K for additional information.
Refer to Part II, Item 2: Unregistered Sales of Equity Securities and Use of Proceeds and Part II, Item 5: Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities on pages 209-210 of this Form 10-Q and page 34 of JPMorgan Chase's 2022 Form 10-K, respectively, for additional information regarding repurchases of the Firm's equity securities.

## Preferred stock

Preferred stock dividends declared were $\$ 373$ million and $\$ 410$ million, and $\$ 729$ million and $\$ 807$ million, for the three and six months ended June 30, 2023 and 2022, respectively.
Refer to Note 19 of this Form 10-Q and Note 21 of JPMorgan Chase’s 2022 Form 10-K for additional information on the Firm's preferred stock, including the issuance and redemption of preferred stock.

## Subordinated Debt

Refer to Long-term funding and issuance on page 60 and Note 18 for additional information on the Firm's subordinated debt.

Capital planning and stress testing Comprehensive Capital Analysis and Review On April 5, 2023, the Firm submitted its 2023 Capital Plan to the Federal Reserve. On June 30, 2023, the Firm announced that it had completed the Federal Reserve's 2023 Comprehensive Capital Analysis and Review ("CCAR") stress test process.
On July 27, 2023, the Federal Reserve announced the Firm's 2023 SCB requirement of $2.9 \%$ (down from the current $4.0 \%$ ), which will result in a Standardized CET1
capital ratio requirement, including regulatory buffers, of $11.4 \%$ (down from the current 12.5\%) for the fourth quarter of 2023. The SCB requirement will become effective on October 1, 2023 and will remain in effect until September 30, 2024.
Refer to Capital planning and stress testing on pages 86-87 of JPMorgan Chase's 2022 Form 10-K for additional information on CCAR.

## Other capital requirements

Total Loss-Absorbing Capacity
The Federal Reserve's TLAC rule requires the U.S. GSIB toptier holding companies, including the Firm, to maintain minimum levels of external TLAC and eligible long-term debt ("eligible LTD").
The following table presents the eligible external TLAC and eligible LTD amounts, as well as a representation of these amounts as a percentage of the Firm's total RWA and total leverage exposure applying the impact of the CECL capital transition provisions as of June 30, 2023 and
December 31, 2022.

| (in billions, except ratio) | June 30, 2023 |  |  |  | December 31, 2022 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | External TLAC |  | LTD |  | External TLAC |  | LTD |  |
| Total eligible amount | \$ | 493.8 | \$ | 218.2 | \$ | 486.0 | \$ | 228.5 |
| \% of RWA |  | 28.9 \% |  | 12.8 \% |  | 29.4 \% |  | 13.8 \% |
| Regulatory requirements |  | 23.0 |  | 10.0 |  | 22.5 |  | 9.5 |
| Surplus/ (shortfall) | \$ | 101.2 | \$ | 47.6 | \$ | 114.0 | \$ | 71.4 |
| \% of total leverage exposure |  | 11.0 \% |  | 4.9 \% |  | 11.1 \% |  | 5.2 \% |
| Regulatory requirements |  | 9.5 |  | 4.5 |  | 9.5 |  | 4.5 |
| Surplus/ <br> (shortfall) | \$ | 66.9 | \$ | 16.1 | \$ | 71.2 | \$ | 32.0 |

Effective January 1, 2023, the Firm's regulatory requirements for TLAC to RWA and LTD to RWA ratios increased by 50 bps to $23.0 \%$ and $10.0 \%$, respectively, due to the increase in the Firm's GSIB requirements. Refer to Risk-based Capital Regulatory Requirements on pages 89-90 of JPMorgan Chase's 2022 Form 10-K for further information on the GSIB surcharge.
Refer to Liquidity Risk Management on pages 54-61 for further information on long-term debt issued by the Parent Company.
Refer to Part I, Item 1A: Risk Factors on pages 9-32 of JPMorgan Chase's 2022 Form 10-K for information on the financial consequences to holders of the Firm's debt and equity securities in a resolution scenario.
Refer to other capital requirements on page 95 of JPMorgan Chase's 2022 Form 10-K for additional information on TLAC.

## U.S. broker-dealer regulatory capital

## J.P. Morgan Securities

JPMorgan Chase's principal U.S. broker-dealer subsidiary is J.P. Morgan Securities. J.P. Morgan Securities is subject to the regulatory capital requirements of Rule 15c3-1 under the Securities Exchange Act of 1934 (the "Net Capital Rule"). J.P. Morgan Securities is also registered as a futures commission merchant and is subject to regulatory capital requirements, including those imposed by the SEC, the Commodity Futures Trading Commission ("CFTC"), the Financial Industry Regulatory Authority ("FINRA") and the National Futures Association ("NFA").
The following table presents J.P. Morgan Securities’ net capital:

| June 30, 2023 <br> (in millions) |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: |
| Net Capital | $\$$ | 24,578 | $\$$ | 5,593 |

## Non-U.S. subsidiary regulatory capital

J.P. Morgan Securities plc
J.P. Morgan Securities plc is a wholly-owned subsidiary of JPMorgan Chase Bank, N.A. and has authority to engage in banking, investment banking and broker-dealer activities. J.P. Morgan Securities plc is jointly regulated in the U.K. by the Prudential Regulation Authority ("PRA") and the Financial Conduct Authority ("FCA"). J.P. Morgan Securities plc is subject to the European Union ("EU") Capital Requirements Regulation ("CRR"), as adopted in the U.K., and the PRA capital rules, each of which have implemented Basel III and thereby subject J.P. Morgan Securities plc to its requirements.

The Bank of England requires that U.K. banks, including U.K. regulated subsidiaries of overseas groups, maintain minimum requirements for own funds and eligible liabilities ("MREL"). As of June 30, 2023, J.P. Morgan Securities plc was compliant with its MREL requirements.
Effective January 1, 2023, J.P. Morgan Securities plc was required to meet the minimum leverage capital requirement established by the PRA of $3.25 \%$, plus regulatory buffers.

The following table presents J.P. Morgan Securities plc's risk-based and leverage-based capital metrics:

| June 30, 2023 <br> (in millions, except ratios) | Estimated | Regulatory <br> Minimum ratios |  |
| :--- | :---: | :---: | :---: |
| Total capital | $\mathbf{5 5 , 7 1 1}$ |  |  |
| CET1 capital ratio | $\mathbf{1 7 . 1} \%$ | $\mathbf{4 . 5} \%$ |  |
| Tier 1 capital ratio | $\mathbf{2 2 . 1}$ | $\mathbf{6 . 0}$ |  |
| Total capital ratio | $\mathbf{2 8 . 2}$ | $\mathbf{8 . 0}$ |  |
| Tier 1 leverage ratio | $\mathbf{7 . 0}$ | $\mathbf{3 . 3}$ | (b) |

(a) Represents minimum Pillar 1 requirements specified by the PRA. J.P. Morgan Securities plc's capital ratios as of June 30, 2023 exceeded the minimum requirements, including the additional capital requirements specified by the PRA.
(b) At least $75 \%$ of the Tier 1 leverage ratio minimum must be met with CET1 capital.

## J.P. Morgan SE

JPMSE is a wholly-owned subsidiary of JPMorgan Chase Bank, N.A. and has authority to engage in banking, investment banking and markets activities. JPMSE is regulated by the European Central Bank as well as the local regulators in each of the countries in which it operates, and it is subject to EU capital requirements under Basel III. JPMSE is required by the EU Single Resolution Board to maintain MREL. As of June 30, 2023, JPMSE was compliant with its MREL requirements.
The following table presents JPMSE's risk-based and leverage-based capital metrics:
$\left.\begin{array}{lccc}\hline \text { June 30, } \mathbf{2 0 2 3} & & \begin{array}{c}\text { Regulatory } \\ \text { (in millions, except ratios) }\end{array} & \mathbf{\$} \\ \text { Estimated }\end{array}\right)$
(a) Represents minimum Pillar 1 requirements specified by the EU CRR. J.P. Morgan SE's capital and leverage ratios as of June 30, 2023 exceeded the minimum requirements, including the additional capital requirements specified by EU regulators.

Refer to U.S. broker-dealer and Non-U.S. subsidiary regulatory capital on page 96 of JPMorgan Chase’s 2022 Form 10-K for further information.

Liquidity risk is the risk that the Firm will be unable to meet its contractual and contingent financial obligations as they arise or that it does not have the appropriate amount, composition and tenor of funding and liquidity to support its assets and liabilities. Refer to pages 97-104 of JPMorgan Chase's 2022 Form 10-K and the Firm's U.S. LCR Disclosure reports, which are available on the Firm's website, for a further discussion of the Firm's liquidity risk.

## LCR and HQLA

The LCR rule requires that the Firm and JPMorgan Chase Bank, N.A. maintain an amount of eligible HQLA that is sufficient to meet their respective estimated total net cash outflows over a prospective 30 calendar-day period of significant stress.
Under the LCR rule, the amount of eligible HQLA held by JPMorgan Chase Bank, N.A. that is in excess of its standalone $100 \%$ minimum LCR requirement, and that is not transferable to non-bank affiliates, must be excluded from the Firm's reported eligible HQLA. The LCR for both the Firm and JPMorgan Chase Bank, N.A. is required to be a minimum of $100 \%$.

The following table summarizes the Firm and JPMorgan Chase Bank, N.A.'s average LCR for the three months ended June 30, 2023, March 31, 2023 and June 30, 2022 based on the Firm's interpretation of the LCR framework.

| Average amount (in millions) | Three months ended |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\begin{gathered} \text { June } 30, \\ 2023 \end{gathered}$ |  | $\begin{gathered} \text { March } 31, \\ 2023 \end{gathered}$ |  | $\begin{gathered} \text { June } 30, \\ 2022 \end{gathered}$ |
| JPMorgan Chase \& Co.: |  |  |  |  |  |  |
| HQLA |  |  |  |  |  |  |
| Eligible cash ${ }^{(a)}$ | \$ | 440,294 | \$ | 453,287 | \$ | 634,480 |
| Eligible securities ${ }^{(b)(c)}$ |  | 327,837 |  | 278,223 |  | 107,473 |
| Total HQLA ${ }^{\text {(d)(e) }}$ | \$ | 768,131 | \$ | 731,510 | \$ | 741,953 |
| Net cash outflows | \$ | 683,446 | \$ | 642,650 | \$ | 676,234 |
| LCR |  | 112 \% |  | 114 \% |  | 110 \% |
| Net excess eligible HQLA ${ }^{\text {(d) }}$ | \$ | 84,685 | \$ | 88,860 | \$ | 65,719 |
| JPMorgan Chase Bank N.A.: |  |  |  |  |  |  |
| LCR |  | 129 \% |  | 140 \% |  | 169 \% |
| Net excess eligible HQLA | \$ | 211,233 | \$ | 278,651 | \$ | 487,867 |

(a) Represents cash on deposit at central banks, primarily the Federal Reserve Banks.
(b) Predominantly U.S. Treasuries, U.S. GSE and government agency MBS, and sovereign bonds net of applicable haircuts under the LCR rule.
(c) Eligible HQLA securities may be reported in securities borrowed or purchased under resale agreements, trading assets, or investment securities on the Firm's Consolidated balance sheets.
(d) Excludes average excess eligible HQLA at JPMorgan Chase Bank, N.A. that are not transferable to non-bank affiliates.
(e) End-of-period HQLA balances were $\$ 791.5$ billion, $\$ 758.9$ billion, and $\$ 721.1$ billion for June 30, 2023, March 31, 2023 and June 30, 2022, respectively.

The Firm's average LCR decreased during the three months ended June 30, 2023, compared with the three months period ended March 31, 2023, due to long-term debt maturities, common stock repurchases and common stock
dividends paid, predominantly offset by a dividend payment from JPMorgan Chase Bank, N.A. to the Parent Company.
The Firm's average LCR increased during the three months ended June 30, 2023, compared with the prior year period, driven by dividend payments from JPMorgan Chase Bank, N.A. to the Parent Company, partially offset by common stock repurchases and common stock dividends paid.
JPMorgan Chase Bank, N.A.'s average LCR decreased during the three months ended June 30, 2023, compared with the three months ended March 31, 2023, reflecting an approximate $50 \%$ decline associated with the First Republic acquisition, reducing HQLA and increasing net cash outflows. JPMorgan Chase Bank, N.A.'s HQLA was further impacted by a reduction in cash primarily driven by higher average loans, a dividend payment to the Parent Company, and a decline in average deposits.
JPMorgan Chase Bank, N.A.'s average LCR for the three months ended June 30, 2023 decreased when compared with the same period in the prior year, reflecting a decrease in JPMorgan Chase Bank, N.A.'s HQLA as a result of a reduction in cash from a decline in average deposits and Ioan growth, as well as lower market values of HQLAeligible investment securities and the impact of the First Republic acquisition.
Refer to Note 10 and Note 28 for additional information on the Firm's investment securities portfolio and the First Republic acquisition.
Actions by the Federal Reserve have impacted depositor behavior, resulting in reductions to system-wide deposits, including those held by the Firm. Each of the Firm and JPMorgan Chase Bank, N.A.'s average LCR may fluctuate from period to period due to changes in their respective eligible HQLA and estimated net cash outflows as a result of ongoing business activity and from the continued impacts of Federal Reserve actions as well as other factors.
Refer to page 98 of JPMorgan Chase's 2022 Form 10-K and the Firm's U.S. LCR Disclosure reports for additional information on HQLA and net cash outflows.

## Internal stress testing

The Firm conducts internal liquidity stress testing that is intended to ensure that the Firm and its material legal entities have sufficient liquidity under a variety of adverse scenarios, including scenarios analyzed as part of the Firm's resolution and recovery planning. Internal Stress scenarios are produced on a regular basis, and other stress tests are performed in response to specific market events or concerns. Results of stress tests are considered in the formulation of the Firm's funding plan and assessment of its liquidity position.
The Firm maintains liquidity at the Parent Company, the Intermediate Holding Company ("IHC"), and operating subsidiaries at levels sufficient to comply with liquidity risk tolerances and minimum liquidity requirements, and to
manage through periods of stress when access to normal funding sources may be disrupted.
Other liquidity sources
In addition to the assets reported in the Firm's eligible HQLA discussed above, the Firm had unencumbered marketable securities, such as equity and debt securities, that the Firm believes would be available to raise liquidity. This includes excess eligible HQLA securities at JPMorgan Chase Bank, N.A. that are not transferable to non-bank affiliates. The fair value of these securities was approximately $\$ 620$ billion and $\$ 694$ billion as of June 30, 2023 and December 31, 2022, respectively, although the amount of liquidity that could be raised at any particular time would be dependent on prevailing market conditions. The decrease compared to December 31, 2022, was driven by a reduction in excess eligible HQLA securities at JPMorgan Chase Bank, N.A., largely offset by an increase in CIB trading assets and AFS securities associated with the First Republic acquisition.

The Firm also had available borrowing capacity at the Federal Home Loan Banks ("FHLBs") and the discount window at the Federal Reserve Banks as a result of collateral pledged by the Firm to such banks of approximately $\$ 332$ billion and $\$ 323$ billion as of June 30, 2023 and December 31, 2022, respectively. This borrowing capacity excludes the benefit of cash and securities reported in the Firm's eligible HQLA or other unencumbered securities that are currently pledged at the Federal Reserve Banks discount window and other central banks. Although available, the Firm does not view this borrowing capacity at the Federal Reserve Banks discount window and the other central banks as a primary source of liquidity.

## NSFR

The net stable funding ratio ("NSFR") is a liquidity requirement for large banking organizations that is intended to measure the adequacy of "available" stable funding that is sufficient to meet their "required" amounts of stable funding over a one-year horizon.
As of June 30, 2023, the Firm and JPMorgan Chase Bank, N.A. were compliant with the $100 \%$ minimum NSFR requirement, based on the Firm's current interpretation of the final rule. By the end of August 2023, the Firm will be required to publicly disclose its quarterly average NSFR on a semiannual basis.

## Funding

## Sources of funds

Management believes that the Firm's unsecured and
secured funding capacity is sufficient to meet its on- and off-balance sheet obligations, which includes both shortand long-term cash requirements.
The Firm funds its global balance sheet through diverse sources of funding including stable deposits, secured and unsecured funding in the capital markets and stockholders' equity. Deposits are the primary funding source for JPMorgan Chase Bank, N.A. Additionally, JPMorgan Chase Bank, N.A. may access funding through short- or long-term secured borrowings, through the issuance of unsecured long-term debt, or from borrowings from the IHC. The
Deposits
The table below summarizes, by LOB and Corporate, the period-end deposit balances as of June 30, 2023, and December 31, 2022, and the average deposit balances for the three and six months ended June 30, 2023 and 2022, respectively.

| (in millions) | June 30, 2023 |  | December 31, 2022 |  | Three months ended June 30, |  |  |  | Six months ended June 30, |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Average | Average |  |  |  |
|  |  |  |  | 2023 |  | 2022 |  | 2023 |  | 2022 |
| Consumer \& Community Banking | \$ | 1,173,514 |  |  | \$ | 1,131,611 | \$ | 1,157,309 | \$ | 1,180,453 | \$ | 1,135,261 | \$ | 1,167,057 |
| Corporate \& Investment Bank |  | 735,576 |  |  |  | 689,893 |  | 722,818 |  | 773,664 |  | 711,266 |  | 765,200 |
| Commercial Banking |  | 269,026 |  | 271,342 |  | 275,196 |  | 300,339 |  | 270,595 |  | 308,518 |
| Asset \& Wealth Management |  | 199,763 |  | 233,130 |  | 211,872 |  | 268,861 |  | 218,078 |  | 278,256 |
| Corporate |  | 21,083 |  | 14,203 |  | 20,219 |  | 8,995 |  | 18,931 |  | 4,948 |
| Total Firm | \$ | 2,398,962 | \$ | 2,340,179 | \$ | 2,387,414 | \$ | 2,532,312 | \$ | 2,354,131 | \$ | 2,523,979 |

The Firm believes that deposits provide a stable source of funding and reduce the Firm's reliance on the wholesale funding markets. A significant portion of the Firm's deposits are consumer deposits and wholesale operating deposits, which are both considered to be stable sources of liquidity. Wholesale operating deposits are generally considered to be stable sources of liquidity because they are generated from customers that maintain operating service relationships with the Firm.
The Firm believes that average deposit balances are generally more representative of deposit trends than period-end deposit balances. However, during periods of market disruption those trends could be affected.
Average deposits were lower for the three months ended June 30, 2023 compared to the three months ended June 30, 2022. The decrease was driven by:

- the continued migration into higher-yielding investments in AWM as a result of the rising interest rate environment,
- continued deposit attrition in CIB, including actions to reduce certain deposits, partially offset by net issuances of structured notes as a result of client demand,
- continued deposit attrition in CB, partially offset by continued inflows as a result of disruptions in the market in the first quarter of 2023, and
- a net decline in CCB primarily from existing accounts due to increased customer spending, largely offset by the impact of the First Republic acquisition,
partially offset by

Firm's non-bank subsidiaries are primarily funded from long-term unsecured borrowings and short-term secured borrowings which are primarily securities loaned or sold under repurchase agreements. Excess funding is invested by Treasury and CIO in the Firm's investment securities portfolio or deployed in cash or other short-term liquid investments based on their interest rate and liquidity risk characteristics.
Refer to Note 24 for additional information on off-balance sheet obligations.

- an increase in Corporate related to the Firm's international consumer initiatives.
Average deposits were lower for the six months ended June 30, 2023 compared to the six months ended June 30, 2022. The decrease was driven by:
- the continued migration into higher-yielding investments in AWM as a result of the rising interest rate environment,
- continued deposit attrition in CIB, including actions to reduce certain deposits, partially offset by net issuances of structured notes as a result of client demand,
- continued deposit attrition in CB, partially offset by continued inflows as a result of disruptions in the market in the first quarter of 2023, and
- a net decline in CCB primarily from existing accounts due to increased customer spending, partially offset by the impact of the First Republic acquisition,
partially offset by
- an increase in Corporate related to the Firm's international consumer initiatives.


## Period-end deposits increased, reflecting:

- increases in CIB due to deposit inflows related to clientdriven activities and net issuances of structured notes as a result of client demand,
- $\$ 68$ billion of deposits in CCB associated with the First Republic acquisition, partially offset by a net decline primarily in existing accounts due to increased customer spending, and
- an increase in Corporate related to the Firm's international consumer initiatives,
partially offset by
- the continued migration into higher-yielding investments in AWM as a result of the rising interest rate environment, and
- ongoing attrition in CB driven by higher rates and seasonal outflows, predominantly offset by inflows as a result of disruptions in the market in the first quarter of 2023.

Refer to the Firm's Consolidated Balance Sheets Analysis and the Business Segment Results on pages 16-19 and pages 22-46, respectively, for further information on deposit and liability balance trends. Refer to Note 3 for further information on structured notes.

Certain deposits are covered by insurance protection that provides additional funding stability and results in a benefit to the LCR. Deposit insurance protection may be available to depositors in the countries in which the deposits are placed. For example, the FDIC provides deposit insurance protection for deposits placed in a U.S. depository institution. At June 30, 2023 and December 31, $2022^{(a)}$, the Firmwide estimated uninsured deposits were $\$ 1,381.1$ billion and \$1,353.1 billion, respectively, primarily reflecting wholesale operating deposits.

Total uninsured deposits include time deposits. The table below presents an estimate of uninsured U.S. and non-U.S. time deposits, and their remaining maturities. The Firm's estimates of its uninsured U.S. time deposits are based on data that the Firm calculates periodically under applicable FDIC regulations. For purposes of this presentation, all nonU.S. time deposits are deemed to be uninsured.

| (in millions) | $\begin{gathered} \hline \text { June } 30, \\ 2023 \\ \hline \end{gathered}$ |  |  |  | $\begin{gathered} \hline \text { December 31, } \\ 2022 \\ \hline \end{gathered}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | U.S. |  | Non-U.S. | U.S. |  | Non-U.S. |
| Three months or less | \$ | 33,242 | \$ | 74,455 | \$ 25,910 | (a) | \$ 68,765 |
| Over three months but within 6 months |  | 15,044 |  | 5,452 | 8,670 |  | 3,658 |
| Over six months but within 12 months |  | 8,014 |  | 3,524 | 7,035 |  | 2,850 |
| Over 12 months |  | 770 |  | 2,506 | 787 |  | 2,634 |
| Total | \$ | 57,070 | \$ | 85,937 | \$ 42,402 |  | \$ 77,907 |

(a) Prior-period amounts for the Firmwide estimated uninsured deposits, including uninsured U.S. time deposits, have been revised to conform with the current presentation, reflecting refinements to the calculation.

Refer to pages 100-101 of JPMorgan Chase's 2022 Form 10-K for additional disclosure on the Firm's deposit balances.

The table below shows the loan and deposit balances, the loans-to-deposits ratios, and deposits as a percentage of total liabilities, as of June 30, 2023 and December 31, 2022.

| (in billions except ratios) | June 30, <br> $\mathbf{2 0 2 3}$ | December 31, <br> 2022 |  |
| :--- | :---: | :---: | :---: |
| Deposits | $\$$ | $\mathbf{2 , 3 9 9 . 0}$ | $\$$ |
| Deposits as a \% of total liabilities | $\mathbf{6 7 \%}$ | $2,340.2$ |  |
| Loans | $\mathbf{\$}$ | $\mathbf{1 , 3 0 0 . 1}$ | $\$$ |
| Loans-to-deposits ratio |  | $\mathbf{5 4} \%$ | $1,135.6$ |

The following tables provide a summary of the average balances and average interest rates of JPMorgan Chase's deposits for the three and six months ended June 30, 2023 and 2022.

| (Unaudited) <br> (in millions) | Average balances |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Three months ended |  |  |  | Six months ended |  |  |  |
|  | June 30, 2023 |  | June 30, 2022 |  | June 30, 2023 |  | June 30, 2022 |  |
| U.S. offices |  |  |  |  |  |  |  |  |
| Noninterest-bearing | \$ | 646,767 | \$ | 713,059 | \$ | 635,748 | \$ | 709,294 |
| Interest-bearing |  |  |  |  |  |  |  |  |
| Demand ${ }^{(a)}$ |  | 286,453 |  | 352,081 |  | 283,524 |  | 346,005 |
| Savings ${ }^{(b)}$ |  | 883,737 |  | 987,067 |  | 887,257 |  | 996,138 |
| Time |  | 138,985 |  | 54,670 |  | 118,960 |  | 52,904 |
| Total interest-bearing deposits |  | 1,309,175 |  | 1,393,818 |  | 1,289,741 |  | 1,395,047 |
| Total deposits in U.S. offices |  | 1,955,942 |  | 2,106,877 |  | 1,925,489 |  | 2,104,341 |
| Non-U.S. offices |  |  |  |  |  |  |  |  |
| Noninterest-bearing |  | 24,948 |  | 28,832 |  | 25,390 |  | 28,789 |
| Interest-bearing |  |  |  |  |  |  |  |  |
| Demand |  | 320,822 |  | 335,102 |  | 320,527 |  | 331,348 |
| Time |  | 85,702 |  | 61,501 |  | 82,725 |  | 59,501 |
| Total interest-bearing deposits |  | 406,524 |  | 396,603 |  | 403,252 |  | 390,849 |
| Total deposits in non-U.S. offices |  | 431,472 |  | 425,435 |  | 428,642 |  | 419,638 |
| Total deposits | \$ | 2,387,414 | \$ | 2,532,312 | \$ | 2,354,131 | \$ | 2,523,979 |


| (Unaudited) | Average interest rates |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Three months ended |  | Six months ended |  |
|  | June 30, 2023 | June 30, 2022 | June 30, 2023 | June 30, 2022 |
| U.S. offices |  |  |  |  |
| Noninterest-bearing | NA | NA | NA | NA |
| Interest-bearing |  |  |  |  |
| Demand ${ }^{(a)}$ | 3.41 \% | 0.32 \% | 3.09 \% | 0.18 \% |
| Savings ${ }^{(b)}$ | 1.04 | 0.12 | 0.97 | 0.10 |
| Time | 4.53 | 0.92 | 4.52 | 0.60 |
| Total interest-bearing deposits | 1.93 | 0.20 | 1.75 | 0.14 |
| Total deposits in U.S. offices | 1.28 | 0.12 | 1.19 | 0.08 |
| Non-U.S. offices |  |  |  |  |
| Noninterest-bearing | NA | NA | NA | NA |
| Interest-bearing |  |  |  |  |
| Demand | 2.53 | 0.08 | 2.38 | 0.02 |
| Time | 5.66 | 0.72 | 5.32 | 0.38 |
| Total interest-bearing deposits | 3.21 | 0.20 | 2.98 | 0.08 |
| Total deposits in non-U.S. offices | 3.01 | 0.16 | 2.80 | 0.06 |
| Total deposits | 1.60 \% | 0.16 \% | 1.47 \% | 0.08 \% |

(a) Includes Negotiable Order of Withdrawal ("NOW") accounts, and certain trust accounts.
(b) Includes Money Market Deposit Accounts ("MMDAs").

Refer to Note 16 for additional information on deposits.

The following table summarizes short-term and long-term funding, excluding deposits, as of June 30, 2023, and December 31, 2022, and average balances for the three and six months ended June 30, 2023 and 2022, respectively. Refer to the Consolidated Balance Sheets Analysis on pages 16-19 and Note 11 for additional information.
Sources of funds (excluding deposits)

| (in millions) | June 30, 2023 |  | $\begin{gathered} \text { December 31, } \\ 2022 \end{gathered}$ |  | Three months ended June 30, Six months ended June 30, |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Average | Average |  |  |  |
|  |  |  | 2023 | 2022 |  | 2023 |  | 2022 |  |
| Commercial paper | \$ | 11,686 |  |  | \$ | 12,557 | \$ | 11,057 | \$ | 19,589 | \$ | 11,930 | \$ | 17,097 |
| Other borrowed funds |  | 7,532 |  |  |  | 8,418 |  | 9,791 |  | 12,533 |  | 9,931 |  | 13,061 |
| Federal funds purchased |  | 1,783 |  | 1,684 |  | 1,564 |  | 1,241 |  | 1,729 |  | 1,467 |
| Total short-term unsecured funding | \$ | 21,001 | \$ | 22,659 | \$ | 22,412 | \$ | 33,363 | \$ | 23,590 | \$ | 31,625 |
| Securities sold under agreements to repurchase ${ }^{(a)}$ | \$ | 260,999 | \$ | 198,382 | \$ | 258,297 | \$ | 227,075 | \$ | 252,322 | \$ | 235,300 |
| Securities loaned ${ }^{(\mathrm{a})}$ |  | 3,490 |  | 2,547 |  | 3,857 |  | 5,060 |  | 3,994 |  | 4,982 |
| Other borrowed funds |  | 21,804 |  | 23,052 |  | 21,179 |  | 26,376 |  | 22,037 |  | 27,152 |
| Obligations of Firm-administered multi-seller conduits ${ }^{(b)}$ |  | 16,383 |  | 9,236 |  | 12,741 |  | 6,779 |  | 11,622 |  | 6,625 |
| Total short-term secured funding | \$ | 302,676 | \$ | 233,217 | \$ | 296,074 | \$ | 265,290 | \$ | 289,975 | \$ | 274,059 |
| Senior notes | \$ | 177,966 | \$ | 188,025 | \$ | 180,712 | \$ | 187,143 | \$ | 182,830 | \$ | 188,779 |
| Subordinated debt |  | 19,763 |  | 21,803 |  | 20,543 |  | 19,139 |  | 21,182 |  | 19,688 |
| Structured notes ${ }^{(c)}$ |  | 76,648 |  | 70,839 |  | 75,075 |  | 66,025 |  | 74,413 |  | 68,584 |
| Total long-term unsecured funding | \$ | 274,377 | \$ | 280,667 | \$ | 276,330 | \$ | 272,307 | \$ | 278,425 | \$ | 277,051 |
| Credit card securitization ${ }^{(b)}$ | \$ | 999 | \$ | 1,999 | \$ | 999 | \$ | 1,748 | \$ | 1,087 | \$ | 2,010 |
| FHLB advances |  | 36,094 |  | 11,093 |  | 28,420 |  | 11,106 |  | 19,804 |  | 11,107 |
| Purchase Money Note ${ }^{(\mathrm{d})}$ |  | 48,883 |  | NA |  | 32,745 |  | NA |  | 16,463 |  | NA |
| Other long-term secured funding ${ }^{(\text {e) }}$ |  | 4,724 |  | 4,105 |  | 4,667 |  | 3,807 |  | 4,383 |  | 3,858 |
| Total long-term secured funding | \$ | 90,700 | \$ | 17,197 | \$ | 66,831 | \$ | 16,661 | \$ | 41,737 | \$ | 16,975 |
| Preferred stock ${ }^{(f)}$ | \$ | 27,404 | \$ | 27,404 | \$ | 27,404 | \$ | 32,838 | \$ | 27,404 | \$ | 33,180 |
| Common stockholders' equity ${ }^{(f)}$ | \$ | 285,112 | \$ | 264,928 | \$ | 277,885 | \$ | 247,986 | \$ | 274,560 | \$ | 250,234 |

(a) Primarily consists of short-term securities loaned or sold under agreements to repurchase.
(b) Included in beneficial interests issued by consolidated variable interest entities on the Firm's Consolidated balance sheets.
(c) Includes certain TLAC-eligible long-term unsecured debt issued by the Parent Company.
(d) As of June 30, 2023, included $\$ 25.0$ billion FHLB advances and the Purchase Money Note associated with the First Republic acquisition. Refer to Note 28 for additional information.
(e) Includes long-term structured notes which are secured.
(f) Refer to Capital Risk Management on pages 48-53, Consolidated statements of changes in stockholders' equity on page 99 of this Form 10-Q, and Note 21 and Note 22 of JPMorgan Chase's 2022 Form 10-K for additional information on preferred stock and common stockholders' equity.
(g) As of June 30, 2023, included FHLB advances with original maturities of less than one year of $\$ 2.3$ billion associated with the First Republic acquisition. Refer to Note 28 for additional information.

## Short-term funding

The Firm's sources of short-term secured funding primarily consist of securities loaned or sold under agreements to repurchase. These instruments are secured predominantly by high-quality securities collateral, including governmentissued debt and U.S. GSE and government agency MBS. Securities sold under agreements to repurchase increased at June 30, 2023, compared with December 31, 2022, due to higher secured financing of trading assets and the impact of a lower level of netting on client-driven market-making activities in Markets.
The balances associated with securities loaned or sold under agreements to repurchase fluctuate over time due to investment and financing activities of clients, the Firm's demand for financing, the ongoing management of the mix of the Firm's liabilities, including its secured and unsecured financing (for both the investment securities and marketmaking portfolios), and other market and portfolio factors.

The Firm's sources of short-term unsecured funding primarily consist of issuances of wholesale commercial paper and other borrowed funds.
The decrease in commercial paper at June 30, 2023 from December 31, 2022, and for the average three and six months ended June 30, 2023 compared to the prior year periods, was due to lower net issuance levels resulting from short-term liquidity management.
The decrease in average unsecured other borrowed funds for the three and six months ended June 30, 2023 compared to the prior year periods was due to a lower level of overdrafts as well as net maturities of structured notes classified as other borrowed funds in CIB.

## Long-term funding and issuance

Long-term funding provides an additional source of stable funding and liquidity for the Firm. The Firm's long-term funding plan is driven primarily by expected client activity, liquidity considerations, and regulatory requirements, including TLAC. Long-term funding objectives include maintaining diversification, maximizing market access and optimizing funding costs. The Firm evaluates various funding markets, tenors and currencies in creating its optimal long-term funding plan.
The significant majority of the Firm's long-term unsecured funding is issued by the Parent Company to provide flexibility in support of the funding needs of both bank and non-bank subsidiaries. The Parent Company advances substantially all net funding proceeds to its subsidiary, the IHC. The IHC does not issue debt to external counterparties. The following table summarizes long-term unsecured issuance and maturities or redemptions for the three and six months ended June 30, 2023 and 2022. Refer to Note 18 of this Form 10-Q and Liquidity Risk Management on pages 97-104 of JPMorgan Chase’s 2022 Form 10-K for additional information on the IHC and long-term debt.

Long-term unsecured funding

| (Notional in millions) | Three months ended June 30 , |  |  |  | Six months ended June 30 , |  |  |  | Three months ended June 30, |  |  |  | Six months ended June 30 , |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 2023 |  | 2022 |  | 2023 |  | 2022 |  | 2023 |  | 2022 |  | 2023 |  | 2022 |
|  | Parent Company |  |  |  |  |  |  |  | Subsidiaries |  |  |  |  |  |  |  |
| Issuance |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Senior notes issued in the U.S. market | \$ | 2,500 | \$ | 13,000 | \$ | 2,500 | \$ | 21,100 | \$ | - | \$ | - | \$ | - | \$ | - |
| Senior notes issued in non-U.S. markets |  | - |  | - |  | - |  | 2,752 |  | - |  | - |  | - |  | - |
| Total senior notes |  | 2,500 |  | 13,000 |  | 2,500 |  | 23,852 |  | - |  | - |  | - |  | - |
| Structured notes ${ }^{(a)}$ |  | 563 |  | 918 |  | 1,444 |  | 2,074 |  | 7,947 |  | 11,230 |  | 15,665 |  | 19,679 |
| Total long-term unsecured funding - issuance | \$ | 3,063 | \$ | 13,918 | \$ | 3,944 | \$ | 25,926 | \$ | 7,947 | \$ | 11,230 | \$ | 15,665 | \$ | 19,679 |
| Maturities/redemptions |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Senior notes | \$ | 6,335 | \$ | 5,000 | \$ | 13,433 | \$ | 8,693 | \$ | 2 | \$ | - | \$ | 67 | \$ | 64 |
| Subordinated debt |  | 2,027 |  | - |  | 2,027 |  | - |  | - |  | - |  | - |  | - |
| Structured notes |  | 324 |  | 415 |  | 771 |  | 1,392 |  | 6,479 |  | 7,428 |  | 13,981 |  | 15,075 |
| Total long-term unsecured funding maturities/redemptions | \$ | 8,686 | \$ | 5,415 | \$ | 16,231 | \$ | 10,085 | \$ | 6,481 | \$ | 7,428 | \$ | 14,048 | \$ | 15,139 |

(a) Includes certain TLAC-eligible long-term unsecured debt issued by the Parent Company.

The Firm can also raise secured long-term funding through securitization of consumer credit card loans and FHLB advances. The following table summarizes the securitization issuance, as well as the FHLB advances and the Purchase Money Note associated with the First Republic acquisition, and their respective maturities or redemptions, as applicable for the three and six months ended June 30, 2023 and 2022, respectively.
Long-term secured funding

| (in millions) | Three months ended June 30, |  |  |  |  |  |  |  |  | Six months ended June 30, |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Issuance |  |  |  |  | Maturities/Redemptions |  |  |  | Issuance |  |  |  |  | Maturities/Redemptions |  |  |  |
|  | 2023 |  |  |  | 2022 | 2023 |  | 2022 |  | 2023 |  |  | 2022 |  | 2023 |  | 2022 |  |
| Credit card securitization | \$ | - | \$ | \$ | - | \$ | - | \$ | - | \$ | - |  | \$ | - | \$ | 1,000 | \$ | 650 |
| FHLB advances |  | 25,775 | (a) |  | - |  | 602 |  | 4 |  | 25,775 | (a) |  | - |  | 604 |  | 6 |
| Purchase Money Note ${ }^{(\mathrm{a})}$ |  | 50,000 |  |  | NA |  | - |  | NA |  | 50,000 |  |  | NA |  | - |  | NA |
| Other long-term secured funding ${ }^{(b)}$ |  | 591 |  |  | 82 |  | 58 |  | 31 |  | 742 |  |  | 284 |  | 112 |  | 92 |
| Total long-term secured funding | \$ | 76,366 | \$ | \$ | 82 | \$ | 660 | \$ | 35 | \$ | 76,517 |  | \$ | 284 | \$ | 1,716 | \$ | 748 |

(a) As of June 30, 2023, included FHLB advances and the Purchase Money Note associated with the First Republic acquisition. Refer to Note 28 for additional information.
(b) Includes long-term structured notes that are secured.

The Firm's wholesale businesses also securitize loans for client-driven transactions; those client-driven loan securitizations are not considered to be a source of funding for the Firm and are not included in the table above. Refer to Note 14 of JPMorgan Chase's 2022 Form 10-K for a further description of client-driven loan securitizations.

## Credit ratings

The cost and availability of financing are influenced by credit ratings. Reductions in these ratings could have an adverse effect on the Firm's access to liquidity sources, increase the cost of funds, trigger additional collateral or funding requirements and decrease the number of investors and counterparties willing to lend to the Firm. The nature and magnitude of the impact of ratings downgrades depends on numerous contractual and behavioral factors, which the Firm believes are incorporated in its liquidity risk
and stress testing metrics. The Firm believes that it maintains sufficient liquidity to withstand a potential decrease in funding capacity due to ratings downgrades.
Additionally, the Firm's funding requirements for VIEs and other third-party commitments may be adversely affected by a decline in credit ratings. Refer to Note 5 and Note 14 for additional information.

The credit ratings of the Parent Company and the Firm's principal bank and non-bank subsidiaries as of June 30, 2023, were as follows:

| June 30, 2023 | JPMorgan Chase \& Co. |  |  | JPMorgan Chase Bank, N.A. |  |  | J.P. Morgan Securities LLC J.P. Morgan Securities plc J.P. Morgan SE |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Long-term issuer | Short-term issuer | Outlook | Long-term issuer | Short-term issuer | Outlook | Long-term issuer | Short-term issuer | Outlook |
| Moody's Investors Service | A1 | P-1 | Stable | Aa2 | P-1 | Stable | Aa3 | P-1 | Stable |
| Standard \& Poor's ${ }^{\text {(a) }}$ | A- | A-2 | Stable | A+ | A-1 | Stable | A+ | A-1 | Stable |
| Fitch Ratings | AA- | F1+ | Stable | AA | F1+ | Stable | AA | F1+ | Stable |

(a) On March 31, 2023, Standard \& Poor's affirmed the credit ratings of the Parent Company and the Firm's principal bank and non-bank subsidiaries, and revised the outlook from positive to stable.

Refer to page 104 of JPMorgan Chase's 2022 Form 10-K for a discussion of the factors that could affect the credit ratings of the Parent Company and the Firm's principal bank and non-bank subsidiaries.

Credit and investment risk is the risk associated with the default or change in credit profile of a client, counterparty or customer; or loss of principal or a reduction in expected returns on investments, including consumer credit risk, wholesale credit risk, and investment portfolio risk. Refer to Consumer Credit Portfolio, Wholesale Credit Portfolio and Allowance for Credit Losses on pages 65-82 for a further discussion of Credit Risk.
Refer to page 83 for a further discussion of Investment Portfolio Risk. Refer to Credit and Investment Risk
Management on pages 106-130 of JPMorgan Chase's 2022 Form 10-K for a further discussion of the Firm's Credit and Investment Risk Management framework.

Credit risk is the risk associated with the default or change in credit profile of a client, counterparty or customer.

In the following tables, total loans include loans retained (i.e., held-for-investment); loans held-for-sale; and certain loans accounted for at fair value. The following tables do not include loans which the Firm accounts for at fair value and classifies as trading assets; refer to Notes 2 and 3 for further information regarding these loans. Refer to Notes 12, 24 and 5 for additional information on the Firm's loans, lending-related commitments and derivative receivables.

Refer to Note 10 for information regarding the credit risk inherent in the Firm's investment securities portfolio; and refer to Note 11 for information regarding the credit risk inherent in the securities financing portfolio. Refer to Consumer Credit Portfolio on pages 65-69 and Note 12 for further discussions of the consumer credit environment and consumer loans. Refer to Wholesale Credit Portfolio on pages 70-79 and Note 12 for further discussions of the wholesale credit environment and wholesale loans.

On January 1, 2023, the Firm adopted changes to the TDR accounting guidance, which eliminated the accounting and disclosure requirements for TDRs including the requirement to assess whether a modification is reasonably expected or involves a concession. The new guidance requires disclosure for loan modifications to borrowers experiencing financial difficulty consisting of principal forgiveness, interest rate reduction, other-than-insignificant payment delay, term extension or a combination of these modifications. The Firm has defined these types of modifications as financial difficulty modifications ("FDMs"). As a result of the elimination of the requirement to assess whether a modification is reasonably expected or involves a concession, the population of loans considered FDMs will differ from those previously considered TDRs. Refer to Note 1 and Note 12 for further information.

Total credit portfolio

| (in millions) | Credit exposure |  | Nonperforming ${ }^{\text {(d) }}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{array}{r} \hline \text { Jun 30, } \\ 2023 \\ \hline \end{array}$ | $\begin{array}{r} \hline \text { Dec 31, } \\ 2022 \end{array}$ |  | $\begin{array}{r} \hline \text { Jun 30, } \\ 2023 \\ \hline \end{array}$ |  | $\begin{array}{r} \hline \text { Dec 31, } \\ 2022 \\ \hline \end{array}$ |
| Loans retained | \$ 1,255,688 | \$ 1,089,598 | \$ | 6,377 | \$ | 5,837 |
| Loans held-for-sale | 5,592 | 3,970 |  | 119 |  | 54 |
| Loans at fair value | 38,789 | 42,079 |  | 777 |  | 829 |
| Total loans | 1,300,069 | 1,135,647 |  | 7,273 |  | 6,720 |
| Derivative receivables | 64,217 | 70,880 |  | 286 |  | 296 |
| Receivables from customers ${ }^{(\text {a })}$ | 42,741 | 49,257 |  | - |  | - |
| Total creditrelated assets | 1,407,027 | 1,255,784 |  | 7,559 |  | 7,016 |
| Assets acquired in Ioan satisfactions |  |  |  |  |  |  |
| Real estate owned | NA | NA |  | 243 |  | 203 |
| Other | NA | NA |  | 36 |  | 28 |
| Total assets acquired in loan satisfactions | NA | NA |  | 279 |  | 231 |
| Lending-related commitments | 1,473,420 | 1,326,782 |  | 332 |  | 455 |
| Total credit portfolio | \$ 2,880,447 | \$2,582,566 | \$ | 8,170 | \$ | 7,702 |


| Credit derivatives and credit-related notes used in credit portfolio management activities ${ }^{(b)}$ | \$ | $(32,090)$ | \$ | $(19,330)$ | \$ | - | - |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Liquid securities and other cash collateral held against derivatives |  | $(23,282)$ |  | $(23,014)$ |  | NA | NA |

(a) Receivables from customers reflect held-for-investment margin loans to brokerage clients in CIB, CCB and AWM; these are reported within accrued interest and accounts receivable on the Consolidated balance sheets.
(b) Represents the net notional amount of protection purchased and sold through credit derivatives and credit-related notes used to manage credit exposures.
(c) Included credit exposure associated with the First Republic acquisition consisting of $\$ 104.6$ billion in the Consumer credit portfolio and $\$ 98.2$ billion in the Wholesale credit portfolio.
(d) At June 30, 2023, and December 31, 2022, nonperforming assets excluded mortgage loans 90 or more days past due and insured by U.S. government agencies of $\$ 215$ million and $\$ 302$ million, respectively. These amounts have been excluded based upon the government guarantee. In addition, the Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance.

The following table provides information on Firmwide nonaccrual loans to total loans.

| (in millions, <br> except ratios) | June 30,2023 | Dec 31, 2022 |  |
| :--- | ---: | ---: | ---: |
| Total nonaccrual loans | $\mathbf{7 , 2 7 3}$ | $\$$ | 6,720 |
| Total loans |  |  |  |

The following table provides information about the Firm's net charge-offs and recoveries.

| (in millions, except ratios) | Three months ended June30 , |  | Six months ended June30 , |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2023 | 2022 | 2023 | 2022 |
| Net charge-offs | \$ 1,411 | 657 | \$ 2,548 | \$ 1,239 |
| Average retained loans | 1,194,044 | 1,035,933 | 1,138,550 | 1,020,180 |
| Net charge-off rates | 0.47 \% | 0.25 \% | 0.45 \% | 0.24 \% |

## CONSUMER CREDIT PORTFOLIO

The Firm's retained consumer portfolio consists primarily of loans and lending-related commitments for residential real estate, credit card, scored auto and business banking. The consumer credit portfolio also includes certain loans and lending-related commitments associated with the First Republic acquisition, primarily in residential real estate. The Firm's focus is on serving primarily the prime segment of the consumer credit market. Refer to Note 12 of this Form 10-Q; and Consumer Credit Portfolio on pages 110-115 and Note 12 of JPMorgan Chase's 2022 Form 10-K for further information on consumer loans, as well as the Firm's nonaccrual and charge-off accounting policies. Refer to Note 24 of this Form 10-Q and Note 28 of JPMorgan Chase's 2022 Form 10 -K for further information on lending-related commitments.
The following tables present consumer credit-related information with respect to the scored credit portfolios held in CCB, AWM, CIB and Corporate.

## Consumer credit portfolio


(a) Includes scored mortgage and home equity loans held in CCB and AWM.
(b) At June 30, 2023 and December 31, 2022, excluded operating lease assets of $\$ 10.9$ billion and $\$ 12.0$ billion, respectively. These operating lease assets are included in other assets on the Firm's Consolidated balance sheets. Refer to Note 17 for further information.
(c) Includes scored auto and business banking loans, and overdrafts.
(d) Includes scored mortgage loans held in CCB and CIB, and other consumer unsecured loans in CIB.
(e) Credit card, home equity and certain business banking lending-related commitments represent the total available lines of credit for these products. The Firm has not experienced, and does not anticipate, that all available lines of credit would be used at the same time. For credit card commitments, and if certain conditions are met, home equity commitments and certain business banking commitments, the Firm can reduce or cancel these lines of credit by providing the borrower notice or, in some cases as permitted by law, without notice. Refer to Note 24 for further information.
(f) Includes billed interest and fees.
(g) Also includes commercial card lending-related commitments primarily in CB and CIB.
(h) Represents the notional amount of protection obtained through the issuance of credit-related notes that reference certain pools of residential real estate and auto loans in the retained consumer portfolio.
(i) Included credit exposure of $\$ 104.6$ billion associated with the First Republic acquisition consisting of $\$ 101.5$ billion in residential real estate and $\$ 3.1$ billion in auto and other.
(j) At June 30, 2023 and December 31, 2022, nonaccrual loans excluded mortgage loans 90 or more days past due and insured by U.S. government agencies of $\$ 215$ million and $\$ 302$ million, respectively. These amounts have been excluded from nonaccrual loans based upon the government guarantee. In addition, the Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status, as permitted by regulatory guidance.
(k) Generally excludes loans under payment deferral programs offered in response to the COVID-19 pandemic.
(I) At June 30, 2023 and December 31, 2022, nonaccrual loans excluded $\$ 39$ million and $\$ 101$ million, respectively, of PPP loans 90 or more days past due and guaranteed by the SBA.
(m) Average consumer loans held-for-sale and loans at fair value were $\$ 13.3$ billion and $\$ 18.2$ billion for the three months ended June 30 , 2023 and 2022 , respectively, and $\$ 12.4$ billion and $\$ 21.0$ billion for the six months ended June 30, 2023 and 2022, respectively. These amounts were excluded when calculating net charge-off/(recovery) rates.

## Maturities and sensitivity to changes in interest rates

The table below sets forth loan maturities by scheduled repayments, by class of loan and the distribution between fixed and floating interest rates based on the stated terms of the loan agreements. Refer to Consumer Credit Portfolio on pages 110-115 of JPMorgan Chase's 2022 Form 10-K for further information.

| June 30, 2023 (in millions) |  | Within year ${ }^{\text {(d) }}$ |  | $\begin{gathered} 1-5 \\ \text { years } \end{gathered}$ |  | $\begin{aligned} & 5-15 \\ & \text { years } \\ & \hline \end{aligned}$ |  | After 15 years |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Consumer, excluding credit card |  |  |  |  |  |  |  |  |  |  |
| Residential real estate | \$ | 16,797 | \$ | 27,570 | \$ | 109,586 |  | 183,944 | \$ | 337,897 |
| Auto and other |  | 19,826 | (e) | 45,847 |  | 4,629 |  | 5 |  | 70,307 |
| Total consumer, excluding credit card loans ${ }^{(a)}$ | \$ | 36,623 | \$ | 73,417 | \$ | 114,215 |  | 183,949 | \$ | 408,204 |
| Total credit card loans | \$ | 190,780 | \$ | 568 | \$ | - | \$ | - | \$ | 191,348 |
| Total consumer loans | \$ | 227,403 | \$ | 73,985 | \$ | 114,215 |  | 183,949 | \$ | 599,552 |
| Loans due after one year at fixed interest rates |  |  |  |  |  |  |  |  |  |  |
| Residential real estate ${ }^{(\text {b }}$ |  |  | \$ | 20,332 | \$ | 59,618 |  | 91,537 |  |  |
| Auto and other |  |  |  | 45,771 |  | 3,678 |  | 5 |  |  |
| Credit card |  |  |  | 568 |  | - |  | - |  |  |
| Loans due after one year at variable interest rates |  |  |  |  |  |  |  |  |  |  |
| Residential real estate ${ }^{(c)}$ |  |  | \$ | 7,238 | \$ | 49,968 |  | 92,407 |  |  |
| Auto and other |  |  |  | 76 |  | 951 |  | - |  |  |
| Total consumer loans |  |  | \$ | 73,985 | \$ | 114,215 |  | 183,949 |  |  |

(a) Included $\$ 3.6$ billion, $\$ 4.7$ billion, $\$ 27.3$ billion, and $\$ 58.3$ billion of loans within 1 year, 1-5 years, $5-15$ years, and after 15 years, respectively, associated with the First Republic acquisition.
(b) Included $\$ 3.0$ billion, $\$ 8.8$ billion, and $\$ 15.6$ billion in 1-5 years, $5-15$ years, and after 15 years, respectively, associated with the First Republic acquisition.
(c) Included $\$ 1.7$ billion, $\$ 18.6$ billion, and $\$ 42.7$ billion in 1-5 years, $5-15$ years, and after 15 years, respectively, associated with the First Republic acquisition.
(d) Includes loans held-for-sale and loans at fair value.
(e) Includes overdrafts.

## Consumer, excluding credit card

## Portfolio analysis

Loans increased compared to December 31, 2022 driven by residential real estate loans associated with the First Republic acquisition and higher auto loans.
Residential real estate: The residential real estate portfolio, including loans held-for-sale and loans at fair value, predominantly consists of prime mortgage loans and home equity lines of credit.
Retained loans increased compared to December 31, 2022, reflecting residential real estate loans associated with the First Republic acquisition. Retained nonaccrual loans decreased compared to December 31, 2022. Net recoveries were lower for the three and six months ended June 30, 2023 compared to the same periods in the prior year driven by lower prepayments due to higher interest rates.
Loans at fair value decreased from December 31, 2022, driven by a decrease in CIB due to sales outpacing purchases largely offset by an increase in Home Lending as originations outpaced warehouse loan sales. Nonaccrual Ioans at fair value were relatively flat compared to December 31, 2022.
At June 30, 2023 and December 31, 2022, the carrying value of interest-only residential mortgage loans was $\$ 90.0$ billion and $\$ 36.3$ billion, respectively. The increase was driven by the impact of the First Republic acquisition. These loans have an interest-only payment period generally followed by an adjustable-rate or fixed-rate fully amortizing payment period to maturity and are typically originated as higher-balance loans to higher-income borrowers. The credit performance of this portfolio is comparable with the performance of the broader prime mortgage portfolio and there were no charge-offs associated with the First Republic acquisition.

The carrying value of home equity lines of credit outstanding was $\$ 16.9$ billion at June 30, 2023, which included $\$ 2.6$ billion associated with the First Republic acquisition. The carrying value of home equity lines of credit outstanding included $\$ 4.6$ billion of HELOCs that have recast from interest-only to fully amortizing payments or have been modified and $\$ 4.7$ billion of interest-only balloon HELOCs, which primarily mature after 2030. The Firm manages the risk of HELOCs during their revolving period by closing or reducing the undrawn line to the extent permitted by law when borrowers are exhibiting a material deterioration in their credit risk profile.

The following table provides a summary of the Firm's residential mortgage portfolio insured and/or guaranteed by U.S. government agencies, predominantly loans held-forsale and loans at fair value. The Firm monitors its exposure to certain potential unrecoverable claim payments related to government-insured loans and considers this exposure in estimating the allowance for loan losses.

|  |  | June 30, <br> (in millions) | December 31, <br> 2023 | 2022 |
| :--- | ---: | ---: | ---: | ---: |
| Current | $\$$ | $\mathbf{6 1 4}$ | $\$$ | 659 |
| 30-89 days past due |  | $\mathbf{1 1 2}$ | 136 |  |
| 90 or more days past due |  | $\mathbf{2 1 5}$ | 302 |  |
| Total government guaranteed loans | $\$$ | $\mathbf{9 4 1}$ | $\$$ | 1,097 |

Geographic composition and current estimated loan-tovalue ratio of residential real estate loans

At June 30, 2023, \$229.8 billion, or 70\% of the total retained residential real estate loan portfolio, was concentrated in California, New York, Florida, Texas and Massachusetts, compared with $\$ 147.8$ billion, or $62 \%$ at December 31, 2022.

Refer to Note 12 for information on the geographic composition and current estimated LTVs of the Firm's residential real estate loans.

Modified residential real estate loans
For the three and six months ended June 30, 2023, residential real estate FDMs were $\$ 35$ million and \$75 million, respectively. In addition to FDMs, the Firm also had $\$ 33$ million and $\$ 48$ million of loans subject to trial modification where the terms of the loans have not been permanently modified, as well as $\$ 3$ million and $\$ 5$ million of loans subject to discharge under Chapter 7 bankruptcy proceedings ("Chapter 7 loans") for the three and six months ended June 30, 2023, respectively. The changes to the TDR accounting guidance eliminated the TDR reasonably expected and concession assessment criteria. Accordingly, trial modifications and Chapter 7 loans were considered TDRs, but not FDMs. Refer to Note 1 and Note 12 for further information.

For the three and six months ended June 30, 2022, residential real estate TDRs were $\$ 115$ million and $\$ 233$ million, respectively. Refer to Note 12 for further information on TDRs in prior periods.

Auto and other: The auto and other loan portfolio, including loans at fair value consists of prime-quality scored auto and business banking loans, other consumer unsecured loans, and overdrafts. The portfolio increased when compared to December 31, 2022 due to originations of scored Auto loans and an increase in other consumer unsecured fair value option loans associated with the First Republic acquisition, largely offset by paydowns. Net charge-offs increased for the three and six months ended June 30, 2023 compared to the same periods in the prior year due to higher scored Auto charge-offs as delinquency levels normalized and vehicle valuations declined. The scored Auto net charge-off rates were $0.41 \%$ and $0.12 \%$ for the three months ended June 30, 2023 and 2022, respectively, and $0.43 \%$ and $0.15 \%$ for the six months ended June 30, 2023 and 2022, respectively.

## Nonperforming assets

The following table presents information as of June 30, 2023 and December 31, 2022, about consumer, excluding credit card, nonperforming assets.
Nonperforming assets ${ }^{(a)}$

| (in millions) |  | $\begin{array}{r} \text { June 30, } \\ 2023 \end{array}$ |  | December 31, 2022 |
| :---: | :---: | :---: | :---: | :---: |
| Nonaccrual loans |  |  |  |  |
| Residential real estate ${ }^{(\mathrm{b})}$ | \$ | 4,122 | \$ | 4,196 |
| Auto and other ${ }^{(c)}$ |  | 143 |  | 129 |
| Total nonaccrual loans |  | 4,265 |  | 4,325 |
| Assets acquired in loan satisfactions |  |  |  |  |
| Real estate owned |  | 126 |  | 129 |
| Other |  | 36 |  | 28 |
| Total assets acquired in loan satisfactions |  | 162 |  | 157 |
| Total nonperforming assets | \$ | 4,427 | \$ | 4,482 |

(a) At June 30, 2023 and December 31, 2022, nonperforming assets excluded mortgage loans 90 or more days past due and insured by U.S. government agencies of $\$ 215$ million and $\$ 302$ million, respectively. These amounts have been excluded based upon the government guarantee.
(b) Generally excludes loans under payment deferral programs offered in response to the COVID-19 pandemic.
(c) At June 30, 2023 and December 31, 2022, nonaccrual loans excluded $\$ 39$ million and $\$ 101$ million, respectively, of PPP loans 90 or more days past due and guaranteed by the SBA.

## Nonaccrual loans

The following table presents changes in consumer, excluding credit card, nonaccrual loans for the six months ended June 30, 2023 and 2022.
Nonaccrual loan activity

| Six months ended June 30, <br> (in millions) |  |  |  |
| :--- | ---: | ---: | ---: |
| Beginning balance | $\mathbf{2 0 2 3}$ | $\mathbf{4 , 3 2 5}$ | $\$$ |
| Additions |  | $\mathbf{1 , 2 9 0}$ | 1,350 |
| Reductions: |  |  |  |
| $\quad$ Principal payments and other ${ }^{(\mathrm{a})}$ | $\mathbf{4 8 6}$ | $\mathbf{7 8 9}$ |  |
| Charge-offs | $\mathbf{2 0 2}$ | 117 |  |
| Returned to performing status | $\mathbf{5 7 3}$ | 824 |  |
| Foreclosures and other liquidations |  | $\mathbf{8 9}$ | 97 |
| Total reductions |  | $\mathbf{1 , 3 5 0}$ | 1,827 |
| Net changes |  | $\mathbf{( 6 0 )}$ | $\mathbf{( 6 7 8 )}$ |
| Ending balance | $\mathbf{4}$ | $\mathbf{4 , 2 6 5}$ | $\$$ |

(a) Other reductions include loan sales.

Refer to Note 12 for further information about the consumer credit portfolio, including information about delinquencies, other credit quality indicators, Ioan modifications and loans that were in the process of active or suspended foreclosure.

## Credit card

Total credit card loans increased from December 31, 2022 reflecting growth from new accounts and revolving balances which continued to normalize to pre-pandemic levels. The June 30, 2023 30+ and 90+ day delinquency rates of $1.70 \%$ and $0.84 \%$, respectively, increased compared to the December 31, 2022 30+ and 90+ day delinquency rates of $1.45 \%$ and $0.68 \%$ respectively, and net charge-offs increased for the three and six months ended June 30, 2023 compared to the same periods in the prior year as 30+ day delinquencies have normalized.
Consistent with the Firm's policy, all credit card loans typically remain on accrual status until charged off. However, the Firm's allowance for loan losses includes the estimated uncollectible portion of accrued and billed interest and fee income. Refer to Note 12 for further information about this portfolio, including information about delinquencies.

Geographic and FICO composition of credit card loans Refer to Note 12 for information on the geographic and FICO composition of the Firm's credit card loans.

Modifications of credit card loans
For the three and six months ended June 30, 2023, credit card FDMs were $\$ 181$ million and $\$ 326$ million, respectively. In addition to FDMs, the Firm also had \$26 million of loans subject to trial modification where the terms of the loans have not been permanently modified for both the three and six months ended June 30, 2023. The changes to the TDR accounting guidance eliminated the TDR reasonably expected and concession assessment criteria. Accordingly, trial modifications were considered TDRs, but not FDMs.

For the three and six months ended June 30, 2022, credit card TDRs were $\$ 81$ million and $\$ 163$ million, respectively. Refer to Note 1 and Note 12 for further information.

In its wholesale businesses, the Firm is exposed to credit risk primarily through its underwriting, lending, marketmaking, and hedging activities with and for clients and counterparties, as well as through various operating services (such as cash management and clearing activities), securities financing activities and cash placed with banks. A portion of the loans originated or acquired by the Firm's wholesale businesses is generally retained on the balance sheet. The Firm distributes a significant percentage of the loans that it originates into the market as part of its syndicated loan business and to manage portfolio concentrations and credit risk. The wholesale portfolio is actively managed, in part by conducting ongoing, in-depth reviews of client credit quality and transaction structure inclusive of collateral where applicable, and of industry, product and client concentrations. Refer to the industry discussion on pages 72-75 for further information.

The Firm's wholesale credit portfolio includes exposure held in CIB, CB, AWM and Corporate, as well as risk-rated BWM and auto dealer exposure held in CCB, for which the wholesale methodology is applied when determining the allowance for Ioan losses. The Firm continues to convert certain operations, and to integrate clients, products and services, associated with the First Republic acquisition to align with the Firm's businesses and operations. Accordingly, reporting classifications and internal risk rating profiles in the wholesale portfolio may change in future periods. Refer to Business Developments on page 9 for additional information.

As of June 30, 2023, the increase in nonperforming exposure was driven by loans, resulting from client-specific downgrades in CB and AWM, partially offset by a reduction in lending-related commitments. For the six months ended June 30, 2023, wholesale charge-offs remained low, despite an increase in charge-offs in the second quarter of 2023 concentrated in Office real estate.

As of June 30, 2023, retained loans increased $\$ 64.5$ billion predominantly driven by the impact of the First Republic acquisition. Lending-related commitments increased \$69.1 billion driven by the impact of the First Republic acquisition, and net portfolio activity in CIB and CB, including an increase in held-for-sale positions in the bridge financing portfolio.

Wholesale credit portfolio

| (in millions) | Credit exposure |  | Nonperforming |  |
| :---: | :---: | :---: | :---: | :---: |
|  | $\begin{array}{r} \text { Jun 30, } \\ 2023 \\ \hline \end{array}$ | $\begin{array}{r} \text { Dec 31, } \\ 2022 \end{array}$ | $\begin{array}{r} \text { Jun 30, } \\ 2023 \end{array}$ | $\begin{array}{r} \text { Dec } 31, \\ 2022 \end{array}$ |
| Loans retained | \$ 668,145 | \$ 603,670 | \$ 2,593 | \$ 1,963 |
| Loans held-for-sale | 5,043 | 3,352 | 48 | 26 |
| Loans at fair value | 27,329 | 32,075 | 367 | 406 |
| Loans | 700,517 | 639,097 | 3,008 | 2,395 |
| Derivative receivables | 64,217 | 70,880 | 286 | 296 |
| Receivables from customers ${ }^{(a)}$ | 42,741 | 49,257 | - | - |
| Total wholesale credit-related assets | 807,475 | 759,234 | 3,294 | 2,691 |
| Assets acquired in Ioan satisfactions |  |  |  |  |
| Real estate owned | - | NA | 117 | 74 |
| Other | - | NA | - | - |
| Total assets acquired in loan satisfactions | - | NA | 117 | 74 |
| Lending-related commitments | 541,089 | 471,980 | 332 | 455 |
| Total wholesale credit portfolio | \$1,348,564 ${ }^{\text {(c) }}$ | \$1,231,214 | \$ 3,743 | \$ 3,220 |
| Credit derivatives and credit-related notes used in credit portfolio management activities ${ }^{(b)}$ | \$ $(31,105)$ | \$ (18,143) | \$ - | \$ |
| Liquid securities and other cash collateral held against derivatives | $(23,282)$ | $(23,014)$ | - | NA |

(a) Receivables from customers reflect held-for-investment margin loans to brokerage clients in CIB, CCB and AWM; these are reported within accrued interest and accounts receivable on the Consolidated balance sheets.
(b) Represents the net notional amount of protection purchased and sold through credit derivatives and credit-related notes used to manage both performing and nonperforming wholesale credit exposures; these derivatives do not qualify for hedge accounting under U.S. GAAP. Refer to Credit derivatives on page 79 and Note 5 for additional information.
(c) Included credit exposure of $\$ 98.2$ billion associated with the First Republic acquisition.

## Wholesale credit exposure - maturity and ratings profile

The following tables present the maturity and internal risk rating profiles of the wholesale credit portfolio as of June 30, 2023, and December 31, 2022. The Firm generally considers internal ratings with qualitative characteristics equivalent to BBB-/ Baa3 or higher as investment grade, and takes into consideration collateral and structural support when determining the internal risk rating for each credit facility. Refer to Note 12 of JPMorgan Chase's 2022 Form 10-K for further information on internal risk ratings.

| June 30, 2023, (in millions, except ratios) | Maturity profile ${ }^{(d)}$ |  |  |  | Ratings profile |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & 1 \text { year or } \\ & \text { less } \end{aligned}$ | 1 year through 5 years | After 5 years | Total | Investmentgrade |  | Noninvestmentgrade |  | Total |  | $\begin{gathered} \text { Total \% } \\ \text { of IG } \\ \hline \end{gathered}$ |
| Loans retained | \$ 225,626 | \$ 265,856 | \$ 176,663 | \$ 668,145 | \$ | 451,978 | \$ | 216,167 | \$ | 668,145 | 68 \% |
| Derivative receivables |  |  |  | 64,217 |  |  |  |  |  | 64,217 |  |
| Less: Liquid securities and other cash collateral held against derivatives |  |  |  | $(23,282)$ |  |  |  |  |  | $(23,282)$ |  |
| Total derivative receivables, net of collateral | 12,198 | 11,089 | 17,648 | 40,935 |  | 32,682 |  | 8,253 |  | 40,935 | 80 |
| Lending-related commitments | 141,356 | 375,289 | 24,444 | 541,089 |  | 354,209 |  | 186,880 |  | 541,089 | 65 |
| Subtotal | 379,180 | 652,234 | 218,755 | 1,250,169 |  | 838,869 |  | 411,300 |  | 1,250,169 | 67 |
| Loans held-for-sale and loans at fair value ${ }^{(a)}$ |  |  |  | 32,372 |  |  |  |  |  | 32,372 |  |
| Receivables from customers |  |  |  | 42,741 |  |  |  |  |  | 42,741 |  |
| Total exposure - net of liquid securities and other cash collateral held against derivatives |  |  |  | \$1,325,282 |  |  |  |  |  | 1,325,282 |  |
| Credit derivatives and credit-related notes used in credit portfolio management activities ${ }^{(16)}$ | \$ (6,612) | \$ $(22,502)$ | \$ (1,991) | \$ (31,105) | \$ | $(26,836)$ | \$ | $(4,269)$ | \$ | $(31,105)$ | 86 \% |
|  |  | Maturity | profile ${ }^{(d)}$ |  |  |  |  | atings profi |  |  |  |
| December 31, 2022 <br> (in millions, except ratios) | 1 year or less | 1 year through 5 years | After 5 years | Total |  | stmentrade |  | vestment- <br> rade |  | Total | $\begin{gathered} \text { Total \% } \\ \text { of IG } \\ \hline \end{gathered}$ |
| Loans retained | \$ 204,761 | \$ 253,896 | \$ 145,013 | \$ 603,670 | \$ | 425,412 | \$ | 178,258 | \$ | 603,670 | 70 \% |
| Derivative receivables |  |  |  | 70,880 |  |  |  |  |  | 70,880 |  |
| Less: Liquid securities and other cash collateral held against derivatives |  |  |  | $(23,014)$ |  |  |  |  |  | $(23,014)$ |  |
| Total derivative receivables, net of collateral | 13,508 | 14,880 | 19,478 | 47,866 |  | 36,231 |  | 11,635 |  | 47,866 | 76 |
| Lending-related commitments | 101,083 | 347,456 | 23,441 | 471,980 |  | 327,168 |  | 144,812 |  | 471,980 | 69 |
| Subtotal | 319,352 | 616,232 | 187,932 | 1,123,516 |  | 788,811 |  | 334,705 |  | 1,123,516 | 70 |
| Loans held-for-sale and loans at fair value ${ }^{(a)}$ |  |  |  | 35,427 |  |  |  |  |  | 35,427 |  |
| Receivables from customers |  |  |  | 49,257 |  |  |  |  |  | 49,257 |  |
| Total exposure - net of liquid securities and other cash collateral held against derivatives |  |  |  | \$1,208,200 |  |  |  |  | \$ | 1,208,200 |  |
| Credit derivatives and credit-related notes used in credit portfolio management activities ${ }^{(b)}$ | \$ (2,817) | \$ $(13,530)$ | \$ (1,796) | \$ $(18,143)$ | \$ | $(15,115)$ | \$ | $(3,028)$ | \$ | $(18,143)$ | 83 \% |

(a) Loans held-for-sale are primarily related to syndicated loans and loans transferred from the retained portfolio.
(b) These derivatives do not qualify for hedge accounting under U.S. GAAP.
(c) The notional amounts are presented on a net basis by underlying reference entity and the ratings profile shown is based on the ratings of the reference entity on which protection has been purchased. Predominantly all of the credit derivatives entered into by the Firm where it has purchased protection used in credit portfolio management activities are executed with investment-grade counterparties. In addition, the Firm obtains credit protection against certain loans in the retained loan portfolio through the issuance of credit-related notes.
(d) The maturity profile of retained loans, lending-related commitments and derivative receivables is generally based on remaining contractual maturity. Derivative contracts that are in a receivable position as of June 30, 2023, may become payable prior to maturity based on their cash flow profile or changes in market conditions.

Wholesale credit exposure - industry exposures
The Firm focuses on the management and diversification of its industry exposures, and pays particular attention to industries with actual or potential credit concerns.
Exposures deemed criticized align with the U.S. banking regulators' definition of criticized exposures, which consist of the special mention, substandard and doubtful categories. Total criticized exposure, excluding loans held-for-sale and loans at fair value, was $\$ 35.0$ billion and $\$ 31.3$ billion as of June 30, 2023 and December 31, 2022, representing approximately $2.8 \%$ and $2.7 \%$ of total wholesale credit exposure, respectively. Criticized exposure increased, driven by client-specific downgrades largely in Real Estate, Consumer and Retail, Technology, Media \& Telecommunications, and Healthcare, as well as exposures associated with the First Republic acquisition, partially offset by client-specific upgrades. Of the $\$ 35.0$ billion of criticized exposure at June 30, 2023, approximately half was undrawn and $\$ 31.8$ billion was performing.
The table below summarizes by industry the Firm's exposures as of June 30, 2023 and December 31, 2022. The industry of risk category is generally based on the client or counterparty's primary business activity. Refer to Note 4 for additional information on industry concentrations.

| As of or for the six months ended <br> June 30, 2023 <br> (in millions) | $\begin{gathered} \text { Credit } \\ \text { exposure }{ }^{(f)(g)(h)} \end{gathered}$ |  | $\begin{aligned} & \text { Investment- } \\ & \text { grade } \end{aligned}$ |  | Noninvestment-grade |  |  |  |  |  | Selected metrics |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 30 days or more past due and accruing loans |  |  |  |  |  |  |  | Net charge-offs/ (recoveries) |  | Credit derivative hedges and credit-related notes ${ }^{(i)}$ |  | Liquid securities and other cash collateral held against derivative receivables |  |
|  |  |  | Noncriticized | Criticized performing |  | Criticized nonperforming |  |  |  |  |  |  |  |
| Real Estate | \$ | 206,912 |  |  | \$ | 151,293 | \$ | 50,328 | \$ | 4,715 | \$ | 576 | \$ | 286 | \$ | 102 | \$ | (671) | \$ | - |
| Individuals and Individual Entities ${ }^{(b)}$ |  | 141,178 |  | 115,505 |  | 24,954 |  | 210 |  | 509 |  | 1,158 |  | - |  | - |  | - |
| Asset Managers |  | 138,143 |  | 87,284 |  | 50,713 |  | 138 |  | 8 |  | 72 |  | - |  | - |  | $(8,906)$ |
| Consumer \& Retail |  | 125,935 |  | 62,890 |  | 54,980 |  | 7,511 |  | 554 |  | 416 |  | 59 |  | $(3,618)$ |  | - |
| Industrials |  | 77,206 |  | 43,489 |  | 30,310 |  | 3,242 |  | 165 |  | 362 |  | 16 |  | $(2,072)$ |  | (3) |
| Technology, Media \& Telecommunications |  | 76,444 |  | 41,401 |  | 27,127 |  | 7,708 |  | 208 |  | 125 |  | 78 |  | $(3,396)$ |  | - |
| Healthcare |  | 65,547 |  | 43,569 |  | 19,435 |  | 2,140 |  | 403 |  | 292 |  | 13 |  | $(2,829)$ |  | (13) |
| Banks \& Finance Cos |  | 61,659 |  | 31,037 |  | 29,540 |  | 1,061 |  | 21 |  | 71 |  | 4 |  | (470) |  | $(1,123)$ |
| State \& Municipal Govt ${ }^{(\mathrm{c})}$ |  | 37,157 |  | 33,372 |  | 3,560 |  | 222 |  | 3 |  | 7 |  | - |  | (4) |  | - |
| Utilities |  | 35,757 |  | 25,124 |  | 9,746 |  | 768 |  | 119 |  | 60 |  | (2) |  | $(1,989)$ |  | - |
| Oil \& Gas |  | 33,233 |  | 18,969 |  | 13,768 |  | 446 |  | 50 |  | 42 |  | 4 |  | $(1,384)$ |  | - |
| Automotive |  | 32,947 |  | 23,385 |  | 9,174 |  | 235 |  | 153 |  | 56 |  | - |  | (623) |  | - |
| Chemicals \& Plastics |  | 22,195 |  | 12,020 |  | 9,243 |  | 811 |  | 121 |  | 26 |  | - |  | (835) |  | - |
| Insurance |  | 21,874 |  | 15,513 |  | 6,062 |  | 299 |  | - |  | 14 |  | - |  | (531) |  | $(7,529)$ |
| Central Govt |  | 16,845 |  | 16,396 |  | 318 |  | 127 |  | 4 |  | - |  | - |  | $(3,724)$ |  | (229) |
| Metals \& Mining |  | 15,631 |  | 8,528 |  | 6,623 |  | 450 |  | 30 |  | - |  | (6) |  | (209) |  | - |
| Transportation |  | 15,447 |  | 6,879 |  | 7,002 |  | 1,516 |  | 50 |  | 64 |  | (18) |  | (598) |  | - |
| Securities Firms |  | 9,077 |  | 6,116 |  | 2,961 |  | - |  | - |  | 4 |  | - |  | (14) |  | $(2,693)$ |
| Financial Markets Infrastructure |  | 4,993 |  | 4,599 |  | 394 |  | - |  | - |  | - |  | - |  | (1) |  | - |
| All other ${ }^{(d)}$ |  | 135,271 |  | 114,197 |  | 20,621 |  | 216 |  | 237 |  | 40 |  | (2) |  | $(8,137)$ |  | $(2,786)$ |
| Subtotal | \$ | 1,273,451 | \$ | 861,566 | \$ | 376,859 | \$ | 31,815 | \$ | 3,211 | \$ | 3,095 | \$ | 248 | \$ | $(31,105)$ | \$ | $(23,282)$ |


| Loans held-for-sale and loans at fair <br> value | 32,372 |  |
| :--- | ---: | ---: |
| Receivables from customers |  | 42,741 |
| Total $^{(\text {e) }}$ | $\$$ | $\mathbf{1 , 3 4 8 , 5 6 4}$ |


| (continued from previous page) |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

(a) The industry rankings presented in the table as of December 31, 2022, are based on the industry rankings of the corresponding exposures as of June 30, 2023, not actual rankings of such exposures as of December 31, 2022.
(b) Individuals and Individual Entities predominantly consists of Global Private Bank clients within AWM and J.P. Morgan Wealth Management within CCB, and includes exposure to personal investment companies and personal and testamentary trusts.
(c) In addition to the credit risk exposure to states and municipal governments (both U.S. and non-U.S.) noted above, the Firm held $\$ 6.8$ billion and $\$ 6.6$ billion of trading assets as of June 30,2023 , and December 31, 2022, respectively; $\$ 24.0$ billion and $\$ 6.8$ billion, respectively, of AFS securities; and $\$ 11.6$ billion and $\$ 19.7$ billion, respectively, of HTM securities, issued by U.S. state and municipal governments. Refer to Note 2 and Note 10 for further information.
(d) All other includes: SPEs, and Private education and civic organizations, representing approximately $94 \%$ and $6 \%$, respectively, as of June 30, 2023 and $95 \%$ and $5 \%$, respectively, as of December 31, 2022.
(e) Excludes cash and other deposits placed with banks of $\$ 485.4$ billion and $\$ 556.6$ billion, as of June 30, 2023, and December 31, 2022, respectively, which is predominantly placed with various central banks, primarily Federal Reserve Banks.
(f) Credit exposure is net of risk participations and excludes the benefit of credit derivatives and credit-related notes used in credit portfolio management activities held against derivative receivables or loans and liquid securities and other cash collateral held against derivative receivables.
(g) Credit exposure includes held-for-sale and fair value option elected lending-related commitments.
(h) Included credit exposure of $\$ 98.2$ billion associated with the First Republic acquisition predominantly in Asset Managers, Real Estate, and Individuals and Individual Entities.
(i) Represents the net notional amounts of protection purchased and sold through credit derivatives and credit-related notes used to manage the credit exposures; these derivatives do not qualify for hedge accounting under U.S. GAAP. The All other category includes purchased credit protection on certain credit indices.

Presented below is additional detail on certain of the Firm's industry exposures.

## Real Estate

Real Estate exposure was $\$ 206.9$ billion as of June 30 , 2023. Criticized exposure increased by $\$ 1.3$ billion from $\$ 4.0$ billion as of December 31, 2022 to $\$ 5.3$ billion as of June 30, 2023, driven by client-specific downgrades, partially offset by clientspecific upgrades.

| (in millions, except ratios) | June 30, 2023 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Loans and Lending-related Commitments |  | Derivative Receivables |  | Credit exposure |  | \% Investmentgrade | \% Drawn ${ }^{(\mathrm{e})}$ |
| Multifamily ${ }^{\text {a }}$ | \$ | 119,840 | \$ | 11 | \$ | 119,851 | 83 \% | 89 \% |
| Other Income Producing Properties ${ }^{(\mathrm{b})}$ |  | 18,664 |  | 178 |  | 18,842 | 56 | 68 |
| Industrial |  | 17,997 |  | - |  | 17,997 | 66 | 74 |
| Office |  | 17,623 |  | 24 |  | 17,647 | 62 | 76 |
| Services and Non Income Producing |  | 15,656 |  | 63 |  | 15,719 | 64 | 53 |
| Retail |  | 12,899 |  | 35 |  | 12,934 | 61 | 71 |
| Lodging |  | 3,902 |  | 20 |  | 3,922 | 16 | 47 |
| Total Real Estate Exposure ${ }^{(c)}$ | \$ | 206,581 | \$ | 331 | \$ | 206,912 | 73 \% | 80 \% |
|  | December 31, 2022 |  |  |  |  |  |  |  |
| (in millions, except ratios) |  | ns and g-related itments |  | ive <br> bles |  | Credit posure | \% Investment- grade | \% Drawn ${ }^{(\mathrm{e})}$ |
| Multifamily ${ }^{\text {(a) }}$ | \$ | 99,555 | \$ | 17 | \$ | 99,572 | 82 \% | 87 \% |
| Other Income Producing Properties ${ }^{(b)}$ |  | 12,701 |  | 150 |  | 12,851 | 70 | 62 |
| Industrial |  | 15,928 |  | 1 |  | 15,929 | 72 | 71 |
| Office |  | 14,917 |  | 25 |  | 14,942 | 74 | 73 |
| Services and Non Income Producing |  | 13,968 |  | 10 |  | 13,978 | 65 | 48 |
| Retail |  | 10,192 |  | 8 |  | 10,200 | 75 | 68 |
| Lodging |  | 3,347 |  | 38 |  | 3,385 | 6 | 37 |
| Total Real Estate Exposure | \$ | 170,608 | \$ | 249 | \$ | 170,857 | 76 \% | 77 \% |

(a) Multifamily exposure is largely in California.
(b) Other Income Producing Properties consists of clients with diversified property types or other property types outside of categories listed in the table above.
(c) Real Estate exposure is approximately $82 \%$ secured; unsecured exposure is approximately $76 \%$ investment-grade.
(d) Included $\$ 33.2$ billion of credit exposure associated with the First Republic acquisition.
(e) Represents drawn exposure as a percentage of credit exposure.

## Consumer \& Retail

Consumer \& Retail exposure was $\$ 125.9$ billion as of June 30, 2023. Criticized exposure increased by $\$ 162$ million from $\$ 7.9$ billion as of December 31, 2022 to $\$ 8.1$ billion as of June 30,2023 , driven by client-specific downgrades predominantly offset by client-specific upgrades and net portfolio activity.

| (in millions, except ratios) | June 30, 2023 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Loans andLending-relatedCommitments |  | Derivative Receivables |  | Credit exposure |  | \% Investmentgrade | \% Drawn ${ }^{\text {(d) }}$ |
| Retail ${ }^{\text {(a) }}$ | \$ | 35,745 | \$ | 329 | \$ | 36,074 | 53 \% | 32 \% |
| Business and Consumer Services |  | 33,127 |  | 348 |  | 33,475 | 49 | 41 |
| Food and Beverage |  | 31,747 |  | 1,195 |  | 32,942 | 56 | 40 |
| Consumer Hard Goods |  | 13,927 |  | 285 |  | 14,212 | 47 | 36 |
| Leisure ${ }^{\text {(b) }}$ |  | 9,111 |  | 121 |  | 9,232 | 25 | 44 |
| Total Consumer \& Retail ${ }^{(c)}$ | \$ | 123,657 | \$ | 2,278 | \$ | 125,935 | 50 \% | 38 \% |
|  | December 31, 2022 |  |  |  |  |  |  |  |
| (in millions, except ratios) |  | ns and g-related mitments |  | ative vables |  | redit posure | \% Investmentgrade | \% Drawn ${ }^{(\mathrm{d})}$ |
| Retail ${ }^{(\mathrm{a})}$ | \$ | 33,891 | \$ | 309 | \$ | 34,200 | 50 \% | 33 \% |
| Business and Consumer Services |  | 31,256 |  | 384 |  | 31,640 | 50 | 40 |
| Food and Beverage |  | 31,706 |  | 736 |  | 32,442 | 59 | 39 |
| Consumer Hard Goods |  | 13,879 |  | 172 |  | 14,051 | 51 | 39 |
| Leisure ${ }^{\text {(b) }}$ |  | 8,173 |  | 49 |  | 8,222 | 21 | 45 |
| Total Consumer \& Retail | \$ | 118,905 | \$ | 1,650 | \$ | 120,555 | 50 \% | 38 \% |

(a) Retail consists of Home Improvement \& Specialty Retailers, Restaurants, Supermarkets, Discount \& Drug Stores, Specialty Apparel and Department Stores.
(b) Leisure consists of Gaming, Arts \& Culture, Travel Services and Sports \& Recreation. As of June 30, 2023 approximately 88\% of the noninvestment-grade Leisure portfolio is secured.
(c) Consumer \& Retail exposure is approximately 57\% secured; unsecured exposure is approximately $79 \%$ investment-grade.
(d) Represents drawn exposure as a percent of credit exposure.

Oil \& Gas
Oil \& Gas exposure was $\$ 33.2$ billion as of June 30,2023 of which $\$ 496$ million was considered criticized exposure.

| (in millions, except ratios) | June 30, 2023 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Loans and Lending-related Commitments |  | Derivative Receivables |  | Credit exposure |  | \% Investment- grade | \% Drawn ${ }^{(\mathrm{c})}$ |
| Exploration \& Production ("E\&P") and Oil field Services | \$ | 16,592 | \$ | 1,186 | \$ | 17,778 | 56 \% | 29 \% |
| Other Oil \& Gas ${ }^{(a)}$ |  | 15,289 |  | 166 |  | 15,455 | 58 | 28 |
| Total Oil \& Gas ${ }^{(\text {b })}$ | \$ | 31,881 | \$ | 1,352 | \$ | 33,233 | 57 \% | 29 \% |
|  | December 31, 2022 |  |  |  |  |  |  |  |
| (in millions, except ratios) |  | ns and -related itments |  | ative vables |  | edit osure | \% Investmentgrade | \% Drawn ${ }^{\text {(c) }}$ |
| Exploration \& Production ("E\&P") and Oil field Services | \$ | 17,729 | \$ | 4,666 | \$ | 22,395 | 50 \% | 25 \% |
| Other Oil \& Gas ${ }^{(\mathrm{a})}$ |  | 15,818 |  | 455 |  | 16,273 | 57 | 25 |
| Total Oil \& Gas | \$ | 33,547 | \$ | 5,121 | \$ | 38,668 | 53 \% | 25 \% |

(a) Other Oil \& Gas includes Integrated Oil \& Gas companies, Midstream/Oil Pipeline companies and refineries.
(b) Oil \& Gas exposure is approximately $40 \%$ secured, approximately half of which is reserve-based lending to the Exploration \& Production sub-sector; unsecured exposure is approximately $68 \%$ investment-grade.
(c) Represents drawn exposure as a percent of credit exposure.

Loans
In its wholesale businesses, the Firm provides loans to a variety of clients, ranging from large corporate and institutional clients to high-net-worth individuals. Refer to Note 12 for a further discussion on loans, including information about delinquencies, loan modifications and other credit quality indicators.
The following table presents the change in the nonaccrual Ioan portfolio for the six months ended June 30, 2023 and 2022. Since June 30, 2022, nonaccrual loan exposure increased by $\$ 518$ million driven by Healthcare, Consumer \& Retail, and Real Estate resulting from downgrades, partially offset by Transportation and civic organizations resulting from net portfolio activity.

Wholesale nonaccrual loan activity

| Six months ended June 30, <br> (in millions) | $\mathbf{2 0 2 3}$ | 2022 |  |
| :--- | ---: | ---: | ---: |
| Beginning balance | $\$$ | $\mathbf{2 , 3 9 5}$ | $\$$ |
| Additions | $\mathbf{1 , 6 4 9}$ | 1,239 |  |
| Reductions: |  |  |  |
| Paydowns and other | $\mathbf{6 1 8}$ | 776 |  |
| Gross charge-offs | $\mathbf{2 8 1}$ | 83 |  |
| Returned to performing status | $\mathbf{8 5}$ | 326 |  |
| Sales | $\mathbf{5 2}$ | 9 |  |
| Total reductions | $\mathbf{1 , 0 3 6}$ | 1,194 |  |
| Net changes | $\mathbf{6 1 3}$ | 45 |  |
| Ending balance | $\mathbf{3 , 0 0 8}$ | $\$$ | 2,490 |

The following table presents net charge-offs/recoveries, which are defined as gross charge-offs less recoveries, for the three and six months ended June 30, 2023 and 2022. The amounts in the table below do not include gains or losses from sales of nonaccrual loans recognized in noninterest revenue.
Wholesale net charge-offs/(recoveries)

| (in millions, except ratios) | Three months ended June 30, |  | Six months ended June 30, |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2023 | 2022 | 2023 | 2022 |
| Loans |  |  |  |  |
| Average loans retained | \$647,474 | \$577,850 | \$624,566 | \$568,673 |
| Gross charge-offs | 189 | 71 | 294 | 123 |
| Gross recoveries collected | (24) | (21) | (46) | (43) |
| Net charge-offs/ (recoveries) | 165 | 50 | 248 | 80 |
| Net charge-off/ (recovery) rate | 0.10 \% | 0.03 \% | 0.08 \% | 0.03 \% |

## Modified wholesale Ioans

The amortized cost of wholesale FDMs was $\$ 673$ million and $\$ 854$ million for the three and six months ended June 30, 2023, respectively. Refer to Note 1 and Note 12 for further information.
Wholesale TDRs were $\$ 60$ million and $\$ 479$ million for the three and six months ended June 30, 2022, respectively. Refer to Note 12 for further information on TDRs in prior periods.

Maturities and sensitivity to changes in interest rates
The table below sets forth loan maturities by scheduled repayments, by class of loan and the distribution between fixed and floating interest rates based on the stated terms of the Ioan agreements. Refer to Wholesale Credit Portfolio on pages 116-126 of JPMorgan Chase's 2022 Form 10-K for further information. Refer to Note 12 for further information on loan classes.

| June 30, 2023 <br> (in millions, except ratios) | $\begin{gathered} 1 \text { year or } \\ \text { less }^{(f)} \end{gathered}$ |  | After 1 year through 5 years |  | After 5 years through 15 years |  | After 15 years |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Wholesale loans: |  |  |  |  |  |  |  |  |  |  |
| Secured by real estate ${ }^{(a)}$ | \$ | 17,025 | \$ | 61,188 | \$ | 50,001 | \$ | 41,680 | \$ | 169,894 |
| Commercial and industrial |  | 54,346 |  | 114,370 |  | 8,863 |  | 197 |  | 177,776 |
| Other ${ }^{\text {(b) }}$ |  | 184,593 |  | 127,299 |  | 35,378 |  | 5,577 |  | 352,847 |
| Total wholesale loans | \$ | 255,964 | \$ | 302,857 | \$ | 94,242 | \$ | 47,454 | \$ | 700,517 |
| Loans due after one year at fixed interest rates |  |  |  |  |  |  |  |  |  |  |
| Secured by real estate ${ }^{(c)}$ |  |  | \$ | 15,915 | \$ | 11,563 | \$ | 520 |  |  |
| Commercial and industrial |  |  |  | 5,775 |  | 1,238 |  | 66 |  |  |
| Other |  |  |  | 30,048 |  | 15,690 |  | 3,808 |  |  |
| Loans due after one year at variable interest rates |  |  |  |  |  |  |  |  |  |  |
| Secured by real estate ${ }^{(d)}$ |  |  | \$ | 45,273 | \$ | 38,438 | \$ | 41,160 |  |  |
| Commercial and industrial |  |  |  | 108,595 |  | 7,625 |  | 131 |  |  |
| Other ${ }^{(\mathrm{e})}$ |  |  |  | 97,251 |  | 19,688 |  | 1,769 |  |  |
| Total wholesale loans |  |  | \$ | 302,857 | \$ | 94,242 | \$ | 47,454 |  |  |

(a) Included $\$ 6.5$ billion, $\$ 17.0$ billion, and $\$ 9.9$ billion of loans in 1 year or less, after 1 year through 5 years, and after 5 years though 15 , respectively, associated with the First Republic acquisition.
(b) Included $\$ 12.0$ billion, and $\$ 3.8$ billion of loans in 1 year or less, and after 1 year through 5 years, respectively, associated with the First Republic acquisition.
(c) Included $\$ 9.7$ billion, and $\$ 5.7$ billion in after 1 year through 5 years, and after 5 years though 15 , respectively, associated with the First Republic acquisition.
(d) Included $\$ 7.3$ billion, and $\$ 4.2$ billion in after 1 year through 5 years, and after 5 years though 15 , respectively, associated with the First Republic acquisition.
(e) Included $\$ 3.2$ billion in after 1 year through 5 years associated with the First Republic acquisition.
(f) Includes loans held-for-sale, demand loans and overdrafts.

The following table presents net charge-offs/recoveries, average retained loans and net charge-off/recovery rate by loan class for the three and six months ended June 30, 2023 and 2022.


## Lending-related commitments

The Firm uses lending-related financial instruments, such as commitments (including revolving credit facilities) and guarantees, to address the financing needs of its clients. The contractual amounts of these financial instruments represent the maximum possible credit risk should the clients draw down on these commitments or when the Firm fulfills its obligations under these guarantees, and the clients subsequently fail to perform according to the terms of these contracts. Most of these commitments and guarantees have historically been refinanced, extended, cancelled, or expired without being drawn upon or a default occurring. As a result, the Firm does not believe that the total contractual amount of these wholesale lending-related commitments is representative of the Firm's expected future credit exposure or funding requirements. Refer to Note 24 for further information on wholesale lendingrelated commitments.

## Receivables from customers

Receivables from customers reflect held-for-investment margin loans to brokerage clients in CIB, CCB and AWM that are collateralized by assets maintained in the clients' brokerage accounts (e.g., cash on deposit, and liquid and readily marketable debt or equity securities). Because of this collateralization, no allowance for credit losses is generally held against these receivables. To manage its credit risk the Firm establishes margin requirements and monitors the required margin levels on an ongoing basis, and requires clients to deposit additional cash or other collateral, or to reduce positions, when appropriate. These receivables are reported within accrued interest and accounts receivable on the Firm's Consolidated balance sheets.

## Derivative contracts

Derivatives enable clients and counterparties to manage risk including credit risk and risks arising from fluctuations in interest rates, foreign exchange and equities and commodities prices. The Firm makes markets in derivatives in order to meet these needs and uses derivatives to manage certain risks associated with net open risk positions from its market-making activities, including the counterparty credit risk arising from derivative receivables. The Firm also uses derivative instruments to manage its own credit risk and other market risk exposure. The nature of the counterparty and the settlement mechanism of the derivative affect the credit risk to which the Firm is exposed. For over-the-counter ("OTC") derivatives the Firm is exposed to the credit risk of the derivative counterparty. For exchange-traded derivatives ("ETD"), such as futures and options, and cleared over-the-counter ("OTC-cleared") derivatives, the Firm can also be exposed to the credit risk of the relevant central counterparty clearing house ("CCP"). Where possible, the Firm seeks to mitigate its credit risk exposures arising from derivative contracts through the use of legally enforceable master netting arrangements and collateral agreements.

The percentage of the Firm's over-the-counter derivative transactions subject to collateral agreements - excluding foreign exchange spot trades, which are not typically covered by collateral agreements due to their short maturity, and centrally cleared trades that are settled daily - was approximately $88 \%$ and $87 \%$ at June 30, 2023, and December 31, 2022, respectively. Refer to Note 5 for additional information on the Firm's use of collateral agreements and for a further discussion of derivative contracts, counterparties and settlement types.
The fair value of derivative receivables reported on the Consolidated balance sheets was $\$ 64.2$ billion and $\$ 70.9$ billion at June 30, 2023, and December 31, 2022, respectively. The decrease was primarily driven by market movements in CIB Markets. Derivative receivables represent the fair value of the derivative contracts after giving effect to legally enforceable master netting agreements and the related cash collateral held by the Firm.

In addition, the Firm held liquid securities and other cash collateral that may be used as security when the fair value of the client's exposure is in the Firm's favor. For these purposes, the definition of liquid securities is consistent with the definition of high quality liquid assets as defined in the LCR rule.

In management's view, the appropriate measure of current credit risk should also take into consideration other collateral, which generally represents securities that do not qualify as high quality liquid assets under the LCR rule. The benefits of these additional collateral amounts for each counterparty are subject to a legally enforceable master netting agreement and limited to the net amount of the derivative receivables for each counterparty.

The Firm also holds additional collateral (primarily cash, G7 government securities, other liquid government agency and guaranteed securities, and corporate debt and equity securities) delivered by clients at the initiation of transactions, as well as collateral related to contracts that have a non-daily call frequency and collateral that the Firm has agreed to return but has not yet settled as of the reporting date. Although this collateral does not reduce the balances and is not included in the tables below, it is available as security against potential exposure that could arise should the fair value of the client's derivative contracts move in the Firm's favor. Refer to Note 5 for additional information on the Firm's use of collateral agreements for derivatives transactions.

The following tables summarize the net derivative receivables and the internal ratings profile for the periods presented.
Derivative receivables

| (in millions) | June 30, <br> 2023 | December 31, <br> 2022 |  |
| :--- | :---: | :---: | :---: |
| Total, net of cash collateral | $\$$ | 64,217 | $\$$ |
| Liquid securities and other cash collateral held against derivative receivables | $\mathbf{( 2 3 , 2 8 2 )}$ | $(23,014)$ |  |
| Total, net of liquid securities and other cash collateral | 40,935 | $\$$ | 47,866 |
| Other collateral held against derivative receivables | $\mathbf{( 1 , 2 5 7 )}$ | $(1,261)$ |  |
| Total, net of collateral | $\$$ | $\mathbf{3 9 , 6 7 8}$ | $\$$ |

Ratings profile of derivative receivables

| (in millions, except ratios) | June 30, 2023 |  |  | December 31, 2022 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Exposure net of collateral |  | \% of exposure net of collateral | Exposure net of collateral |  | \% of exposure net of collateral |
| Investment-grade | \$ | 31,560 | 80 \% | \$ | 35,097 | 75 \% |
| Noninvestment-grade |  | 8,118 | 20 |  | 11,508 | 25 |
| Total | \$ | 39,678 | 100 \% | \$ | 46,605 | 100 \% |

## Credit portfolio management activities

The Firm uses credit derivatives for two primary purposes: first, in its capacity as a market-maker, and second, as an end-user, to manage the Firm's own credit risk associated with traditional lending activities (loans and lending-related commitments) and derivatives counterparty exposure in the Firm's wholesale businesses. In addition, the Firm obtains credit protection against certain loans in the retained wholesale portfolio through the issuance of credit-related notes. Information on credit portfolio management activities is provided in the table below.

Credit derivatives and credit-related notes used in credit portfolio management activities

|  | Notional amount of protection <br> purchased and sold |  |
| :--- | ---: | ---: |
|  |  |  |
| (in millions) | June 30, | December 31, |

Credit derivatives and credit-related
notes used to manage:

| Loans and lending-related commitments | \$ | 16,801 | \$ | 6,422 |
| :---: | :---: | :---: | :---: | :---: |
| Derivative receivables |  | 14,304 |  | 11,721 |
| Credit derivatives and creditrelated notes used in credit portfolio management activities | \$ | 31,105 | \$ | 18,143 |

(a) Amounts are presented net, considering the Firm's net protection purchased or sold with respect to each underlying reference entity or index.

Refer to Credit derivatives in Note 5 of this Form 10-Q and Note 5 of JPMorgan Chase’s 2022 Form 10-K for further information on credit derivatives and derivatives used in credit portfolio management activities.

The Firm's allowance for credit losses represents management's estimate of expected credit losses over the remaining expected life of the Firm's financial assets measured at amortized cost and certain off-balance sheet lending-related commitments. The allowance for credit losses generally consists of:

- the allowance for loan losses, which covers the Firm's retained loan portfolios (scored and risk-rated),
- the allowance for lending-related commitments, which is reflected in accounts payable and other liabilities on the Consolidated balance sheets, and
- the allowance for credit losses on investment securities, which is reflected in investment securities on the Consolidated balance sheets.


## Discussion of changes in the allowance

The allowance for credit losses as of June 30, 2023 was $\$ 24.3$ billion, reflecting a net addition of $\$ 2.7$ billion from December 31, 2022.

The net addition to the allowance for credit losses included \$1.5 billion, consisting of:

- $\$ 819$ million in wholesale, predominantly driven by net downgrade activity, updates to certain assumptions related to office real estate in CB in the second quarter of 2023, and the impact of the additional weight placed on the adverse scenarios in the first quarter of 2023, and
- \$649 million in consumer, predominantly driven by Card Services, reflecting loan growth, the net effect of changes in the Firm's macroeconomic outlook, including the impact from the weighted average U.S. unemployment rate peaking in the third quarter of 2024, and the additional weight placed on the adverse scenarios in the first quarter of 2023, partially offset by reduced borrower uncertainty.
The net addition also included $\$ 1.2$ billion to establish the allowance for the First Republic loans and lending-related commitments in the second quarter of 2023.

The Firm has maintained the additional weight placed on the relative adverse scenario in the first quarter of 2023, reflecting an increased probability of a moderate recession due to tightening financial conditions.

The allowance for credit losses also reflected a reduction of $\$ 587$ million as a result of the adoption of changes to the TDR accounting guidance on January 1, 2023. Refer to Note 1 for further information.
The Firm's allowance for credit losses is estimated using a weighted average of five internally developed macroeconomic scenarios. The adverse scenarios incorporate more punitive macroeconomic factors than the central case assumptions provided in the table below, resulting in a weighted average U.S. unemployment rate peaking at $5.8 \%$ in the third quarter of 2024 , and a $1.5 \%$ lower U.S. real GDP exiting the fourth quarter of 2024.

The Firm's central case assumptions reflected U.S. unemployment rates and U.S. real GDP as follows:

|  | Assumptions at June 30, 2023 |  |  |
| :---: | :---: | :---: | :---: |
|  | 4Q23 | 2Q24 | 4Q24 |
| U.S. unemployment rate ${ }^{(\mathrm{a})}$ | 4.2 \% | 4.9 \% | 5.0 \% |
| YoY growth in U.S. real GDP ${ }^{(b)}$ | 0.5 \% | - \% | 1.0 \% |
|  | Assumptions at December 31, 2022 |  |  |
|  | 2Q23 | 4Q23 | 2Q24 |
| U.S. unemployment rate ${ }^{(\mathrm{a})}$ | 3.8 \% | 4.3 \% | 5.0 \% |
| YoY growth in U.S. real GDP ${ }^{(b)}$ | 1.5 \% | 0.4 \% | - \% |

(a) Reflects quarterly average of forecasted U.S. unemployment rate.
(b) The year over year growth in U.S. real GDP in the forecast horizon of the central scenario is calculated as the percentage change in U.S. real GDP levels from the prior year.
Subsequent changes to this forecast and related estimates will be reflected in the provision for credit losses in future periods.
Refer to Note 13 and Note 10 of JPMorgan Chase's 2022 Form $10-\mathrm{K}$ for a description of the policies, methodologies and judgments used to determine the Firm's allowance for credit losses on loans, lending-related commitments, and investment securities.
Refer to Consumer Credit Portfolio on pages 65-69, Wholesale Credit Portfolio on pages 70-79 and Note 12 for additional information on the consumer and wholesale credit portfolios.
Refer to Critical Accounting Estimates Used by the Firm on pages 91-93 for further information on the allowance for credit losses and related management judgments.

## Allowance for credit losses and related information

| Six months ended June 30, <br> (in millions, except ratios) | 2023 |  |  |  |  |  |  |  | 2022 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Consumer, excluding credit card |  | Credit card |  | Wholesale |  | Total |  | Consumer, excluding credit card |  | Credit card |  | Wholesale |  | Total |  |
| Allowance for loan losses |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Beginning balance at January 1, | \$ | 2,040 | \$ | 11,200 | \$ | 6,486 | \$ | 19,726 | \$ | 1,765 |  | 10,250 | \$ | 4,371 | \$ | 16,386 |
| Cumulative effect of a change in accounting principle ${ }^{(a)}$ |  | (489) |  | (100) |  | 2 |  | (587) |  | NA |  | NA |  | NA |  | NA |
| Gross charge-offs |  | 501 |  | 2,432 |  | 294 |  | 3,227 |  | 384 |  | 1,505 |  | 123 |  | 2,012 |
| Gross recoveries collected |  | (247) |  | (386) |  | (46) |  | (679) |  | (311) |  | (419) |  | (43) |  | (773) |
| Net charge-offs/(recoveries) |  | 254 |  | 2,046 |  | 248 |  | 2,548 |  | 73 |  | 1,086 |  | 80 |  | 1,239 |
| Provision for loan losses |  | 751 |  | 2,546 |  | 2,067 |  | 5,364 |  | 237 |  | 1,236 |  | 1,125 |  | 2,598 |
| Other |  | - |  | - |  | 25 |  | 25 |  |  |  | - |  | 5 |  | 5 |
| Ending balance at June 30, | \$ | 2,048 | \$ | 11,600 | \$ | 8,332 | \$ | 21,980 | \$ | 1,929 |  | 10,400 | \$ | 5,421 | \$ | 17,750 |
| Allowance for lending-related commitments |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Beginning balance at January 1, | \$ | 76 | \$ | - | \$ | 2,306 | \$ | 2,382 | \$ | 113 | \$ | - | \$ | 2,148 | \$ | 2,261 |
| Provision for lending-related commitments |  | 52 |  | - |  | (253) |  | (201) |  | (2) |  | - |  | (37) |  | (39) |
| Other |  | 1 |  | - |  | 4 |  | 5 |  | (1) |  | - |  | 1 |  | - |
| Ending balance at June 30, | \$ | 129 | \$ | - | \$ | 2,057 | \$ | 2,186 | \$ | 110 | \$ | - | \$ | 2,112 | \$ | 2,222 |
| Impairment methodology |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Asset-specific ${ }^{(b)}$ | \$ | (971) | \$ | - | \$ | 478 | \$ | (493) | \$ | (676) | \$ | 227 | \$ | 332 | \$ | (117) |
| Portfolio-based |  | 3,019 |  | 11,600 |  | 7,854 |  | 22,473 |  | 2,605 |  | 10,173 |  | 5,089 |  | 17,867 |
| Total allowance for loan losses | \$ | 2,048 |  | 11,600 | \$ | 8,332 | \$ | 21,980 | \$ | 1,929 |  | 10,400 | \$ | 5,421 | \$ | 17,750 |
| Impairment methodology |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Asset-specific | \$ | - | \$ | - | \$ | 65 | \$ | 65 | \$ | - | \$ | - | \$ | 78 | \$ | 78 |
| Portfolio-based |  | 129 |  | - |  | 1,992 |  | 2,121 |  | 110 |  | - |  | 2,034 |  | 2,144 |
| Total allowance for lending-related commitments | \$ | 129 | \$ | - | \$ | 2,057 | \$ | 2,186 | \$ | 110 | \$ | - | \$ | 2,112 | \$ | 2,222 |
| Total allowance for investment securities |  | NA |  | NA |  | NA | \$ | 104 |  | NA |  | NA |  | NA | \$ | 47 |
| Total allowance for credit losses ${ }^{(\mathrm{c})(\mathrm{d})}$ | \$ | 2,177 |  | 11,600 | \$ | 10,389 | \$ | 24,270 | \$ | 2,039 |  | 10,400 | \$ | 7,533 | \$ | 20,019 |
| Memo: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Retained loans, end-of-period |  | 396,195 |  | 191,348 |  | 668,145 |  | 1,255,688 |  | 302,631 |  | 165,494 |  | 584,265 |  | ,052,390 |
| Retained loans, average |  | 330,227 |  | 183,757 |  | 624,566 |  | 1,138,550 |  | 297,566 |  | 153,941 |  | 568,673 |  | ,020,180 |
| Credit ratios |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Allowance for loan losses to retained loans |  | 0.52 \% |  | 6.06 \% |  | 1.25 \% |  | 1.75 \% |  | 0.64 \% |  | 6.28 \% |  | 0.93 \% |  | 1.69 \% |
| Allowance for loan losses to retained nonaccrual loans ${ }^{(\mathrm{e})}$ |  | 54 |  | NM |  | 321 |  | 345 |  | 46 |  | NM |  | 260 |  | 283 |
| Allowance for loan losses to retained nonaccrual loans excluding credit card |  | 54 |  | NM |  | 321 |  | 163 |  | 46 |  | NM |  | 260 |  | 117 |
| Net charge-off/(recovery) rates |  | 0.16 |  | 2.25 |  | 0.08 |  | 0.45 |  | 0.05 |  | 1.42 |  | 0.03 |  | 0.24 |

(a) Represents the impact to the allowance for loan losses upon the Firm's adoption of changes to the TDR accounting guidance on January 1 , 2023. The adoption of this guidance eliminated the existing accounting and disclosure requirements for TDRs, including the requirement to measure the allowance using a discounted cash flow ("DCF") methodology. The Firm elected to change from an asset-specific allowance approach to its non-DCF, portfolio-based allowance approach for modified loans to troubled borrowers for all portfolios except collateral-dependent loans and nonaccrual risk-rated loans, for which the asset-specific allowance approach will continue to apply. Refer to Note 1 for further information.
(b) Includes collateral-dependent loans, including those for which foreclosure is deemed probable, and nonaccrual risk-rated loans for all periods presented. Prior periods also include non collateral-dependent TDRs or reasonably expected TDRs and modified purchased credit deteriorated ("PCD") Ioans.
(c) At June 30, 2023, in addition to the allowance for credit losses in the table above, the Firm also had an allowance for credit losses of $\$ 18$ million associated with certain accounts receivable in CIB.
(d) As of June 30, 2023 included $\$ 1.2$ billion allowance for credit losses associated with the First Republic acquisition.
(e) The Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance.

## Allocation of allowance for loan losses

The table below presents a breakdown of the allowance for loan losses by loan class. Refer to Note 12 for further information on loan classes.

| (in millions, except ratios) | June 30, 2023 |  |  | December 31, 2022 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Allowance for loan losses |  | Percent of retained Ioans to total retained loans |  | Allowance for loan losses | Percent of retained loans to total retained loans |
| Residential real estate | \$ | 1,022 | 26 \% | \$ | 1,070 | 22 \% |
| Auto and other |  | 1,026 | 5 |  | 970 | 6 |
| Consumer, excluding credit card |  | 2,048 | 32 |  | 2,040 | 28 |
| Credit card |  | 11,600 | 15 |  | 11,200 | 17 |
| Total consumer |  | 13,648 | 47 |  | 13,240 | 45 |
| Secured by real estate |  | 2,548 | 13 |  | 1,782 | 12 |
| Commercial and industrial |  | 3,837 | 14 |  | 3,507 | 15 |
| Other |  | 1,947 | 27 |  | 1,197 | 28 |
| Total wholesale |  | 8,332 | 53 |  | 6,486 | 55 |
| Total ${ }^{(\mathrm{a})}$ | \$ | 21,980 | 100 \% | \$ | 19,726 | 100 \% |

(a) As of June 30, 2023 included $\$ 1.1$ billion allowance for loan losses associated with the First Republic acquisition, consisting of $\$ 377$ million in Residential real estate, $\$ 290$ million in Secured by real estate, and $\$ 404$ million in Commercial and industrial.

Investment portfolio risk is the risk associated with the loss of principal or a reduction in expected returns on investments arising from the investment securities portfolio or from principal investments. The investment securities portfolio is predominantly held by Treasury and CIO in connection with the Firm's balance sheet and asset-liability management objectives. Principal investments are predominantly privately-held financial instruments and are managed in the LOBs and Corporate. Investments are typically intended to be held over extended periods and, accordingly, the Firm has no expectation for short-term realized gains with respect to these investments.

Investment securities risk Investment securities risk includes the exposure associated with a default in the payment of principal and interest. This risk is mitigated given that the investment securities portfolio held by Treasury and CIO predominantly consists of high-quality securities. At June 30, 2023, the Treasury and CIO investment securities portfolio, net of the allowance for credit losses, was $\$ 610.2$ billion, and the average credit rating of the securities comprising the portfolio was AA+ (based upon external ratings where available, and where not available, based primarily upon internal risk ratings). Refer to Corporate segment results on pages 45-46 and Note 10 for further information on the investment securities portfolio and internal risk ratings. Refer to Liquidity Risk Management on pages 54-61 for further information on related liquidity risk. Refer to Market Risk Management on pages 84-89 for further information on the market risk inherent in the portfolio.

Principal investment risk
Principal investments are typically privately-held financial instruments representing ownership interests or other forms of junior capital. In general, principal investments include tax-oriented investments and investments made to enhance or accelerate the Firm's business strategies and exclude those that are consolidated on the Firm's balance sheets. These investments are made by dedicated investing businesses or as part of a broader business strategy. The Firm's principal investments are managed by the LOBs and Corporate and are reflected within their respective financial results. The Firm's investments will continue to evolve in line with its strategies, including the Firm's commitment to support underserved communities and minority-owned businesses.

The table below presents the aggregate carrying values of the principal investment portfolios as of June 30, 2023 and December 31, 2022.

| (in billions) | June 30, 2023 |  | December 31,2022 |  |
| :---: | :---: | :---: | :---: | :---: |
| Tax-oriented investments, primarily in alternative energy and affordable housing ${ }^{(a)}$ | \$ | 27.5 | \$ | 26.2 |
| Private equity, various debt and equity instruments, and real assets ${ }^{(b)}$ |  | 11.4 |  | 10.8 |
| Total carrying value | \$ | 38.9 | \$ | 37.0 |

(a) As of June 30, 2023, included approximately $\$ 1.2$ billion in taxoriented investments in CIB associated with the First Republic acquisition.
(b) Includes the Firm's 40\% ownership in C6 Bank and 49\% ownership in Viva Wallet.

Refer to page 130 of JPMorgan Chase’s 2022 Form 10-K for a discussion of the Firm's Investment Portfolio Risk Management governance and oversight.

Market risk is the risk associated with the effect of changes in market factors such as interest and foreign exchange rates, equity and commodity prices, credit spreads or implied volatilities, on the value of assets and liabilities held for both the short and long term. Refer to Market Risk Management on pages 131-138 of JPMorgan Chase's 2022 Form $10-\mathrm{K}$ for a discussion of the Firm's Market Risk Management organization, market risk measurement, risk monitoring and control, and predominant business activities that give rise to market risk.
Models used to measure market risk are inherently imprecise and are limited in their ability to measure certain risks or to predict losses. This imprecision may be heightened when sudden or severe shifts in market conditions occur. For additional discussion on model uncertainty refer to Estimations and Model Risk Management on page 148 of JPMorgan Chase's 2022 Form 10-K.
Market Risk Management periodically reviews the Firm's existing market risk measures to identify opportunities for enhancement, and to the extent appropriate, will calibrate those measures accordingly over time.

Value-at-risk
JPMorgan Chase utilizes value-at-risk ("VaR"), a statistical risk measure, to estimate the potential loss from adverse market moves in the current market environment. The Firm has a single VaR framework used as a basis for calculating Risk Management VaR and Regulatory VaR.
The Firm's Risk Management VaR is calculated assuming a one-day holding period and an expected tail-loss methodology which approximates a 95\% confidence level. For risk management purposes, the Firm believes this methodology provides a daily measure of risk that is closely aligned to risk management decisions made by the LOBs and Corporate and, along with other market risk measures, provides the appropriate information needed to respond to risk events. The Firm calculates separately a daily aggregated VaR in accordance with regulatory rules ("Regulatory VaR"), which is used to derive the Firm's regulatory VaR-based capital requirements under Basel III.
The Firm's VaR model calculations are periodically evaluated and enhanced in response to changes in the composition of the Firm's portfolios, changes in market conditions, improvements in the Firm's modeling techniques and measurements, and other factors. Such changes may affect historical comparisons of VaR results. Refer to Estimations and Model Risk Management on page 148 of JPMorgan Chase's 2022 Form 10-K for information regarding model reviews and approvals.
Refer to page 133 of JPMorgan Chase's 2022 Form 10-K for further information regarding VaR, including the inherent limitations, and the key differences between Risk Management VaR and Regulatory VaR. Refer to JPMorgan Chase's Basel III Pillar 3 Regulatory Capital Disclosures reports, which are available on the Firm's website, for additional information on Regulatory VaR and the other components of market risk regulatory capital for the Firm (e.g., VaR-based measure, stressed VaR-based measure and the respective backtesting). Refer to Other risk measures on pages 136-138 of JPMorgan Chase's 2022 Form 10-K for further information regarding nonstatistical market risk measures used by the Firm.

The table below shows the results of the Firm's Risk Management VaR measure using a 95\% confidence level. VaR can vary significantly as positions change, market volatility fluctuates, and diversification benefits change.
Total VaR

| (in millions) | Three months ended |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | June 30, 2023 |  |  | March 31, 2023 |  |  | June 30, 2022 |  |  |
|  | Avg. | Min | Max | Avg. | Min | Max | Avg. | Min | Max |
| CIB trading VaR by risk type |  |  |  |  |  |  |  |  |  |
| Fixed income | \$ 57 | \$ 50 | \$ 66 | \$ 56 | \$ 45 | \$ 71 | \$ 60 | \$ 48 | \$ 79 |
| Foreign exchange | 12 | 7 | 24 | 10 | 6 | 17 | 8 | 4 | 13 |
| Equities | 8 | 5 | 11 | 7 | 5 | 10 | 11 | 7 | 15 |
| Commodities and other | 12 | 8 | 17 | 15 | 11 | 19 | 14 | 12 | 17 |
| Diversification benefit to CIB trading VaR ${ }^{(\mathrm{a})}$ | (48) | NM | NM | (44) | NM | NM | (43) | NM | NM |
| CIB trading VaR | 41 | 31 | 50 | 44 | 34 | 55 | 50 | 38 | 66 |
| Credit Portfolio VaR ${ }^{(b)}$ | 14 | 11 | 18 | 11 | 8 | 17 | 17 | 6 | $31{ }^{\text {(e) }}$ |
| Diversification benefit to $\mathrm{CIB} \mathrm{VaR}{ }^{(\mathrm{a})}$ | (11) | NM | NM | (10) | NM | NM | (15) | NM | NM |
| CIB VaR | 44 | 34 | 55 | 45 | 35 | 58 | 52 | 38 | 70 |
| CCB VaR | $9{ }^{\text {(d) }}$ | 6 | 14 | 11 | 6 | 15 | 5 | 4 | 6 |
| Corporate and other LOB VaR ${ }^{(c)}$ | 13 | 11 | 15 | 15 | 13 | 17 | 10 | 9 | 11 |
| Diversification benefit to other VaR ${ }^{(\mathrm{a})}$ | (7) | NM | NM | (8) | NM | NM | (3) | NM | NM |
| Other VaR | 15 | 13 | 19 | 18 | 14 | 22 | 12 | 10 | 14 |
| Diversification benefit to CIB and other VaR ${ }^{\text {(a) }}$ | (12) | NM | NM | (16) | NM | NM | (10) | NM | NM |
| Total VaR | \$ 47 | \$ 36 | \$ 56 | \$ 47 | \$ 37 | \$ 57 | \$ 54 | \$ 41 | \$ 71 |

(a) Diversification benefit represents the difference between the portfolio VaR and the sum of its individual components. This reflects the non-additive nature of VaR due to imperfect correlation across LOBs, Corporate, and risk types. For maximum and minimum VaR, diversification benefit is not meaningful as the maximum and minimum VaR for each portfolio may have occurred on different trading days than the components.
(b) Credit portfolio VaR includes the derivative CVA, hedges of the CVA and hedges of the retained loan portfolio, which are reported in principal transactions revenue. This VaR does not include the retained loan portfolio, which is not reported at fair value. In the first quarter of 2022, in line with the Firm's internal model governance, the credit risk component of CVA related to certain counterparties was removed from Credit Portfolio VaR due to the widening of the credit spreads for those counterparties to elevated levels. The related hedges were also removed to maintain consistency. This exposure is now reflected in other sensitivity-based measures.
(c) Corporate and other LOB VaR includes a legacy private equity position in Corporate which is publicly traded.
(d) The increase in CCB VaR is driven by interest rate volatility impacting Home Lending warehouse loans, MSR, and related hedges.
(e) For the period ended June 30, 2022, maximum Credit Portfolio VaR remained elevated due to the effects of nickel price increases and the associated volatility in the nickel market which occurred during the first quarter of 2022.

## Quarter over quarter results

Average total VaR was flat for the three months ended June 30, 2023, when compared with March 31, 2023, reflecting increases in fixed income offset by market volatility relating to commodities rolling out of the one-year historical look-back period.

## Year over year results

Average total VaR decreased by $\$ 7$ million for the three months ended June 30, 2023, compared with the same period in the prior year predominantly driven by risk reductions impacting Credit Portfolio VaR as well as fixed income.

The following graph presents daily Risk Management VaR for the five trailing quarters.
Daily Risk Management VaR


## VaR backtesting

The Firm performs daily VaR model backtesting, which compares the daily Risk Management VaR results with the daily gains and losses that are utilized for VaR backtesting purposes. The gains and losses depicted in the chart below do not reflect the Firm's reported revenue as they exclude certain components of total net revenue, such as those associated with the execution of new transactions (i.e., intraday client-driven trading and intraday risk management activities), fees, commissions, other valuation adjustments and net interest income. These excluded components of total net revenue may more than offset the backtesting gain or loss on a particular day. The definition of backtesting gains and losses above is consistent with the requirements for backtesting under Basel III capital rules.
A backtesting exception occurs when the daily backtesting loss exceeds the daily Risk Management VaR for the prior day. Under the Firm's Risk Management VaR methodology, assuming current changes in market values are consistent with the historical changes used in the simulation, the Firm would expect to incur VaR backtesting exceptions five times every 100 trading days on average. The number of VaR backtesting exceptions observed can differ from the statistically expected number of backtesting exceptions if the current level of market volatility is materially different from the level of market volatility during the 12 months of historical data used in the VaR calculation.
For the 12 months ended June 30, 2023, the Firm posted backtesting gains on 134 of the 259 days, and observed 15 VaR backtesting exceptions. For the three months ended June 30, 2023, the Firm posted backtesting gains on 34 of the 65 days, and observed two VaR backtesting exceptions.
The following chart presents the distribution of Firmwide daily backtesting gains and losses for the trailing 12 months and three months ended June 30, 2023. The daily backtesting losses are displayed as a percentage of the corresponding daily Risk Management VaR. The count of days with backtesting losses are shown in aggregate, in fifty percentage point intervals. Backtesting exceptions are displayed within the intervals that are greater than one hundred percent. The results in the chart below differ from the results of backtesting disclosed in the Market Risk section of the Firm's Basel III Pillar 3 Regulatory Capital Disclosures reports, which are based on Regulatory VaR applied to the Firm's covered positions.

Distribution of Daily Backtesting Gains and Losses


Structural interest rate risk management
The effect of interest rate exposure on the Firm's reported net income is important as interest rate risk represents one of the Firm's significant market risks. Interest rate risk arises not only from trading activities but also from the Firm's traditional banking activities, which include extension of loans and credit facilities, taking deposits, issuing debt and the investment securities portfolio.
One way that the Firm evaluates its structural interest rate risk is through earnings-at-risk. Earnings-at-risk estimates the Firm's interest rate exposure for a given interest rate scenario. It is presented as a sensitivity to a baseline, which includes net interest income and certain interest rate sensitive fees. The baseline uses market interest rates and in the case of deposits, pricing assumptions. The Firm conducts simulations of changes to this baseline for interest rate-sensitive assets and liabilities denominated in U.S. dollars and other currencies ("non-U.S. dollar" currencies). These simulations primarily include retained loans, deposits, deposits with banks, investment securities, longterm debt and any related interest rate hedges, and funds transfer pricing of other positions in risk management VaR and other sensitivity-based measures as described on page 132 of JPMorgan Chase's 2022 Form 10-K.
Earnings-at-risk scenarios estimate the potential change to a net interest income baseline, over the following 12 months utilizing multiple assumptions. These scenarios include a parallel shift involving changes to both short-term and long-term rates by an equal amount; a steeper yield curve involving holding short-term rates constant and increasing long-term rates; and a flatter yield curve involving increasing short-term rates and holding long-term rates constant or holding short-term rates constant and decreasing long-term rates. These scenarios consider many different factors, including:

- The impact on exposures as a result of instantaneous changes in interest rates from baseline rates.
- Forecasted balance sheet, as well as modeled prepayment and reinvestment behavior, but excluding assumptions about actions that could be taken by the Firm or its clients and customers in response to instantaneous rate changes. Mortgage prepayment assumptions are based on the interest rates used in the scenarios compared with underlying contractual rates, the time since origination, and other factors which are updated periodically based on historical experience. Deposit forecasts are a key assumption in the Firm's earnings-at-risk. The baseline reflects certain assumptions relating to the reversal of Quantitative Easing that are highly uncertain and require management judgment. Therefore, the actual amount of deposits held by the Firm, at any particular time, could be impacted by actions the Federal Reserve may take as part of monetary policy, including through the use of the Reverse Repurchase Facility. In addition, there are other factors that impact the amount of deposits held at the Firm such
as the level of loans across the industry and competition for deposits.
- The pricing sensitivity of deposits, known as deposit betas, represent the amount by which deposit rates paid could change upon a given change in market interest rates. As part of the Firm's continuous evaluation and periodic enhancements to its earnings-at-risk calculations, the Firm updated its model in the second quarter of 2023 to incorporate deposit repricing lags impacting both consumer and wholesale deposits. The model change incorporated observed pricing and customer behavior in both rising and falling interest rate environments. Actual deposit rates paid may differ from the modeled assumptions, primarily due to customer behavior and competition for deposits.
The Firm's earnings-at-risk scenarios are periodically evaluated and enhanced in response to changes in the composition of the Firm's balance sheet, changes in market conditions, improvements in the Firm's simulation and other factors. While a relevant measure of the Firm's interest rate exposure, the earnings-at-risk analysis does not represent a forecast of the Firm's net interest income. Refer to Outlook on page 8 for additional information.
The Firm's U.S. dollar sensitivities are presented in the table below.

(a) Reflects the impact of the aforementioned model update to incorporate deposit repricing lags. Prior periods have not been revised.

In the absence of the model update to incorporate deposit repricing lags in the second quarter of 2023, the Firm's U.S. dollar sensitivities as of June 30, 2023, would have been lower by $\$ 4.2$ billion to the +100 basis points shift in shortterm and parallel rate scenarios and higher by $\$ 4.4$ billion to the -100 basis points shift in short-term and parallel rate scenarios.
In addition, the change in the Firm's U.S. dollar sensitivities as of June 30, 2023 compared to December 31, 2022 reflected the impact of changes in the Firm's balance sheet including the impact of the First Republic acquisition.
As of June 30, 2023, the Firm's sensitivity to the $+/-100$ basis points parallel shift in rates is primarily the result of a greater impact from assets repricing compared to the impact of liabilities repricing.

The Firm continues to convert certain operations, and to integrate products associated with the First Republic acquisition to align with the Firm's business and operations. The Firm also continues to evaluate to which segments certain products associated with the First Republic acquisition, including deposits, should be allocated. Accordingly, earnings-at-risk results may be impacted in future periods.
The Firm's non-U.S. dollar sensitivities are presented in the table below.

| (in billions) | $\begin{array}{r} \text { June } 30, \\ 2023 \end{array}$ |  | $\begin{array}{r} \text { December 31, } \\ 2022 \end{array}$ |  |
| :---: | :---: | :---: | :---: | :---: |
| Parallel shift: |  |  |  |  |
| +100 bps shift in rates | \$ | 0.8 | \$ | 0.7 |
| -100 bps shift in rates |  | (0.8) |  | (0.6) |
| Steeper yield curve: |  |  |  |  |
| -100 bps shift in short-term rates |  | (0.7) |  | (0.6) |
| Flatter yield curve: |  |  |  |  |
| +100 bps shift in short-term rates |  | 0.8 |  | 0.6 |

The results of the non-U.S. dollar interest rate scenario involving a steeper/flatter yield curve with long-term rates increasing/decreasing by 100 basis points and short-term rates staying at current levels were not material to the Firm's earnings-at-risk at June 30, 2023 and December 31, 2022.

In addition to earnings-at-risk, the Firm also measures Economic Value Sensitivity (EVS). EVS stress tests the longer-term economic value of equity by measuring the sensitivity of the Firm's current balance sheet, primarily retained loans, deposits, debt and investment securities as well as related hedges, under various interest rate scenarios. In accordance with the CTC structural interest rate risk policy, the Firm has established limits on EVS as a percentage of TCE.
Refer to Other Risk Measures on pages 136-138 of JPMorgan Chase's 2022 Form 10-K for additional information.

## Other sensitivity-based measures

The Firm quantifies the market risk of certain debt and equity and credit and funding-related exposures by assessing the potential impact on net revenue, other comprehensive income ("OCI") and noninterest expense due to changes in relevant market variables. Refer to the predominant business activities that give rise to market risk on page 138 of JPMorgan Chase's 2022 Form 10-K for additional information on the positions captured in other sensitivity-based measures.
The table below represents the potential impact to net revenue, OCI or noninterest expense for market risk-sensitive instruments that are not included in VaR or earnings-at-risk. Where appropriate, instruments used for hedging purposes are reported net of the positions being hedged. The sensitivities disclosed in the table below may not be representative of the actual gain or loss that would have been realized at June 30, 2023 and December 31, 2022, as the movement in market parameters across maturities may vary and are not intended to imply management's expectation of future changes in these sensitivities.

| Gain/(loss) (in millions) <br> Activity |  |  | Sensitivity measure |
| :--- | :--- | :--- | :--- | :--- | :--- |

(a) Excludes equity securities without readily determinable fair values that are measured under the measurement alternative. Refer to Note 2 for additional information.
(b) In the first quarter of 2022, in line with the Firm's internal model governance, the credit risk component of CVA related to certain counterparties was removed from Credit Portfolio VaR due to the widening of the credit spreads for those counterparties to elevated levels. The related hedges were also removed to maintain consistency. This exposure is now reflected in other sensitivity-based measures.
(c) Impact recognized through net revenue.
(d) Impact recognized through noninterest expense.
(e) Impact recognized through OCI.

The Firm, through its LOBs and Corporate, may be exposed to country risk resulting from financial, economic, political or other significant developments which adversely affect the value of the Firm's exposures related to a particular country or set of countries. The Country Risk Management group actively monitors the various portfolios which may be impacted by these developments and measures the extent to which the Firm's exposures are diversified given the Firm's strategy and risk tolerance relative to a country.
Refer to pages 139-140 of JPMorgan Chase's 2022 Form 10-K for a further discussion of the Firm's country risk management.

## Risk Reporting

The following table presents the Firm's top 20 exposures by country (excluding the U.S.) as of June 30, 2023 and their comparative exposures as of December 31, 2022. The selection of countries represents the Firm's largest total exposures by individual country, based on the Firm's internal country risk management approach, and does not represent the Firm's view of any existing or potentially adverse credit conditions. Country exposures may fluctuate from period to period due to client activity and market flows.
The increases in exposures to Germany and the United Kingdom were primarily driven by increases in cash placed with the central banks of those countries, due to clientdriven activities, including as a result of changes in interest rates.

The decrease in exposure to Australia was driven by a reduction in cash placed with the central bank of Australia due to client-driven activities resulting from changes in interest rates.

The Firm continues to monitor potential impacts to the Firm associated with the war in Ukraine. As of June 30, 2023, exposure to Russia was approximately $\$ 430$ million. This amount excludes certain deposits placed on behalf of clients at the Depository Insurance Agency of Russia.

| (in billions) | June 30, 2023 |  |  |  |  |  |  | December <br> 31, <br> $2022^{(f)}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \text { Deposits } \\ & \text { with } \\ & \text { wanks }{ }^{(b)} \end{aligned}$ |  | $\underset{\substack{\text { Trading } \\ \text { and } \\ \text { investing } \\ \text { Lef) }}}{\substack{\text { (c) } \\ \text { Lendin }}}$ |  |  | Other | $\begin{gathered} \text { Total } \\ \text { exposure } \end{gathered}$ | $\begin{gathered} \text { Total } \\ \text { exposure } \\ \hline \end{gathered}$ |  |
| Germany | \$ | 94.0 | \$ 12.5 | \$ | 5.5 | \$ 0.3 | \$ 112.3 | \$ | 93.2 |
| United Kingdom |  | 44.1 | 25.6 |  | 17.4 | 1.9 | 89.0 |  | 70.1 |
| Japan |  | 32.7 | 2.7 |  | 7.7 | 0.3 | 43.4 |  | 55.8 |
| Brazil |  | 1.9 | 4.6 |  | 11.2 | - | 17.7 |  | 17.8 |
| Canada |  | 2.4 | 10.7 |  | 3.0 | 0.2 | 16.3 |  | 14.4 |
| Australia |  | 5.0 | 6.3 |  | 3.0 | - | 14.3 |  | 25.7 |
| Switzerland |  | 7.6 | 3.3 |  | 1.4 | 1.7 | 14.0 |  | 15.3 |
| France |  | 0.4 | 10.7 |  | 0.1 | 1.4 | 12.6 |  | 18.1 |
| China |  | 3.3 | 5.0 |  | 4.1 | - | 12.4 |  | 13.7 |
| Belgium |  | 6.7 | 1.7 |  | 1.4 | - | 9.8 |  | 9.2 |
| Singapore |  | 1.8 | 3.9 |  | 3.6 | 0.2 | 9.5 |  | 9.9 |
| India |  | 1.2 | 3.6 |  | 3.9 | 0.6 | 9.3 |  | 9.0 |
| South Korea |  | 1.0 | 3.8 |  | 3.5 | 0.2 | 8.5 |  | 10.0 |
| Netherlands |  | 0.1 | 6.4 |  | 0.6 | 0.2 | 7.3 |  | 7.1 |
| Mexico |  | 1.0 | 4.3 |  | 2.0 | - | 7.3 |  | 5.4 |
| Saudi Arabia |  | 0.8 | 4.0 |  | 1.8 | - | 6.6 |  | 7.9 |
| Spain |  | 0.4 | 5.1 |  | 0.9 | - | 6.4 |  | 5.8 |
| Hong Kong SAR |  | 2.3 | 1.4 |  | 0.8 | 0.4 | 4.9 |  | 4.5 |
| Luxembourg |  | 0.8 | 2.6 |  | 1.3 | - | 4.7 |  | 5.3 |
| Sweden |  | 1.2 | 3.4 |  | (0.1) | - | 4.5 |  | 4.4 |

(a) Country exposures presented in the table reflect $88 \%$ of total Firmwide non-U.S. exposure, where exposure is attributed to an individual country based on the Firm's internal country risk management approach, as of both June 30, 2023 and December 31, 2022.
(b) Predominantly represents cash placed with central banks.
(c) Includes loans and accrued interest receivable, lending-related commitments (net of eligible collateral and the allowance for credit losses). Excludes intra-day and operating exposures, such as those from settlement and clearing activities.
(d) Includes market-making inventory, investment securities, and counterparty exposure on derivative and securities financings net of eligible collateral and hedging. Includes exposure from single reference entity ("single-name"), index and other multiple reference entity transactions for which one or more of the underlying reference entities is in a country listed in the above table.
(e) Includes physical commodities inventory and clearing house guarantee funds.
(f) The country rankings presented in the table as of December 31, 2022, are based on the country rankings of the corresponding exposures at June 30, 2023, not actual rankings of such exposures as of December 31, 2022.

JPMorgan Chase's accounting policies and use of estimates are integral to understanding its reported results. The Firm's most complex accounting estimates require management's judgment to ascertain the appropriate carrying value of assets and liabilities. The Firm has established policies and control procedures intended to ensure that estimation methods, including any judgments made as part of such methods, are well-controlled, independently reviewed and applied consistently from period to period. The methods used and judgments made reflect, among other factors, the nature of the assets or liabilities and the related business and risk management strategies, which may vary across the Firm's businesses and portfolios. In addition, the policies and procedures are intended to ensure that the process for changing methodologies occurs in an appropriate manner. The Firm believes its estimates for determining the carrying value of its assets and liabilities are appropriate. The following is a brief description of the Firm's critical accounting estimates involving significant judgments.

## Allowance for credit losses

The Firm's allowance for credit losses represents management's estimate of expected credit losses over the remaining expected life of the Firm's financial assets measured at amortized cost and certain off-balance sheet lending-related commitments. The allowance for credit losses generally consists of:

- The allowance for loan losses, which covers the Firm's retained loan portfolios (scored and risk-rated).
- The allowance for lending-related commitments, which is reflected in accounts payable and other liabilities on the Consolidated balance sheets, and
- The allowance for credit losses on investment securities, which is reflected in investment securities on the Consolidated balance sheets.
The allowance for credit losses involves significant judgment on a number of matters including development and weighting of macroeconomic forecasts, incorporation of historical loss experience, assessment of risk characteristics, assignment of risk ratings, valuation of collateral, and the determination of remaining expected life. Refer to Note 10 and Note 13 of JPMorgan Chase's 2022 Form 10-K for further information on these judgments as well as the Firm's policies and methodologies used to determine the Firm's allowance for credit losses; and refer to Allowance for credit losses on pages 80-82 and Note 13 of this Form 10-Q for further information.
One of the most significant judgments involved in estimating the Firm's allowance for credit losses relates to the macroeconomic forecasts used to estimate credit losses over the eight-quarter forecast period within the Firm's methodology. The eight-quarter forecast incorporates hundreds of macroeconomic variables ("MEVs") that are relevant for exposures across the Firm, with modeled credit losses being driven primarily by a subset of less than twenty
variables. The specific variables that have the greatest effect on the modeled losses of each portfolio vary by portfolio and geography.
- Key MEVs for the consumer portfolio include regional U.S. unemployment and HPI.
- Key MEVs for the wholesale portfolio include U.S. unemployment, U.S. real GDP, U.S. equity prices, U.S. interest rates, corporate credit spreads, oil prices, commercial real estate prices and HPI.
Changes in the Firm's assumptions and forecasts of economic conditions could significantly affect its estimate of expected credit losses in the portfolio at the balance sheet date or lead to significant changes in the estimate from one reporting period to the next.
As a result of the First Republic acquisition, the Firm recorded an allowance for credit losses for the loans acquired and lending-related commitments assumed as of May 1, 2023. Given the differences in risk rating methodologies for the First Republic Portfolio, and the ongoing integration of products and systems, the allowance for credit losses for the acquired wholesale portfolio was measured based on other facilities underwritten by the Firm with similar risk characteristics and not based on modeled estimates. As such, the First Republic wholesale portfolio is excluded from the modeled estimates sensitivity analysis below. The allowance for credit losses for predominantly all of the consumer portfolio was measured using the Firm's modeled approach, as the consumer portfolio is predominantly residential real estate that has more commonly defined risk characteristics including loan to value ratio and credit score, and therefore is reflected in the sensitivity analysis below. Refer to Note 28 for additional information on the First Republic acquisition. It is difficult to estimate how potential changes in any one factor or input might affect the overall allowance for credit losses because management considers a wide variety of factors and inputs in estimating the allowance for credit losses. Changes in the factors and inputs considered may not occur at the same rate and may not be consistent across all geographies or product types, and changes in factors and inputs may be directionally inconsistent, such that improvement in one factor or input may offset deterioration in others.
To consider the impact of a hypothetical alternate macroeconomic forecast, the Firm compared the modeled credit losses determined using its central and relative adverse macroeconomic scenarios, which are two of the five scenarios considered in estimating the allowances for loan losses and lending-related commitments. The central and relative adverse scenarios each included a full suite of MEVs, but differed in the levels, paths and peaks/troughs of those variables over the eight-quarter forecast period.
For example, compared to the Firm's central scenario shown on page 80 and in Note 13, the Firm's relative
adverse scenario assumes an elevated U.S. unemployment rate, averaging approximately $1.6 \%$ higher over the eight-quarter forecast, with a peak difference of $2.2 \%$ in the first quarter of 2024; lower U.S. real GDP with a slower recovery, remaining approximately $3.1 \%$ lower at the end of the eight-quarter forecast, with a peak difference of approximately $3.4 \%$ in the third quarter of 2024; and lower national HPI with a peak difference of approximately $10.5 \%$ in the first quarter of 2025 .

This analysis is not intended to estimate expected future changes in the allowance for credit losses, for a number of reasons, including:

- The allowance as of June 30, 2023, reflects credit losses beyond those estimated under the central scenario due to the weight placed on the adverse scenarios.
- The impacts of changes in many MEVs are both interrelated and nonlinear, so the results of this analysis cannot be simply extrapolated for more severe changes in macroeconomic variables.
- Expectations of future changes in portfolio composition and borrower behavior can significantly affect the allowance for credit losses.

To demonstrate the sensitivity of credit loss estimates to macroeconomic forecasts as of June 30, 2023, the Firm compared the modeled estimates under its relative adverse scenario to its central scenario. Without considering offsetting or correlated effects in other qualitative components of the Firm's allowance for credit losses, the comparison between these two scenarios for the exposures below reflect the following differences:

- An increase of approximately \$750 million for residential real estate loans and lending-related commitments, including the First Republic portfolios
- An increase of approximately $\$ 2.4$ billion for credit card Ioans
- An increase of approximately $\$ 3.8$ billion for wholesale loans and lending-related commitments, excluding the First Republic portfolios.

This analysis relates only to the modeled credit loss estimates and is not intended to estimate changes in the overall allowance for credit losses as it does not reflect any potential changes in other adjustments to the quantitative calculation, which would also be influenced by the judgment management applies to the modeled lifetime loss estimates to reflect the uncertainty and imprecision of these modeled lifetime loss estimates based on then-current circumstances and conditions.
Recognizing that forecasts of macroeconomic conditions are inherently uncertain, particularly in light of the recent economic conditions, the Firm believes that its process to consider the available information and associated risks and uncertainties is appropriately governed and that its estimates of expected credit losses were reasonable and appropriate for the period ended June 30, 2023.

## Fair value

JPMorgan Chase carries a portion of its assets and liabilities at fair value. The majority of such assets and liabilities are measured at fair value on a recurring basis, including derivatives, structured note products and certain securities financing agreements. Certain assets and liabilities are measured at fair value on a nonrecurring basis, including certain mortgage, home equity and other loans, where the carrying value is based on the fair value of the underlying collateral.

## Assets measured at fair value

The following table includes the Firm's assets measured at fair value and the portion of such assets that are classified within level 3 of the fair value hierarchy. Refer to Note 2 for further information.

| June 30, 2023 <br> (in millions, except ratios) | Total assets at fair value | Total level 3 assets |
| :---: | :---: | :---: |
| Federal funds sold and securities purchased under resale agreements | \$ 322,579 | \$ |
| Securities borrowed | 55,905 | - |
| Trading assets: |  |  |
| Trading-debt and equity instruments | 572,739 | 3,313 |
| Derivative receivables ${ }^{(a)}$ | 64,217 | 10,749 |
| Total trading assets | 636,956 | 14,062 |
| AFS securities | 203,262 | 267 |
| Loans | 38,789 | 3,808 |
| MSRs | 8,229 | 8,229 |
| Other | 13,250 | 417 |
| Total assets measured at fair value on a recurring basis | 1,278,970 | 26,783 |
| Total assets measured at fair value on a nonrecurring basis | 1,936 | 1,126 |
| Total assets measured at fair value | \$1,280,906 | \$ 27,909 |
| Total Firm assets | \$3,868,240 |  |
| Level 3 assets at fair value as a percentage of total Firm assets ${ }^{(\text {a) }}$ |  | 0.7 \% |
| Level 3 assets at fair value as a percentage of total Firm assets at fair value ${ }^{\text {(a) }}$ |  | 2.2 \% |

(a) For purposes of the table above, the derivative receivables total reflects the impact of netting adjustments; however, the $\$ 10.7$ billion of derivative receivables classified as level 3 does not reflect the netting adjustment as such netting is not relevant to a presentation based on the transparency of inputs to the valuation of an asset. The level 3 balances would be reduced if netting were applied, including the netting benefit associated with cash collateral.

Valuation
Estimating fair value requires the application of judgment. The type and level of judgment required is largely dependent on the amount of observable market information available to the Firm. For instruments valued using internally developed valuation models and other valuation techniques that use significant unobservable inputs and are therefore classified within level 3 of the fair value hierarchy, judgments used to estimate fair value are more significant than those required when estimating the fair value of instruments classified within levels 1 and 2.
In arriving at an estimate of fair value for an instrument within level 3, management must first determine the appropriate valuation model or other valuation technique to use. Second, the lack of observability of certain significant inputs requires management to assess relevant empirical data in deriving valuation inputs including, for example, transaction details, yield curves, interest rates, prepayment speeds, default rates, volatilities, correlations, prices (such as commodity, equity or debt prices), valuations of comparable instruments, foreign exchange rates and credit curves. Refer to Note 2 for a further discussion of the valuation of level 3 instruments, including unobservable inputs used.
For instruments classified in levels 2 and 3, management judgment must be applied to assess the appropriate level of valuation adjustments to reflect counterparty credit quality, the Firm's creditworthiness, market funding rates, liquidity considerations, unobservable parameters, and for portfolios that meet specified criteria, the size of the net open risk position. The judgments made are typically affected by the type of product and its specific contractual terms, and the level of liquidity for the product or within the market as a whole. In periods of heightened market volatility and uncertainty judgments are further affected by the wider variation of reasonable valuation estimates, particularly for positions that are less liquid. Refer to Note 2 for a further discussion of valuation adjustments applied by the Firm. Imprecision in estimating unobservable market inputs or other factors can affect the amount of gain or loss recorded for a particular position. Furthermore, while the Firm believes its valuation methods are appropriate and consistent with those of other market participants, the methods and assumptions used reflect management judgment and may vary across the Firm's businesses and portfolios.
The Firm uses various methodologies and assumptions in the determination of fair value. The use of methodologies or assumptions different than those used by the Firm could result in a different estimate of fair value at the reporting date. Refer to Note 2 for a detailed discussion of the Firm's valuation process and hierarchy, and its determination of fair value for individual financial instruments.

Credit card rewards liability
The credit card rewards liability was $\$ 12.2$ billion and $\$ 11.3$ billion at June 30, 2023 and December 31, 2022, respectively, and is recorded in accounts payable and other liabilities on the Consolidated balance sheets. The increase in the liability was predominantly driven by continued growth in rewards points earned on higher spend and promotional offers outpacing redemptions throughout 2023, and, to a lesser extent, adjustments to certain reward program terms in the second quarter. Refer to pages 151-152 of JPMorgan Chase's 2022 Form 10-K for a description of the significant assumptions and sensitivities, associated with the Firm's credit card rewards liability.

Income taxes
Refer to Income taxes on page 152 of JPMorgan Chase's 2022 Form 10-K for a description of the significant assumptions, judgments and interpretations associated with the accounting for income taxes.
Goodwill impairment
Management applies significant judgment when testing goodwill for impairment. Refer to Goodwill impairment on page 151 of JPMorgan Chase's 2022 Form 10-K for a description of the significant valuation judgments associated with goodwill impairment.
Refer to Note 15 for additional information on goodwill, including the goodwill impairment assessment as of June 30, 2023.

Litigation reserves
Refer to Note 26 of this Form 10-Q, and Note 30 of JPMorgan Chase's 2022 Form 10-K for a description of the significant estimates and judgments associated with establishing litigation reserves.

Financial Accounting Standards Board ("FASB") Standards Adopted since January 1, 2021

| Standard | Summary of guidance | Effects on financial statements |
| :--- | :--- | :--- |
| Reference Rate | • Provides optional expedients and exceptions to | • Issued and effective March 12, 2020. The |
| Reform | current accounting guidance when financial <br> instruments, hedge accounting relationships, and | January 7, 2021 and December 21, 2022 <br> updates were effective when issued. |
| Issued March other transactions are amended due to reference | Refer to Accounting and Reporting <br> 2020 and updated <br> January 2021 and | rate reform. |

FASB Standards Adopted since January 1, 2023

| Standard | Summary of guidance | Effects on financial statements |
| :---: | :---: | :---: |
| Derivatives and Hedging: Fair Value Hedging - Portfolio Layer Method <br> Issued March 2022 | - Expands the current ability to hedge a portfolio of prepayable assets to allow more of the portfolio to be hedged. Non-prepayable assets can also be included in the same portfolio, thus increasing the size of the portfolio and the amount available to be hedged. <br> - Clarifies the types of derivatives that can be used as hedges, and the balance sheet presentation and disclosure requirements for the hedge accounting adjustments. <br> - Allows a one-time reclassification from HTM to AFS upon adoption. | - Adopted prospectively on January 1, 2023. <br> - Refer to Note 1 for further information. |
| Financial Instruments Credit Losses: Troubled Debt Restructurings and Vintage Disclosures | - Eliminates existing accounting and disclosure requirements for Troubled Debt Restructurings, including the requirement to measure the allowance using a discounted cash flow | - Adopted under the modified retrospective method on January 1, 2023. <br> - Refer to Note 1 for further information. |

Issued March 2022 methodology.

- Requires disclosure of Ioan modifications for borrowers experiencing financial difficulty involving principal forgiveness, interest rate reduction, other-than-insignificant payment delay, term extension or a combination of these modifications.
- Requires disclosure of current period loan charge-off information by origination year.
- May be adopted prospectively, or by using a modified retrospective method wherein the effect of adoption is reflected as an adjustment to retained earnings at the effective date.
FASB Standards Issued but not yet Adopted

| Standard | Summary of guidance | Effects on financial statements |
| :---: | :---: | :---: |
| Investments - Equity | Expands the ability to elect proportional | - Required effective date: January 1, 2024. ${ }^{(a)}$ |
| Method and Joint | amortization for more types of tax-oriented | - The Firm is |
| Ventures: Accounting | investments (beyond low income housing tax | potential impact on the Consolidated |
| for Investments in Tax Credit Structures Using | credit investments) on a program-by-program | Financial Statements. |
| the Proportional |  |  |
| Amortization Method | - May be adopted using a full retrospective method, or a modified retrospective method |  |
| Issued March 2023 | wherein the effect of adoption is reflected as an adjustment to retained earnings at the effective date. |  |

(a) Early adoption is permitted.

From time to time, the Firm has made and will make forwardlooking statements. These statements can be identified by the fact that they do not relate strictly to historical or current facts. Forward-looking statements often use words such as "anticipate," "target," "expect," "estimate," "intend," "plan," "goal," "believe," or other words of similar meaning. Forwardlooking statements provide JPMorgan Chase's current expectations or forecasts of future events, circumstances, results or aspirations. JPMorgan Chase's disclosures in this Form 10-Q contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. The Firm also may make forward-looking statements in its other documents filed or furnished with the SEC. In addition, the Firm's senior management may make forwardlooking statements orally to investors, analysts, representatives of the media and others.
All forward-looking statements are, by their nature, subject to risks and uncertainties, many of which are beyond the Firm's control. JPMorgan Chase's actual future results may differ materially from those set forth in its forward-looking statements. While there is no assurance that any list of risks and uncertainties or risk factors is complete, below are certain factors which could cause actual results to differ from those in the forward-looking statements:

- Local, regional and global business, economic and political conditions and geopolitical events, including the war in Ukraine;
- Changes in laws, rules and regulatory requirements, including capital and liquidity requirements affecting the Firm's businesses, and the ability of the Firm to address those requirements;
- Heightened regulatory and governmental oversight and scrutiny of JPMorgan Chase's business practices, including dealings with retail customers;
- Changes in trade, monetary and fiscal policies and laws;
- Changes in the level of inflation;
- Changes in income tax laws, rules and regulations;
- Changes in FDIC assessments;
- Securities and capital markets behavior, including changes in market liquidity and volatility;
- Changes in investor sentiment or consumer spending or savings behavior;
- Ability of the Firm to manage effectively its capital and liquidity;
- Changes in credit ratings assigned to the Firm or its subsidiaries;
- Damage to the Firm's reputation;
- Ability of the Firm to appropriately address social, environmental and sustainability concerns that may arise, including from its business activities;
- Ability of the Firm to deal effectively with an economic slowdown or other economic or market disruption, including, but not limited to, in the interest rate environment;
- Technology changes instituted by the Firm, its counterparties or competitors;
- The effectiveness of the Firm's control agenda;
- Ability of the Firm to develop or discontinue products and services, and the extent to which products or services previously sold by the Firm require the Firm to incur liabilities or absorb losses not contemplated at their initiation or origination;
- Acceptance of the Firm's new and existing products and services by the marketplace and the ability of the Firm to innovate and to increase market share;
- Ability of the Firm to attract and retain qualified and diverse employees;
- Ability of the Firm to control expenses;
- Competitive pressures;
- Changes in the credit quality of the Firm's clients, customers and counterparties;
- Adequacy of the Firm's risk management framework, disclosure controls and procedures and internal control over financial reporting;
- Adverse judicial or regulatory proceedings;
- Ability of the Firm to determine accurate values of certain assets and liabilities;
- Occurrence of natural or man-made disasters or calamities, including health emergencies, the spread of infectious diseases, epidemics or pandemics, an outbreak or escalation of hostilities or other geopolitical instabilities, the effects of climate change or extraordinary events beyond the Firm's control, and the Firm's ability to deal effectively with disruptions caused by the foregoing;
- Ability of the Firm to maintain the security of its financial, accounting, technology, data processing and other operational systems and facilities;
- Ability of the Firm to withstand disruptions that may be caused by any failure of its operational systems or those of third parties;
- Ability of the Firm to effectively defend itself against cyberattacks and other attempts by unauthorized parties to access information of the Firm or its customers or to disrupt the Firm's systems; and
- The other risks and uncertainties detailed in Part I, Item 1A: Risk Factors in JPMorgan Chase's 2022 Form 10-K.
Any forward-looking statements made by or on behalf of the Firm speak only as of the date they are made, and JPMorgan Chase does not undertake to update any forward-looking statements. The reader should, however, consult any further disclosures of a forward-looking nature the Firm may make in any subsequent Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q or Current Reports on Form 8-K.

JPMorgan Chase \& Co.
Consolidated statements of income (unaudited)

| (in millions, except per share data) | Three months ended June 30, |  |  |  | Six months ended June 30, |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  | 2022 |  | 2023 |  | 2022 |  |
| Revenue |  |  |  |  |  |  |  |  |
| Investment banking fees | \$ | 1,513 | \$ | 1,586 | \$ | 3,162 | \$ | 3,594 |
| Principal transactions |  | 6,910 |  | 4,990 |  | 14,525 |  | 10,095 |
| Lending- and deposit-related fees |  | 1,828 |  | 1,873 |  | 3,448 |  | 3,712 |
| Asset management fees |  | 3,774 |  | 3,517 |  | 7,239 |  | 7,169 |
| Commissions and other fees |  | 1,739 |  | 1,723 |  | 3,434 |  | 3,433 |
| Investment securities losses |  | (900) |  | (153) |  | $(1,768)$ |  | (547) |
| Mortgage fees and related income |  | 278 |  | 378 |  | 499 |  | 838 |
| Card income |  | 1,094 |  | 1,133 |  | 2,328 |  | 2,108 |
| Other income |  | 3,292 |  | 540 |  | 4,299 |  | 2,030 |
| Noninterest revenue |  | 19,528 |  | 15,587 |  | 37,166 |  | 32,432 |
| Interest income |  | 41,644 |  | 18,646 |  | 78,648 |  | 34,142 |
| Interest expense |  | 19,865 |  | 3,518 |  | 36,158 |  | 5,142 |
| Net interest income |  | 21,779 |  | 15,128 |  | 42,490 |  | 29,000 |
| Total net revenue |  | 41,307 |  | 30,715 |  | 79,656 |  | 61,432 |
| Provision for credit losses |  | 2,899 |  | 1,101 |  | 5,174 |  | 2,564 |
| Noninterest expense |  |  |  |  |  |  |  |  |
| Compensation expense |  | 11,216 |  | 10,301 |  | 22,892 |  | 21,088 |
| Occupancy expense |  | 1,070 |  | 1,129 |  | 2,185 |  | 2,263 |
| Technology, communications and equipment expense |  | 2,267 |  | 2,376 |  | 4,451 |  | 4,736 |
| Professional and outside services |  | 2,561 |  | 2,469 |  | 5,009 |  | 5,041 |
| Marketing |  | 1,122 |  | 881 |  | 2,167 |  | 1,801 |
| Other expense |  | 2,586 |  | 1,593 |  | 4,225 |  | 3,011 |
| Total noninterest expense |  | 20,822 |  | 18,749 |  | 40,929 |  | 37,940 |
| Income before income tax expense |  | 17,586 |  | 10,865 |  | 33,553 |  | 20,928 |
| Income tax expense |  | 3,114 |  | 2,216 |  | 6,459 |  | 3,997 |
| Net income | \$ | 14,472 | \$ | 8,649 | \$ | 27,094 | \$ | 16,931 |
| Net income applicable to common stockholders | \$ | 14,011 | \$ | 8,195 | \$ | 26,204 | \$ | 16,039 |
| Net income per common share data |  |  |  |  |  |  |  |  |
| Basic earnings per share | \$ | 4.76 | \$ | 2.77 | \$ | 8.86 | \$ | 5.40 |
| Diluted earnings per share |  | 4.75 |  | 2.76 |  | 8.85 |  | 5.39 |
| Weighted-average basic shares |  | 2,943.8 |  | 2,962.2 |  | 2,956.1 |  | 2,969.6 |
| Weighted-average diluted shares |  | 2,948.3 |  | 2,966.3 |  | 2,960.5 |  | 2,973.7 |

The Notes to Consolidated Financial Statements (unaudited) are an integral part of these statements.

JPMorgan Chase \& Co.
Consolidated statements of comprehensive income (unaudited)

| (in millions) | Three months ended June 30, |  |  |  | Six months ended June 30, |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  | 2022 |  | 2023 |  | 2022 |  |
| Net income | \$ | 14,472 | \$ | 8,649 | \$ | 27,094 | \$ | 16,931 |
| Other comprehensive income/(loss), after-tax |  |  |  |  |  |  |  |  |
| Unrealized gains/(losses) on investment securities |  | 757 |  | $(4,031)$ |  | 2,969 |  | $(11,484)$ |
| Translation adjustments, net of hedges |  | 70 |  | (679) |  | 267 |  | (741) |
| Fair value hedges |  | 11 |  | 51 |  | (10) |  | 161 |
| Cash flow hedges |  | (497) |  | $(1,348)$ |  | 301 |  | $(4,139)$ |
| Defined benefit pension and OPEB plans |  | (6) |  | 20 |  | (61) |  | 87 |
| DVA on fair value option elected liabilities |  | (207) |  | 1,185 |  | (415) |  | 1,831 |
| Total other comprehensive income/(loss), after-tax |  | 128 |  | $(4,802)$ |  | 3,051 |  | $(14,285)$ |
| Comprehensive income | \$ | 14,600 | \$ | 3,847 | \$ | 30,145 | \$ | 2,646 |

The Notes to Consolidated Financial Statements (unaudited) are an integral part of these statements.

JPMorgan Chase \& Co.
Consolidated balance sheets (unaudited)

| (in millions, except share data) |  | $\begin{array}{r} \hline \text { June 30, } \\ 2023 \end{array}$ | December 31,2022 |  |
| :---: | :---: | :---: | :---: | :---: |
| Assets |  |  |  |  |
| Cash and due from banks | \$ | 26,064 | \$ | 27,697 |
| Deposits with banks |  | 469,059 |  | 539,537 |
| Federal funds sold and securities purchased under resale agreements (included $\$ 322,579$ and $\$ 311,883$ at fair value) |  | 325,628 |  | 315,592 |
| Securities borrowed (included \$55,905 and \$70,041 at fair value) |  | 163,563 |  | 185,369 |
| Trading assets (included assets pledged of \$142,625 and \$93,687) |  | 636,996 |  | 453,799 |
| Available-for-sale securities (amortized cost of $\$ 209,876$ and $\$ 216,188$; included assets pledged of $\$ 12,864$ and $\$ 9,158$ ) |  | 203,262 |  | 205,857 |
| Held-to-maturity securities |  | 408,941 |  | 425,305 |
| Investment securities, net of allowance for credit losses |  | 612,203 |  | 631,162 |
| Loans (included \$38,789 and \$42,079 at fair value) |  | 1,300,069 |  | 1,135,647 |
| Allowance for loan losses |  | $(21,980)$ |  | $(19,726)$ |
| Loans, net of allowance for loan losses |  | 1,278,089 |  | 1,115,921 |
| Accrued interest and accounts receivable |  | 111,561 |  | 125,189 |
| Premises and equipment |  | 29,493 |  | 27,734 |
| Goodwill, MSRs and other intangible assets |  | 64,238 |  | 60,859 |
| Other assets (included \$14,166 and \$14,921 at fair value and assets pledged of \$5,844 and \$7,998) |  | 151,346 |  | 182,884 |
| Total assets ${ }^{\text {(a) }}$ | \$ | 3,868,240 | \$ | 3,665,743 |
| Liabilities |  |  |  |  |
| Deposits (included \$51,568 and \$28,620 at fair value) | \$ | 2,398,962 | \$ | 2,340,179 |
| Federal funds purchased and securities loaned or sold under repurchase agreements (included \$216,604 and \$151,999 at fair value) |  | 266,272 |  | 202,613 |
| Short-term borrowings (included \$17,942 and \$15,792 at fair value) |  | 41,022 |  | 44,027 |
| Trading liabilities |  | 178,809 |  | 177,976 |
| Accounts payable and other liabilities (included \$5,101 and \$7,038 at fair value) |  | 286,934 |  | 300,141 |
| Beneficial interests issued by consolidated VIEs (included \$1 and \$5 at fair value) |  | 19,647 |  | 12,610 |
| Long-term debt (included \$78,609 and \$72,281 at fair value) |  | 364,078 |  | 295,865 |
| Total liabilities ${ }^{\text {(a) }}$ |  | 3,555,724 |  | 3,373,411 |
| Commitments and contingencies (refer to Notes 22, 23 and 24) |  |  |  |  |
| Stockholders' equity |  |  |  |  |
| Preferred stock (\$1 par value; authorized 200,000,000 shares; issued 2,740,375 shares) |  | 27,404 |  | 27,404 |
| Common stock (\$1 par value; authorized 9,000,000,000 shares; issued 4,104,933,895 shares) |  | 4,105 |  | 4,105 |
| Additional paid-in capital |  | 89,578 |  | 89,044 |
| Retained earnings |  | 317,359 |  | 296,456 |
| Accumulated other comprehensive losses |  | $(14,290)$ |  | $(17,341)$ |
| Treasury stock, at cost (1,198,848,622 and 1,170,676,094 shares) |  | $(111,640)$ |  | $(107,336)$ |
| Total stockholders' equity |  | 312,516 |  | 292,332 |
| Total liabilities and stockholders' equity | \$ | 3,868,240 | \$ | 3,665,743 |

(a) The following table presents information on assets and liabilities related to VIEs that are consolidated by the Firm at June 30, 2023, and December 31, 2022. The assets of the consolidated VIEs are used to settle the liabilities of those entities. The holders of the beneficial interests generally do not have recourse to the general credit of JPMorgan Chase. The assets and liabilities in the table below include third-party assets and liabilities of consolidated VIEs and exclude intercompany balances that eliminate in consolidation. Refer to Note 14 for a further discussion.

| (in millions) | $\begin{array}{r} \hline \text { June } 30, \\ 2023 \end{array}$ |  | $\begin{array}{r} \text { December 31, } \\ 2022 \end{array}$ |  |
| :---: | :---: | :---: | :---: | :---: |
| Assets |  |  |  |  |
| Trading assets | \$ | 2,368 | \$ | 2,151 |
| Loans |  | 39,125 |  | 34,411 |
| All other assets |  | 532 |  | 550 |
| Total assets | \$ | 42,025 | \$ | 37,112 |
| Liabilities |  |  |  |  |
| Beneficial interests issued by consolidated VIEs | \$ | 19,647 | \$ | 12,610 |
| All other liabilities |  | 247 |  | 279 |
| Total liabilities | \$ | 19,894 | \$ | 12,889 |

The Notes to Consolidated Financial Statements (unaudited) are an integral part of these statements.

JPMorgan Chase \& Co. Consolidated statements of changes in stockholders' equity (unaudited)

| (in millions, except per share data) | Three months ended June 30, |  |  |  | Six months ended June 30, |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  | 2022 |  | 2023 |  | 2022 |  |
| Preferred stock |  |  |  |  |  |  |  |  |
| Balance at the beginning of the period | \$ | 27,404 | \$ | 32,838 | \$ | 27,404 | \$ | 34,838 |
| Issuance |  | - |  | - |  | - |  | - |
| Redemption |  | - |  | - |  | - |  | $(2,000)$ |
| Balance at June 30 |  | 27,404 |  | 32,838 |  | 27,404 |  | 32,838 |
| Common stock |  |  |  |  |  |  |  |  |
| Balance at the beginning and end of the period |  | 4,105 |  | 4,105 |  | 4,105 |  | 4,105 |
| Additional paid-in capital |  |  |  |  |  |  |  |  |
| Balance at the beginning of the period |  | 89,155 |  | 88,260 |  | 89,044 |  | 88,415 |
| Shares issued and commitments to issue common stock for employee share-based compensation awards, and related tax effects |  | 423 |  | 354 |  | 534 |  | 199 |
| Balance at June 30 |  | 89,578 |  | 88,614 |  | 89,578 |  | 88,614 |
| Retained earnings |  |  |  |  |  |  |  |  |
| Balance at the beginning of the period |  | 306,208 |  | 277,177 |  | 296,456 |  | 272,268 |
| Cumulative effect of change in accounting principles |  | - |  | - |  | 449 |  | - |
| Net income |  | 14,472 |  | 8,649 |  | 27,094 |  | 16,931 |
| Dividends declared: |  |  |  |  |  |  |  |  |
| Preferred stock |  | (373) |  | (410) |  | (729) |  | (807) |
| Common stock ( $\$ 1.00$ and $\$ 1.00$ per share and $\$ 2.00$ and $\$ 2.00$ per share, respectively) |  | $(2,948)$ |  | $(2,971)$ |  | $(5,911)$ |  | $(5,947)$ |
| Balance at June 30 |  | 317,359 |  | 282,445 |  | 317,359 |  | 282,445 |
| Accumulated other comprehensive income/(loss) |  |  |  |  |  |  |  |  |
| Balance at the beginning of the period |  | $(14,418)$ |  | $(9,567)$ |  | $(17,341)$ |  | (84) |
| Other comprehensive income/(loss), after-tax |  | 128 |  | $(4,802)$ |  | 3,051 |  | $(14,285)$ |
| Balance at June 30 |  | $(14,290)$ |  | $(14,369)$ |  | $(14,290)$ |  | $(14,369)$ |
| Treasury stock, at cost |  |  |  |  |  |  |  |  |
| Balance at the beginning of the period |  | $(109,372)$ |  | $(106,914)$ |  | $(107,336)$ |  | $(105,415)$ |
| Repurchase |  | $(2,316)$ |  | (622) |  | $(5,271)$ |  | $(3,122)$ |
| Reissuance |  | 48 |  | 46 |  | 967 |  | 1,047 |
| Balance at June 30 |  | $(111,640)$ |  | $(107,490)$ |  | $(111,640)$ |  | $(107,490)$ |
| Total stockholders' equity | \$ | 312,516 | \$ | 286,143 | \$ | 312,516 | \$ | 286,143 |

Effective January 1, 2023, the Firm adopted the Financial Instruments - Credit Losses: Troubled Debt Restructurings and Derivatives and Hedging: Fair Value Hedging - Portfolio Layer Method accounting guidance. Refer to Note 1 for further information.

The Notes to Consolidated Financial Statements (unaudited) are an integral part of these statements.

JPMorgan Chase \& Co.
Consolidated statements of cash flows (unaudited)

| (in millions) | Six months ended June 30, |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  | 2022 |  |
| Operating activities |  |  |  |  |
| Net income | \$ | 27,094 | \$ | 16,931 |
| Adjustments to reconcile net income to net cash used in operating activities: |  |  |  |  |
| Provision for credit losses |  | 5,174 |  | 2,564 |
| Depreciation and amortization |  | 2,156 |  | 3,609 |
| Deferred tax (benefit)/expense |  | $(2,238)$ |  | $(2,086)$ |
| Bargain purchase gain associated with the First Republic acquisition |  | $(2,712)$ |  | - |
| Other |  | 3,008 |  | 2,172 |
| Originations and purchases of loans held-for-sale |  | $(48,270)$ |  | $(102,857)$ |
| Proceeds from sales, securitizations and paydowns of loans held-for-sale |  | 47,746 |  | 116,764 |
| Net change in: |  |  |  |  |
| Trading assets |  | $(178,766)$ |  | $(53,816)$ |
| Securities borrowed |  | 21,835 |  | 3,379 |
| Accrued interest and accounts receivable |  | 16,107 |  | $(43,051)$ |
| Other assets |  | 44,599 |  | $(14,930)$ |
| Trading liabilities |  | $(4,846)$ |  | 23,646 |
| Accounts payable and other liabilities |  | $(24,563)$ |  | 70,976 |
| Other operating adjustments |  | 1,300 |  | 800 |
| Net cash provided by/(used in) operating activities |  | $(92,376)$ |  | 24,101 |
| Investing activities |  |  |  |  |
| Net change in: |  |  |  |  |
| Federal funds sold and securities purchased under resale agreements |  | $(9,816)$ |  | $(60,833)$ |
| Held-to-maturity securities: |  |  |  |  |
| Proceeds from paydowns and maturities |  | 13,762 |  | 20,952 |
| Purchases |  | $(4,141)$ |  | $(27,490)$ |
| Available-for-sale securities: |  |  |  |  |
| Proceeds from paydowns and maturities |  | 23,470 |  | 21,913 |
| Proceeds from sales |  | 69,875 |  | 36,217 |
| Purchases |  | $(52,433)$ |  | $(66,200)$ |
| Proceeds from sales and securitizations of loans held-for-investment |  | 19,526 |  | 22,185 |
| Other changes in loans, net |  | $(33,353)$ |  | $(67,802)$ |
| Net cash used in the First Republic acquisition |  | $(9,920)$ |  | - |
| All other investing activities, net |  | $(11,419)$ |  | $(4,753)$ |
| Net cash provided by/(used in) investing activities |  | 5,551 |  | $(125,811)$ |
| Financing activities |  |  |  |  |
| Net change in: |  |  |  |  |
| Deposits |  | $(27,782)$ |  | 5,841 |
| Federal funds purchased and securities loaned or sold under repurchase agreements |  | 63,590 |  | 28,586 |
| Short-term borrowings |  | $(3,135)$ |  | 5,622 |
| Beneficial interests issued by consolidated VIEs |  | 7,708 |  | 552 |
| Proceeds from long-term borrowings |  | 19,357 |  | 45,873 |
| Payments of long-term borrowings |  | $(32,003)$ |  | $(25,991)$ |
| Redemption of preferred stock |  | - |  | $(2,000)$ |
| Treasury stock repurchased |  | $(5,167)$ |  | $(3,162)$ |
| Dividends paid |  | $(6,651)$ |  | $(6,774)$ |
| All other financing activities, net |  | $(1,275)$ |  | 423 |
| Net cash provided by financing activities |  | 14,642 |  | 48,970 |
| Effect of exchange rate changes on cash and due from banks and deposits with banks |  | 72 |  | $(18,834)$ |
| Net decrease in cash and due from banks and deposits with banks |  | $(72,111)$ |  | $(71,574)$ |
| Cash and due from banks and deposits with banks at the beginning of the period |  | 567,234 |  | 740,834 |
| Cash and due from banks and deposits with banks at the end of the period | \$ | 495,123 | \$ | 669,260 |
| Cash interest paid | \$ | 35,250 | \$ | 4,457 |
| Cash income taxes paid, net |  | 5,466 |  | 3,100 |

The Notes to Consolidated Financial Statements (unaudited) are an integral part of these statements.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (unaudited)

## Note 1 - Basis of presentation

JPMorgan Chase \& Co. ("JPMorgan Chase" or the "Firm"), a financial holding company incorporated under Delaware law in 1968 , is a leading financial services firm based in the U.S., with operations worldwide. The Firm is a leader in investment banking, financial services for consumers and small businesses, commercial banking, financial transaction processing and asset management. On May 1, 2023, JPMorgan Chase acquired certain assets and assumed certain liabilities of First Republic Bank (the "First Republic acquisition") from the Federal Deposit Insurance Corporation ("FDIC"). The Firm continues to convert certain operations, and to integrate clients, products and services, associated with the First Republic acquisition, to align with the Firm's businesses and operations. The Firm also continues to evaluate to which segments certain clients, products and services associated with the First Republic acquisition, including deposits, should be allocated. Accordingly, reporting classifications and allocations may change in future periods including across the Firm's segments. Refer to Note 27 for a further discussion of the Firm's business segments and Note 28 for additional information on the First Republic acquisition.
The accounting and financial reporting policies of JPMorgan Chase and its subsidiaries conform to U.S. GAAP. Additionally, where applicable, the policies conform to the accounting and reporting guidelines prescribed by regulatory authorities.

The unaudited Consolidated Financial Statements prepared in conformity with U.S. GAAP require management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue and expense, and the disclosures of contingent assets and liabilities. Actual results could be different from these estimates. In the opinion of management, all normal, recurring adjustments have been included such that this interim financial information is fairly stated.

These unaudited Consolidated Financial Statements should be read in conjunction with the audited Consolidated Financial Statements, and related notes thereto, included in JPMorgan Chase's 2022 Form 10-K.

Certain amounts reported in prior periods have been revised to conform with the current presentation.

## Consolidation

The Consolidated Financial Statements include the accounts of JPMorgan Chase and other entities in which the Firm has a controlling financial interest. All material intercompany balances and transactions have been eliminated.

Assets held for clients in an agency or fiduciary capacity by the Firm are not assets of JPMorgan Chase and are not included on the Consolidated balance sheets.

The Firm determines whether it has a controlling financial interest in an entity by first evaluating whether the entity is a voting interest entity or a variable interest entity.
Refer to Notes 1 and 14 of JPMorgan Chase's 2022 Form 10-K for a further description of JPMorgan Chase's accounting policies regarding consolidation.

Offsetting assets and liabilities
U.S. GAAP permits entities to present derivative receivables and derivative payables with the same counterparty and the related cash collateral receivables and payables on a net basis on the Consolidated balance sheets when a legally enforceable master netting agreement exists. U.S. GAAP also permits securities financing balances to be presented on a net basis when specified conditions are met, including the existence of a legally enforceable master netting agreement. The Firm has elected to net such balances where it has determined that the specified conditions are met. Refer to Note 1 of JPMorgan Chase's 2022 Form 10-K for further information on offsetting assets and liabilities.

## Accounting standards adopted January 1, 2023 <br> Derivatives and Hedging: Fair Value Hedging - Portfolio Layer Method

The adoption of this guidance expanded the ability to hedge a portfolio of prepayable assets to allow more of the portfolio to be hedged. Non-prepayable assets can also be included in the same portfolio, thus increasing the size of the portfolio and the amount available to be hedged. This guidance also clarified the types of derivatives that can be used as hedges, and the balance sheet presentation and disclosure requirements for the hedge accounting adjustments. As permitted by the guidance, the Firm elected to transfer HTM securities to AFS and designate those securities in a portfolio layer method hedge upon adoption. The adoption impact of the transfer on retained earnings was not material.
Refer to Note 5 and Note 10 for additional information.

## Financial Instruments - Credit Losses: Troubled Debt Restructurings and Vintage Disclosures

The adoption of this guidance eliminated the accounting and disclosure requirements for TDRs, including the requirement to measure the allowance using a discounted cash flow ("DCF") methodology, and allowed the option of a non-DCF portfolio-based approach for modified loans to troubled borrowers. If a DCF methodology is still applied for these modified loans, the discount rate must be the post-
modification effective interest rate, instead of the premodification effective interest rate.

The Firm elected to apply its non-DCF, portfolio-based allowance approach for modified loans to troubled borrowers for all portfolios except modified nonaccrual risk-rated loans which the Firm elected to continue applying a DCF methodology. Refer to Note 13 of JPMorgan Chase's 2022 Form 10-K for a description of the portfolio-based allowance approach and the asset-specific allowance approach.
This guidance was adopted under the modified retrospective method which resulted in a net decrease to the allowance for credit losses of $\$ 587$ million and an increase to retained earnings of $\$ 446$ million, after-tax, predominantly driven by residential real estate and credit card.
The adoption of this guidance eliminated the disclosure requirements for TDRs including the requirement to assess whether a modification is reasonably expected or involves a concession. The new guidance requires disclosure for loan modifications to borrowers experiencing financial difficulty consisting of principal forgiveness, interest rate reduction, other-than-insignificant payment delay, term extension or a combination of these modifications. The Firm has defined these types of modifications as financial difficulty modifications ("FDMs"). As a result of the elimination of the requirement to assess whether a modification is reasonably expected or involves a concession, the population of loans considered FDMs will differ from those previously considered TDRs. This guidance also requires disclosure of current period gross charge-offs by vintage origination year.
Refer to Note 12 for further information.

## Note 2 - Fair value measurement

Refer to Note 2 of JPMorgan Chase's 2022 Form 10-K for a discussion of the Firm's valuation methodologies for assets, liabilities and lending-related commitments measured at fair value and the fair value hierarchy.

The following table presents the assets and liabilities reported at fair value as of June 30,2023 , and December 31, 2022, by major product category and fair value hierarchy.

Assets and liabilities measured at fair value on a recurring basis

| June 30, 2023 (in millions) | Fair value hierarchy |  |  |  |  |  | Derivative netting adjustments ${ }^{(f)}$ |  | Total fair value |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Level 1 |  | Level 2 |  | Level 3 |  |  |  |  |  |
| Federal funds sold and securities purchased under resale agreements | \$ | - | \$ | 322,579 | \$ | - | \$ | - | \$ | 322,579 |
| Securities borrowed |  | - |  | 55,905 |  | - |  | - |  | 55,905 |
| Trading assets: |  |  |  |  |  |  |  |  |  |  |
| Debt instruments: |  |  |  |  |  |  |  |  |  |  |
| Mortgage-backed securities: |  |  |  |  |  |  |  |  |  |  |
| U.S. GSEs and government agencies ${ }^{(\mathrm{a})}$ |  | - |  | 88,769 |  | 706 |  | - |  | 89,475 |
| Residential - nonagency |  | - |  | 2,684 |  | 5 |  | - |  | 2,689 |
| Commercial - nonagency |  | - |  | 1,517 |  | 6 |  | - |  | 1,523 |
| Total mortgage-backed securities |  | - |  | 92,970 |  | 717 |  | - |  | 93,687 |
| U.S. Treasury, GSEs and government agencies ${ }^{(a)}$ |  | 129,042 |  | 9,204 |  | - |  | - |  | 138,246 |
| Obligations of U.S. states and municipalities |  | - |  | 6,782 |  | 6 |  | - |  | 6,788 |
| Certificates of deposit, bankers' acceptances and commercial paper |  | - |  | 2,834 |  | - |  | - |  | 2,834 |
| Non-U.S. government debt securities |  | 41,423 |  | 63,986 |  | 199 |  | - |  | 105,608 |
| Corporate debt securities |  | - |  | 33,106 |  | 522 |  | - |  | 33,628 |
| Loans |  | - |  | 6,984 |  | 1,105 |  | - |  | 8,089 |
| Asset-backed securities |  | - |  | 2,497 |  | 14 |  | - |  | 2,511 |
| Total debt instruments |  | 170,465 |  | 218,363 |  | 2,563 |  | - |  | 391,391 |
| Equity securities |  | 148,222 |  | 1,337 |  | 631 |  | - |  | 150,190 |
| Physical commodities ${ }^{(b)}$ |  | 2,442 |  | 11,265 |  | 6 |  | - |  | 13,713 |
| Other |  | - |  | 17,332 |  | 113 |  | - |  | 17,445 |
| Total debt and equity instruments ${ }^{(\text {c) }}$ |  | 321,129 |  | 248,297 |  | 3,313 |  | - |  | 572,739 |
| Derivative receivables: |  |  |  |  |  |  |  |  |  |  |
| Interest rate |  | 1,988 |  | 282,125 |  | 4,199 |  | $(260,603)$ |  | 27,709 |
| Credit |  | - |  | 12,535 |  | 1,150 |  | $(12,440)$ |  | 1,245 |
| Foreign exchange |  | 204 |  | 226,130 |  | 1,345 |  | $(205,485)$ |  | 22,194 |
| Equity |  | - |  | 57,619 |  | 3,773 |  | $(54,068)$ |  | 7,324 |
| Commodity |  | - |  | 17,358 |  | 282 |  | $(11,895)$ |  | 5,745 |
| Total derivative receivables |  | 2,192 |  | 595,767 |  | 10,749 |  | $(544,491)$ |  | 64,217 |
| Total trading assets ${ }^{\text {(d) }}$ |  | 323,321 |  | 844,064 |  | 14,062 |  | $(544,491)$ |  | 636,956 |
| Available-for-sale securities: |  |  |  |  |  |  |  |  |  |  |
| Mortgage-backed securities: |  |  |  |  |  |  |  |  |  |  |
| U.S. GSEs and government agencies ${ }^{(\mathrm{a})}$ |  | 1 |  | 79,767 |  | - |  | - |  | 79,768 |
| Residential - nonagency |  | - |  | 3,544 |  | - |  | - |  | 3,544 |
| Commercial - nonagency |  | - |  | 2,056 |  | - |  | - |  | 2,056 |
| Total mortgage-backed securities |  | 1 |  | 85,367 |  | - |  | - |  | 85,368 |
| U.S. Treasury and government agencies |  | 62,688 |  | 49 |  | - |  | - |  | 62,737 |
| Obligations of U.S. states and municipalities |  | - |  | 24,023 |  | - |  | - |  | 24,023 |
| Non-U.S. government debt securities |  | 13,397 |  | 8,643 |  | - |  | - |  | 22,040 |
| Corporate debt securities |  | - |  | 121 |  | 267 |  | - |  | 388 |
| Asset-backed securities: |  |  |  |  |  |  |  |  |  |  |
| Collateralized Ioan obligations |  | - |  | 5,437 |  | - |  | - |  | 5,437 |
| Other ${ }^{(\mathrm{a})}$ |  | - |  | 3,269 |  | - |  | - |  | 3,269 |
| Total available-for-sale securities |  | 76,086 |  | 126,909 |  | 267 |  | - |  | 203,262 |
| Loans ${ }^{\text {(e) }}$ |  | - |  | 34,981 |  | 3,808 |  | - |  | 38,789 |
| Mortgage servicing rights |  | - |  | - |  | 8,229 |  | - |  | 8,229 |
| Other assets ${ }^{\text {d }}$ ) |  | 6,146 |  | 6,687 |  | 417 |  | - |  | 13,250 |
| Total assets measured at fair value on a recurring basis | \$ | 405,553 | \$ | 1,391,125 | \$ | 26,783 | \$ | $(544,491)$ | \$ | 1,278,970 |
| Deposits | \$ | - | \$ | 49,515 | \$ | 2,053 | \$ | - | \$ | 51,568 |
| Federal funds purchased and securities loaned or sold under repurchase agreements |  | - |  | 216,604 |  | - |  | - |  | 216,604 |
| Short-term borrowings |  | - |  | 16,238 |  | 1,704 |  | - |  | 17,942 |
| Trading liabilities: |  |  |  |  |  |  |  |  |  |  |
| Debt and equity instruments ${ }^{(\mathrm{c})}$ |  | 101,437 |  | 30,764 |  | 63 |  | - |  | 132,264 |
| Derivative payables: |  |  |  |  |  |  |  |  |  |  |
| Interest rate |  | 1,610 |  | 270,411 |  | 5,321 |  | $(262,185)$ |  | 15,157 |
| Credit |  | - |  | 13,306 |  | 461 |  | $(13,201)$ |  | 566 |
| Foreign exchange |  | 185 |  | 222,444 |  | 956 |  | $(209,408)$ |  | 14,177 |
| Equity |  | - |  | 62,016 |  | 5,654 |  | $(57,865)$ |  | 9,805 |
| Commodity |  | - |  | 18,650 |  | 635 |  | $(12,445)$ |  | 6,840 |
| Total derivative payables |  | 1,795 |  | 586,827 |  | 13,027 |  | $(555,104)$ |  | 46,545 |
| Total trading liabilities |  | 103,232 |  | 617,591 |  | 13,090 |  | $(555,104)$ |  | 178,809 |
| Accounts payable and other liabilities |  | 3,486 |  | 1,547 |  | 68 |  | - |  | 5,101 |
| Beneficial interests issued by consolidated VIEs |  | - |  | 1 |  | - |  | - |  | 1 |
| Long-term debt |  | - |  | 53,184 |  | 25,425 |  | - |  | 78,609 |
| Total liabilities measured at fair value on a recurring basis | \$ | 106,718 | \$ | 954,680 | \$ | 42,340 | \$ | $(555,104)$ | \$ | 548,634 |


| December 31, 2022 (in millions) | Fair value hierarchy |  |  |  |  |  | $\begin{gathered} \text { Derivative } \\ \text { netting } \\ \text { adjustments }{ }^{(f)} \end{gathered}$ |  | Total fair value |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Level 1 |  | Level 2 |  | Level 3 |  |  |  |  |  |
| Federal funds sold and securities purchased under resale agreements | \$ | - | \$ | 311,883 | \$ | - | \$ | - | \$ | 311,883 |
| Securities borrowed |  | - |  | 70,041 |  | - |  | - |  | 70,041 |
| Trading assets: |  |  |  |  |  |  |  |  |  |  |
| Debt instruments: |  |  |  |  |  |  |  |  |  |  |
| Mortgage-backed securities: |  |  |  |  |  |  |  |  |  |  |
| U.S. GSEs and government agencies ${ }^{(\mathrm{a})}$ |  | - |  | 68,162 |  | 759 |  | - |  | 68,921 |
| Residential - nonagency |  | - |  | 2,498 |  | 5 |  | - |  | 2,503 |
| Commercial - nonagency |  | - |  | 1,448 |  | 7 |  | - |  | 1,455 |
| Total mortgage-backed securities |  | - |  | 72,108 |  | 771 |  | - |  | 72,879 |
| U.S. Treasury, GSEs and government agencies ${ }^{(a)}$ |  | 61,191 |  | 8,546 |  | - |  | - |  | 69,737 |
| Obligations of U.S. states and municipalities |  | - |  | 6,608 |  | 7 |  | - |  | 6,615 |
| Certificates of deposit, bankers' acceptances and commercial paper |  | - |  | 2,009 |  | - |  | - |  | 2,009 |
| Non-U.S. government debt securities |  | 18,213 |  | 48,429 |  | 155 |  | - |  | 66,797 |
| Corporate debt securities |  | - |  | 25,626 |  | 463 |  | - |  | 26,089 |
| Loans |  | - |  | 5,744 |  | 759 |  | - |  | 6,503 |
| Asset-backed securities |  | - |  | 2,536 |  | 23 |  | - |  | 2,559 |
| Total debt instruments |  | 79,404 |  | 171,606 |  | 2,178 |  | - |  | 253,188 |
| Equity securities |  | 82,483 |  | 2,060 |  | 665 |  | - |  | 85,208 |
| Physical commodities ${ }^{(b)}$ |  | 9,595 |  | 16,673 |  | 2 |  | - |  | 26,270 |
| Other |  | - |  | 18,146 |  | 64 |  | - |  | 18,210 |
| Total debt and equity instruments ${ }^{\text {(c) }}$ |  | 171,482 |  | 208,485 |  | 2,909 |  | - |  | 382,876 |
| Derivative receivables: |  |  |  |  |  |  |  |  |  |  |
| Interest rate |  | 3,390 |  | 292,956 |  | 4,069 |  | $(271,996)$ |  | 28,419 |
| Credit |  | - |  | 9,722 |  | 607 |  | $(9,239)$ |  | 1,090 |
| Foreign exchange |  | 169 |  | 240,207 |  | 1,203 |  | $(218,214)$ |  | 23,365 |
| Equity |  | - |  | 57,485 |  | 4,428 |  | $(52,774)$ |  | 9,139 |
| Commodity |  | - |  | 24,982 |  | 375 |  | $(16,490)$ |  | 8,867 |
| Total derivative receivables |  | 3,559 |  | 625,352 |  | 10,682 |  | $(568,713)$ |  | 70,880 |
| Total trading assets ${ }^{(\mathrm{d})}$ |  | 175,041 |  | 833,837 |  | 13,591 |  | $(568,713)$ |  | 453,756 |
| Available-for-sale securities: |  |  |  |  |  |  |  |  |  |  |
| Mortgage-backed securities: |  |  |  |  |  |  |  |  |  |  |
| U.S. GSEs and government agencies ${ }^{(a)}$ |  | 3 |  | 71,500 |  | - |  | - |  | 71,503 |
| Residential - nonagency |  | - |  | 4,620 |  | - |  | - |  | 4,620 |
| Commercial - nonagency |  | - |  | 1,958 |  | - |  | - |  | 1,958 |
| Total mortgage-backed securities |  | 3 |  | 78,078 |  | - |  | - |  | 78,081 |
| U.S. Treasury and government agencies |  | 92,060 |  | - |  | - |  | - |  | 92,060 |
| Obligations of U.S. states and municipalities |  | - |  | 6,786 |  | - |  | - |  | 6,786 |
| Non-U.S. government debt securities |  | 10,591 |  | 9,105 |  | - |  | - |  | 19,696 |
| Corporate debt securities |  | - |  | 118 |  | 239 |  | - |  | 357 |
| Asset-backed securities: |  |  |  |  |  |  |  |  |  |  |
| Collateralized Ioan obligations |  | - |  | 5,792 |  | - |  | - |  | 5,792 |
| Other |  | - |  | 3,085 |  | - |  | - |  | 3,085 |
| Total available-for-sale securities |  | 102,654 |  | 102,964 |  | 239 |  | - |  | 205,857 |
| Loans ${ }^{(\text {e] }}$ |  | - |  | 40,661 |  | 1,418 |  | - |  | 42,079 |
| Mortgage servicing rights |  | - |  | - |  | 7,973 |  | - |  | 7,973 |
| Other assets ${ }^{(d)}$ |  | 7,544 |  | 6,065 |  | 405 |  | - |  | 14,014 |
| Total assets measured at fair value on a recurring basis | \$ | 285,239 | \$ | 1,365,451 | \$ | 23,626 | \$ | $(568,713)$ | \$ | 1,105,603 |
| Deposits | \$ | - | \$ | 26,458 | \$ | 2,162 | \$ | - | \$ | 28,620 |
| Federal funds purchased and securities loaned or sold under repurchase agreements |  | - |  | 151,999 |  | - |  | - |  | 151,999 |
| Short-term borrowings |  | - |  | 14,391 |  | 1,401 |  | - |  | 15,792 |
| Trading liabilities: |  |  |  |  |  |  |  |  |  |  |
| Debt and equity instruments ${ }^{(c)}$ |  | 98,719 |  | 28,032 |  | 84 |  | - |  | 126,835 |
| Derivative payables: |  |  |  |  |  |  |  |  |  |  |
| Interest rate |  | 2,643 |  | 284,280 |  | 3,368 |  | $(274,321)$ |  | 15,970 |
| Credit |  | - |  | 9,377 |  | 594 |  | $(9,217)$ |  | 754 |
| Foreign exchange |  | 160 |  | 250,647 |  | 714 |  | $(232,665)$ |  | 18,856 |
| Equity |  | - |  | 57,649 |  | 4,812 |  | $(53,657)$ |  | 8,804 |
| Commodity |  | - |  | 22,748 |  | 521 |  | $(16,512)$ |  | 6,757 |
| Total derivative payables |  | 2,803 |  | 624,701 |  | 10,009 |  | $(586,372)$ |  | 51,141 |
| Total trading liabilities |  | 101,522 |  | 652,733 |  | 10,093 |  | $(586,372)$ |  | 177,976 |
| Accounts payable and other liabilities |  | 5,702 |  | 1,283 |  | 53 |  | - |  | 7,038 |
| Beneficial interests issued by consolidated VIEs |  | - |  | 5 |  | - |  | - |  | 5 |
| Long-term debt |  | - |  | 48,189 |  | 24,092 |  | - |  | 72,281 |
| Total liabilities measured at fair value on a recurring basis | \$ | 107,224 | \$ | 895,058 | \$ | 37,801 | \$ | $(586,372)$ | \$ | 453,711 |

(a) At June 30, 2023, and December 31, 2022, included total U.S. GSE obligations of $\$ 93.5$ billion and $\$ 73.8$ billion, respectively, which were mortgagerelated.
(b) Physical commodities inventories are generally accounted for at the lower of cost or net realizable value. "Net realizable value" is a term defined in U.S. GAAP as not exceeding fair value less costs to sell ("transaction costs"). Transaction costs for the Firm's physical commodities inventories are either not applicable or immaterial to the value of the inventory. Therefore, net realizable value approximates fair value for the Firm's physical commodities inventories. When fair value hedging has been applied (or when net realizable value is below cost), the carrying value of physical commodities approximates fair value, because under fair value hedge accounting, the cost basis is adjusted for changes in fair value. Refer to Note 5 for a further discussion of the Firm's hedge accounting relationships. To provide consistent fair value disclosure information, all physical commodities inventories have been included in each period presented.
(c) Balances reflect the reduction of securities owned (long positions) by the amount of identical securities sold but not yet purchased (short positions).
(d) Certain investments that are measured at fair value using the net asset value per share (or its equivalent) as a practical expedient are not required to be classified in the fair value hierarchy. At June 30, 2023, and December 31, 2022, the fair values of these investments, which include certain hedge funds, private equity funds, real estate and other funds, were $\$ 956$ million and $\$ 950$ million, respectively. Included in these balances at June 30 , 2023, and December 31, 2022, were trading assets of $\$ 40$ million and $\$ 43$ million, respectively, and other assets of $\$ 916$ million and $\$ 907$ million, respectively.
(e) At June 30, 2023, and December 31, 2022, included $\$ 9.3$ billion and $\$ 9.7$ billion, respectively, of residential first-lien mortgages, and $\$ 6.8$ billion of commercial first-lien mortgages for both periods. Residential mortgage loans include conforming mortgage loans originated with the intent to sell to U.S. GSEs and government agencies of $\$ 3.3$ billion and $\$ 2.4$ billion, respectively.
(f) As permitted under U.S. GAAP, the Firm has elected to net derivative receivables and derivative payables and the related cash collateral received and paid when a legally enforceable master netting agreement exists. The level 3 balances would be reduced if netting were applied, including the netting benefit associated with cash collateral.

## Level 3 valuations

Refer to Note 2 of JPMorgan Chase's 2022 Form 10-K for further information on the Firm's valuation process and a detailed discussion of the determination of fair value for individual financial instruments.
The following table presents the Firm's primary level 3 financial instruments, the valuation techniques used to measure the fair value of those financial instruments, the significant unobservable inputs, the range of values for those inputs and the weighted or arithmetic averages of such inputs. While the determination to classify an instrument within level 3 is based on the significance of the unobservable inputs to the overall fair value measurement, level 3 financial instruments typically include observable components (that is, components that are actively quoted and can be validated to external sources) in addition to the unobservable components. The level 1 and/or level 2 inputs are not included in the table. In addition, the Firm manages the risk of the observable components of level 3 financial instruments using securities and derivative positions that are classified within levels 1 or 2 of the fair value hierarchy.

The range of values presented in the table is representative of the highest and lowest level input used to value the significant groups of instruments within a product/ instrument classification. Where provided, the weighted averages of the input values presented in the table are calculated based on the fair value of the instruments that the input is being used to value.
In the Firm's view, the input range, weighted and arithmetic average values do not reflect the degree of input uncertainty or an assessment of the reasonableness of the Firm's estimates and assumptions. Rather, they reflect the characteristics of the various instruments held by the Firm and the relative distribution of instruments within the range of characteristics. For example, two option contracts may have similar levels of market risk exposure and valuation uncertainty, but may have significantly different implied volatility levels because the option contracts have different underlyings, tenors, or strike prices. The input range and weighted average values will therefore vary from period-toperiod and parameter-to-parameter based on the characteristics of the instruments held by the Firm at each balance sheet date.

Level 3 inputs ${ }^{(\mathrm{a})}$

| June 30, 2023 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Product/Instrument | Fair value (in millions) |  | Principal valuation technique | Unobservable inputs ${ }^{(\mathrm{g})}$ | Range of input values |  | Average ${ }^{(i)}$ |
| Residential mortgage-backed securities and loans ${ }^{(b)}$ | \$ | 1,641 | Discounted cash flows | Yield | 6\% | 40\% | 7\% |
|  |  |  |  | Prepayment speed | 3\% | 11\% | 8\% |
|  |  |  |  | Conditional default rate | 0\% | 5\% | 0\% |
|  |  |  |  | Loss severity | 0\% | 110\% | 3\% |
| Commercial mortgage-backed securities and loans |  | 2,318 | Market comparables | Price | \$0 | \$101 | \$84 |
| Corporate debt securities |  | 789 | Market comparables | Price | \$0 | \$242 | \$95 |
| Loans ${ }^{\text {(d) }}$ |  | 1,671 | Market comparables | Price | \$0 | \$108 | \$78 |
| Non-U.S. government debt securities |  | 199 | Market comparables | Price | \$6 | \$106 | \$91 |
| Net interest rate derivatives |  | $(1,105)$ | Option pricing | Interest rate volatility | 26 bps | 674 bps | 131 bps |
|  |  |  |  | Interest rate spread volatility | 37 bps | 77 bps | 64 bps |
|  |  |  |  | Bermudan switch value | 0\% | 58\% | 20\% |
|  |  |  |  | Interest rate correlation | (82)\% | 90\% | 15\% |
|  |  |  |  | IR-FX correlation | (35)\% | 60\% | 5\% |
|  |  | (17) | Discounted cash flows | Prepayment speed | 0\% | 15\% | 5\% |
| Net credit derivatives | 673 |  | Discounted cash flows | Credit correlation | 35\% | 65\% | 48\% |
|  |  |  | Credit spread | 0 bps | 11,279 bps | 342 bps |
|  |  |  | Recovery rate | 10\% | 90\% | 40\% |
|  |  | 16 |  | Market comparables | Price | \$15 | \$115 | \$83 |
| Net foreign exchange derivatives |  | 461 |  | Option pricing | IR-FX correlation | (40)\% | 60\% | 19\% |
|  | (72) |  | Discounted cash flows | Prepayment speed | 11\% |  | 11\% |
|  |  |  | Interest rate curve | 0\% | 30\% | 6\% |
| Net equity derivatives | $(1,881)$ |  |  | Option pricing | Forward equity price ${ }^{(\mathrm{h})}$ | 84\% | 142\% | 101\% |
|  |  |  | Equity volatility |  | 3\% | 167\% | 32\% |
|  |  |  | Equity correlation |  | 15\% | 100\% | 58\% |
|  |  |  | Equity-FX correlation |  | (86)\% | 60\% | (29)\% |
|  |  |  | Equity-IR correlation |  | 10\% | 35\% | 21\% |
| Net commodity derivatives | (353) |  | Option pricing | Oil commodity forward | \$95 / BBL | \$249 / BBL | \$172 / BBL |
|  |  |  | Natural gas commodity forward | \$1/ MMBTU | \$7/ MMBTU | \$4/ MMBTU |
|  |  |  | Commodity volatility | 5\% | 175\% | 90\% |
|  |  |  | Commodity correlation | (28)\% | 80\% | 26\% |
| MSRs |  | 8,229 |  | Discounted cash flows | Refer to Note 15 |  |  |  |
| Long-term debt, short-term borrowings, and deposits ${ }^{\text {(e }}$ | 27,806 |  |  | Option pricing | Interest rate volatility | 26 bps | 674 bps | 131 bps |
|  |  |  | Bermudan switch value |  | 0\% | 58\% | 20\% |
|  |  |  | Interest rate correlation |  | (82)\% | 90\% | 15\% |
|  |  |  | IR-FX correlation |  | (35)\% | 60\% | 5\% |
|  |  |  | Equity correlation |  | 15\% | 100\% | 58\% |
|  |  |  | Equity-FX correlation |  | (86)\% | 60\% | (29)\% |
|  |  |  | Equity-IR correlation |  | 10\% | 35\% | 21\% |
|  |  | 1,376 |  | Discounted cash flows | Credit correlation | 35\% | 65\% | 48\% |
| Other level 3 assets and liabilities, net ${ }^{(f)}$ |  | 1,056 |  |  |  |  |  |

(a) The categories presented in the table have been aggregated based upon the product type, which may differ from their classification on the Consolidated balance sheets. Furthermore, the inputs presented for each valuation technique in the table are, in some cases, not applicable to every instrument valued using the technique as the characteristics of the instruments can differ.
(b) Comprises U.S. GSE and government agency securities of $\$ 706$ million, nonagency securities of $\$ 5$ million and non-trading loans of $\$ 930$ million.
(c) Comprises nonagency securities of $\$ 6$ million, trading loans of $\$ 72$ million and non-trading loans of $\$ 2.2$ billion.
(d) Comprises trading loans of $\$ 1.0$ billion and non-trading loans of $\$ 638$ million.
(e) Long-term debt, short-term borrowings and deposits include structured notes issued by the Firm that are financial instruments that typically contain embedded derivatives. The estimation of the fair value of structured notes includes the derivative features embedded within the instrument. The significant unobservable inputs are broadly consistent with those presented for derivative receivables.
(f) Includes equity securities of $\$ 843$ million including $\$ 213$ million in Other assets, for which quoted prices are not readily available and the fair value is generally based on internal valuation techniques such as EBITDA multiples and comparable analysis. All other level 3 assets and liabilities are insignificant both individually and in aggregate.
(g) Price is a significant unobservable input for certain instruments. When quoted market prices are not readily available, reliance is generally placed on pricebased internal valuation techniques. The price input is expressed assuming a par value of $\$ 100$.
(h) Forward equity price is expressed as a percentage of the current equity price.
(i) Amounts represent weighted averages except for derivative related inputs where arithmetic averages are used.

Changes in and ranges of unobservable inputs Refer to Note 2 of JPMorgan Chase's 2022 Form 10-K for a discussion of the impact on fair value of changes in unobservable inputs and the relationships between unobservable inputs as well as a description of attributes of the underlying instruments and external market factors that affect the range of inputs used in the valuation of the Firm's positions.
Changes in level 3 recurring fair value measurements The following tables include a rollforward of the Consolidated balance sheets amounts (including changes in fair value) for financial instruments classified by the Firm within level 3 of the fair value hierarchy for the three months ended June 30, 2023 and 2022. When a determination is made to classify a financial instrument within level 3 , the determination is based on the significance of the unobservable inputs to the overall fair value measurement. However, level 3 financial instruments typically include, in addition to the unobservable or level 3 components, observable components (that is, components that are actively quoted and can be validated to external sources); accordingly, the gains and losses in the table below include changes in fair value due in part to observable factors that are part of the valuation methodology. Also, the Firm risk-manages the observable components of level 3 financial instruments using securities and derivative positions that are classified within level 1 or 2 of the fair value hierarchy; as these level 1 and level 2 risk management instruments are not included below, the gains or losses in the following tables do not reflect the effect of the Firm's risk management activities related to such level 3 instruments.

|  | Fair value measurements using significant unobservable inputs |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Three months ended June 30, 2023 (in millions) | Fair value at April 1, 2023 | $\begin{gathered} \text { Total } \\ \text { realized/ } \\ \text { unrealized } \\ \text { gains/(losses) } \end{gathered}$ | Purchases ${ }^{(8)}$ | Sales | Settlements ${ }^{(\text {(h) }}$ | Transfers into level 3 | Transfers (out of) level 3 | Fair value at June 30, 2023 | Change in unrealized gains/ (losses) related to financial instruments held at June 30, 2023 |

Assets: ${ }^{(\mathrm{a})}$
Federal funds sold and
securities purchased und resale agreements $\quad \$ \quad$ - $\$ \quad-\quad \$$
Trading assets:
Debt instruments:

| Mortgage-backed securities: |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| U.S. GSEs and government agencies | 757 | - | 106 | (106) | (40) | - | (11) | 706 | (6) |
| Residential - nonagency | 5 | 6 | - | (6) | - | - | - | 5 | - |
| Commercial - nonagency | 10 | (1) | - | - | - | 5 | (8) | 6 | (1) |
| Total mortgage-backed securities | 772 | 5 | 106 | (112) | (40) | 5 | (19) | 717 | (7) |
| Obligations of U.S. states and municipalities | 6 | - | - | - | - | - | - | 6 | - |
| Non-U.S. government debt securities | 169 | 29 | 50 | (49) | - | - | - | 199 | 31 |
| Corporate debt securities | 538 | - | 61 | (43) | (2) | 7 | (39) | 522 | (2) |
| Loans | 926 | (6) | 246 | (65) | (18) | 102 | (80) | 1,105 | (6) |
| Asset-backed securities | 7 | - | 4 | (1) | - | 4 | - | 14 | - |
| Total debt instruments | 2,418 | 28 | 467 | (270) | (60) | 118 | (138) | 2,563 | 16 |
| Equity securities | 581 | (16) | 50 | (36) | - | 104 | (52) | 631 | (16) |
| Physical commodities | - | - | 6 | - | - | - | - | 6 | - |
| Other | 140 | (19) | 2 | - | (6) | - | (4) | 113 | (18) |
| Total trading assets - debt and equity instruments | 3,139 | $(7)^{(c)}$ | 525 | (306) | (66) | 222 | (194) | 3,313 | $(18){ }^{(c)}$ |
| Net derivative receivables: ${ }^{(b)}$ |  |  |  |  |  |  |  |  |  |
| Interest rate | 754 | $(1,043)$ | 60 | (42) | 49 | (914) | 14 | $(1,122)$ | (960) |
| Credit | 452 | 228 | - | (1) | 31 | 2 | (23) | 689 | 240 |
| Foreign exchange | 545 | (37) | 51 | (67) | (126) | 55 | (32) | 389 | (29) |
| Equity | (885) | (148) | 295 | (675) | (726) | 349 | (91) | $(1,881)$ | 9 |
| Commodity | (287) | (50) | 35 | (51) | 16 | (12) | (4) | (353) | (71) |
| Total net derivative receivables | 579 | $(1,050){ }^{(c)}$ | 441 | (836) | (756) | (520) | (136) | $(2,278)$ | $(811){ }^{(c)}$ |

Available-for-sale securities:

| Corporate debt securities | 250 | 17 |  | - | - | - | - | - | 267 | 17 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total available-for-sale securities | 250 | 17 | (d) | - | - | - | - | - | 267 | 17 | (d) |
| Loans | 1,479 | (3) | ${ }^{\text {(c) }}$ | 2,137 | (7) | (490) | 760 | (68) | 3,808 | (52) | (c) |
| Mortgage servicing rights | 7,755 | 275 | (e) | 546 | (92) | (255) | - | - | 8,229 | 275 | (e) |
| Other assets | 406 | 16 | (c) | 5 | (2) | (14) | 8 | (2) | 417 | 16 | (c) |


| Fair value measurements using significant unobservable inputs |  |  |  |  |  |  |  |  |  | Change in unrealized (gains)/ losses related to financial instruments held at June 30, 2023 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Three months ended June 30, 2023 (in millions) | Fair value at April 1, 2023 | Total realized/ unrealized (gains)/losses | Purchases | Sales | Issuances | Settlements ${ }^{(\mathrm{h})}$ | Transfers into level 3 | Transfers (out of) level 3 | Fair value at June 30, 2023 |  |
| Liabilities: ${ }^{\text {(a) }}$ |  |  |  |  |  |  |  |  |  |  |
| Deposits | \$ 2,208 | \$ (51) ${ }^{(c)(f)}$ | \$ | \$ | \$ 139 | \$ (181) | \$ | \$ (62) | \$ 2,053 | \$ (51) ${ }^{(c)(f)}$ |
| Short-term borrowings | 1,410 | $50^{(c)(f)}$ | - | - | 1,191 | (927) | 2 | (22) | 1,704 | $29^{\text {(c)(f) }}$ |
| Trading liabilities - debt and equity instruments | 63 | (1) ${ }^{(c)}$ | - | (2) | - | (2) | 6 | (1) | 63 | (1) ${ }^{(c)}$ |
| Accounts payable and other liabilities | 56 | $5{ }^{\text {(c) }}$ | (2) | 3 | - | - | 8 | (2) | 68 |  |
| Long-term debt | 25,227 | $325^{(c)(f)}$ | - | - | 2,667 | $(2,550)$ | 113 | (357) | 25,425 | $354{ }^{(c)(f)}$ |


| Three months ended June 30, 2022 (in millions) | Fair value measurements using significant unobservable inputs |  |  |  |  |  |  |  |  | Change in unrealized gains/ (losses) related to financial instruments held at June 30, 2022 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Fair value at April 1, 2022 | ```Total realized/ unrealized gains/ (losses)``` | Purchases ${ }^{(8)}$ | Sales |  | Settlements ${ }^{(\text {h) }}$ | $\begin{gathered} \text { Transfers } \\ \text { into } \\ \text { level } 3 \end{gathered}$ | Transfers (out of) level 3 | Fair value at June 30, 2022 |  |
| Assets: ${ }^{\text {(a) }}$ |  |  |  |  |  |  |  |  |  |  |
| Federal funds sold and securities purchased under resale agreements | \$ - | \$ - | \$ | \$ - |  | \$ | \$ | \$ - | \$ 1 | \$ |
| Trading assets: |  |  |  |  |  |  |  |  |  |  |
| Debt instruments: |  |  |  |  |  |  |  |  |  |  |
| Mortgage-backed securities: |  |  |  |  |  |  |  |  |  |  |
| U.S. GSEs and government agencies | 286 | (1) | 643 | (118) |  | (7) | - | - | 803 | (2) |
| Residential - nonagency | 10 | - | 5 | - |  | (1) | - | - | 14 | - |
| Commercial - nonagency | 10 | - | - | - |  | - | - | - | 10 | - |
| Total mortgage-backed securities | 306 | (1) | 648 | (118) |  | (8) | - | - | 827 | (2) |
| Obligations of U.S. states and municipalities | 7 | - | - | - |  | - | - | - | 7 | - |
| Non-U.S. government debt securities | 133 | (9) | 177 | (86) |  | - | 6 | (16) | 205 | (8) |
| Corporate debt securities | 293 | (16) | 272 | (12) |  | - | 57 | (20) | 574 | (16) |
| Loans | 1,049 | (33) | 122 | (164) |  | (152) | 254 | (178) | 898 | (32) |
| Asset-backed securities | 28 | - | 1 | (10) |  | - | 1 | - | 20 | - |
| Total debt instruments | 1,816 | (59) | 1,220 | (390) |  | (160) | 318 | (214) | 2,531 | (58) |
| Equity securities | 663 | (99) | 98 | (61) |  | - | 106 | (46) | 661 | (90) |
| Physical commodities | - | - | 2 | - |  | - | - | - | 2 | - |
| Other | 175 | 66 | 6 | - |  | (158) | - | (2) | 87 | 60 |
| Total trading assets - debt and equity instruments | 2,654 | $(92){ }^{(c)}$ | 1,326 | (451) |  | (318) | 424 | (262) | 3,281 | (88) ${ }^{(c)}$ |
| Net derivative receivables: ${ }^{(b)}$ |  |  |  |  |  |  |  |  |  |  |
| Interest rate | 367 | 160 | 99 | (135) |  | 105 | 44 | (220) | 420 | 204 |
| Credit | 44 | 264 | 4 | (3) |  | (65) | 1 | 4 | 249 | 255 |
| Foreign exchange | 76 | 193 | 15 | (19) |  | (38) | 24 | (6) | 245 | 174 |
| Equity | $(2,583)$ | 1,838 | 162 | (466) |  | (140) | (227) | 182 | $(1,234)$ | 1,788 |
| Commodity | (414) | 382 | 18 | (69) |  | 112 | (1) | (2) | 26 | 423 |
| Total net derivative receivables | $(2,510)$ | 2,837 ${ }^{\text {(c) }}$ | 298 | (692) |  | (26) | (159) | (42) | (294) | 2,844 ${ }^{\text {(c) }}$ |
| Available-for-sale securities: |  |  |  |  |  |  |  |  |  |  |
| Corporate debt securities | 205 | (19) | - | - |  | - | - | - | 186 | (19) |
| Total available-for-sale securities | 205 | $(19){ }^{(d)}$ | - | - |  | - | - | - | 186 | $(19){ }^{(d)}$ |
| Loans | 2,072 | (82) ${ }^{(c)}$ | 273 | (95) |  | (250) | 226 | (124) | 2,020 | (80) ${ }^{(c)}$ |
| Mortgage servicing rights | 7,294 | $654{ }^{\text {(e) }}$ | 341 | (614) |  | (236) | - | - | 7,439 | $654{ }^{\text {(e) }}$ |
| Other assets | 341 | $116{ }^{\text {(c) }}$ | 5 | (28) |  | (20) | - | (6) | 408 | $116{ }^{\text {(c) }}$ |
|  |  |  | Fair value me | asuremen | using signific | icant unobservabl | puts |  |  |  |
| Three months ended June 30, 2022 (in millions) | $\begin{aligned} & \text { Fair value at } \\ & \text { April } 1, \\ & 2022 \\ & \hline \end{aligned}$ | Total realized/ unrealized (gains)/ losses | Purchases | Sales | Issuances | Settlements ${ }^{(\text {h) }}$ |  | Transfers (out of) level 3 | $\begin{gathered} \text { Fair value at } \\ \text { June } 30, \\ 2022 \\ \hline \end{gathered}$ | Change in unrealized (gains)/losses related to financial instruments held at June 30, 2022 |
| Liabilities: ${ }^{(\mathrm{a})}$ |  |  |  |  |  |  |  |  |  |  |
| Deposits | \$ 2,121 | \$ $(160){ }^{(c)(f)}$ | \$ - | \$ - | \$ 138 | \$ (21) | \$ | \$ (46) | \$2,032 | \$ $\quad(160){ }^{(c)(f)}$ |
| Short-term borrowings | 2,146 | $14^{(c)(f)}$ | - | - | 963 | $(1,036)$ | 14 | - | 2,101 | $93^{(c)(f)}$ |
| Trading liabilities - debt and equity instruments | 41 | $1{ }^{\text {(c) }}$ | (20) | 4 | - | - | 30 | - | 56 | $1{ }^{\text {(c) }}$ |
| Accounts payable and other liabilities | 108 | (2) ${ }^{(c)}$ | (28) | 1 | - | - | - | (6) | 73 | (2) ${ }^{(c)}$ |
| Long-term debt | 24,394 | $(2,640)^{(c)(f)}$ | - | - | 3,470 | $(2,045)$ | 179 | (281) | 23,077 | $(2,613)^{(c)(f)}$ |


| $\begin{aligned} & \text { Six months ended June 30, } \\ & 2023 \\ & \text { (in millions) } \\ & \hline \end{aligned}$ | Fair value measurements using significant unobservable inputs |  |  |  |  |  |  |  |  | Change in unrealized gains/ (losses) related to financial instruments held at June 30, 2023 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \text { Fair value at } \\ & \text { Jan 1, } \\ & 2023 \\ & \hline \end{aligned}$ | Total realized/ unrealized gains/ (losses) | Purchases ${ }^{(8)}$ | Sales |  | Settlements ${ }^{(\text {(h) }}$ | $\begin{gathered} \text { Transfers } \\ \text { into } \\ \text { level } 3 \end{gathered}$ | Transfers (out of) level 3 | $\begin{aligned} & \text { Fair value at } \\ & \text { June } 30 \text {, } \\ & 2023 \end{aligned}$ |  |
| Assets: ${ }^{\text {(a) }}$ |  |  |  |  |  |  |  |  |  |  |
| Federal funds sold and securities purchased under resale agreements | \$ - | \$ | \$ | \$ - |  | \$ | \$ | \$ | \$ - | \$ |
| Trading assets: |  |  |  |  |  |  |  |  |  |  |
| Debt instruments: |  |  |  |  |  |  |  |  |  |  |
| Mortgage-backed securities: |  |  |  |  |  |  |  |  |  |  |
| U.S. GSES and government agencies | 759 | 7 | 131 | (113) |  | (64) | - | (14) | 706 | 2 |
| Residential - nonagency | 5 | 7 | - | (6) |  | (2) | 1 | - | 5 | 1 |
| Commercial - nonagency | 7 | - | - | - |  | (1) | 8 | (8) | 6 | (1) |
| Total mortgage-backed securities | 771 | 14 | 131 | (119) |  | (67) | 9 | (22) | 717 | 2 |
| Obligations of U.S. states and municipalities | 7 | - | - | (1) |  | - | - | - | 6 | - |
| Non-U.S. government debt securities | 155 | 40 | 100 | (96) |  | - | - | - | 199 | 43 |
| Corporate debt securities | 463 | 24 | 110 | (60) |  | (2) | 30 | (43) | 522 | 18 |
| Loans | 759 | 2 | 682 | (127) |  | (113) | 125 | (223) | 1,105 | 1 |
| Asset-backed securities | 23 | - | 5 | (3) |  | (1) | 5 | (15) | 14 | (1) |
| Total debt instruments | 2,178 | 80 | 1,028 | (406) |  | (183) | 169 | (303) | 2,563 | 63 |
| Equity securities | 665 | (47) | 108 | (107) |  | - | 140 | (128) | 631 | (27) |
| Physical Commodities | 2 | - | 6 | - |  | (2) | - | - | 6 | - |
| Other | 64 | (40) | 96 | - |  | (4) | 1 | (4) | 113 | (19) |
| Total trading assets - debt and equity instruments | 2,909 | (7) ${ }^{(c)}$ | 1,238 | (513) |  | (189) | 310 | (435) | 3,313 | $17^{\text {(c) }}$ |
| Net derivative receivables: ${ }^{(b)}$ |  |  |  |  |  |  |  |  |  |  |
| Interest rate | 701 | (697) | 95 | (92) |  | 27 | $(1,079)$ | (77) | $(1,122)$ | (582) |
| Credit | 13 | 474 | 3 | (4) |  | 202 | 26 | (25) | 689 | 497 |
| Foreign exchange | 489 | 52 | 79 | (108) |  | (201) | 119 | (41) | 389 | 29 |
| Equity | (384) | 23 | 613 | $(1,362)$ |  | (726) | 460 | (505) | $(1,881)$ | 95 |
| Commodity | (146) | (42) | 39 | (118) |  | (111) | (11) | 36 | (353) | (206) |
| Total net derivative receivables | 673 | $(190){ }^{(c)}$ | 829 | $(1,684)$ |  | (809) | (485) | (612) | $(2,278)$ | (167) ${ }^{(c)}$ |
| Available-for-sale securities: |  |  |  |  |  |  |  |  |  |  |
| Corporate debt securities | 239 | 28 | - | - |  | - | - | - | 267 | 28 |
| Total available-for-sale securities | 239 | $28{ }^{(d)}$ | - | - |  | - | - | - | 267 | $28{ }^{(d)}$ |
| Loans | 1,418 | $23^{\text {(c) }}$ | 2,285 | (73) |  | (585) | 917 | (177) | 3,808 | $24{ }^{\text {(c) }}$ |
| Mortgage servicing rights | 7,973 | $264{ }^{(e)}$ | 577 | (90) |  | (495) | - | - | 8,229 | $264{ }^{(e)}$ |
| Other assets | 405 | $21{ }^{\text {(c) }}$ | 17 | (2) |  | (30) | 8 | (2) | 417 | $21{ }^{\text {(c) }}$ |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | Fair value me | asuremen | using signif | cant unobservable | puts |  |  |  |
| Six months ended June 30, 2023 <br> (in millions) | $\begin{gathered} \text { Fair value at } \\ \text { Jan 1, } \\ 2023 \\ \hline \end{gathered}$ | Total realized/ unrealized (gains)/ losses | Purchases | Sales | Issuances | Settlements ${ }^{(\mathrm{h})}$ | $\begin{gathered} \text { Transfers } \\ \text { into } \\ \text { level } 3 \\ \hline \end{gathered}$ | Transfers (out of) level 3 | $\begin{gathered} \text { Fair value at } \\ \text { June } 30, \\ 2023 \\ \hline \end{gathered}$ | Change in unrealized (gains)/losses related to financial instruments held at June 30, 2023 |
| Liabilities: ${ }^{\text {(a) }}$ |  |  |  |  |  |  |  |  |  |  |
| Deposits | \$ 2,162 | \$ (3) ${ }^{(c)(f)}$ | \$ - | \$ | \$ 267 | \$ (248) | \$ | \$ (125) | \$2,053 | \$ (31) ${ }^{(c)(f)}$ |
| Short-term borrowings | 1,401 | $140{ }^{\text {(c)(f) }}$ | - | - | 2,242 | $(2,059)$ | 2 | (22) | 1,704 | $34^{(c)(f)}$ |
| Trading liabilities - debt and equity instruments | 84 | $(13){ }^{(c)}$ | (27) | 6 | - | (2) | 18 | (3) | 63 | - |
| Accounts payable and other liabilities | 53 | $4^{\text {(c) }}$ | (2) | 7 | - | - | 8 | (2) | 68 | $4^{(c)}$ |
| Long-term debt | 24,092 | 1,681 ${ }^{\text {(c)(f) }}$ | - | - | 5,400 | $(5,525)$ | 204 | (427) | 25,425 | 1,674 ${ }^{\text {(c)(f) }}$ |


|  | Fair value measurements using significant unobservable inputs |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Six months ended June 30, 2022 <br> (in millions) | Fair value at Jan 1, 2022 | Total realized/ unrealized gains/ (losses) | Purchases ${ }^{(\mathrm{g})}$ | Sales | Settlements ${ }^{(\mathrm{h})}$ | Transfers into level 3 | Transfers (out of) level 3 | Fair value at June 30, 2022 | Change in unrealized gains/ (losses) related to financial instruments held at June 30, 2022 |

Assets: ${ }^{(\text {a) }}$
Federal funds sold and
securities purchased under
resale agreements
Trading assets:
Debt instruments:

| Mortgage-backed securities: |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| U.S. GSEs and government agencies | 265 | 26 | 665 | (125) | (28) | - | - | 803 | 24 |  |
| Residential - nonagency | 28 | - | 5 | - | (12) | - | (7) | 14 | (1) |  |
| Commercial - nonagency | 10 | - | - | - | - | - | - | 10 | - |  |
| Total mortgage-backed securities | 303 | 26 | 670 | (125) | (40) | - | (7) | 827 | 23 |  |
| Obligations of U.S. states and municipalities | 7 | - | - | - | - | - | - | 7 | - |  |
| Non-U.S. government debt securities | 81 | (42) | 405 | (266) | - | 43 | (16) | 205 | (106) |  |
| Corporate debt securities | 332 | (35) | 333 | (71) | (37) | 98 | (46) | 574 | (44) |  |
| Loans | 708 | (37) | 419 | (262) | (159) | 525 | (296) | 898 | (13) |  |
| Asset-backed securities | 26 | - | 2 | (10) | - | 5 | (3) | 20 | - |  |
| Total debt instruments | 1,457 | (88) | 1,829 | (734) | (236) | 671 | (368) | 2,531 | (140) |  |
| Equity securities | 662 | (912) | 321 | (301) | - | 959 | (68) | 661 | (474) |  |
| Physical Commodities | - | - | 2 | - | - | - | - | 2 | - |  |
| Other | 160 | 67 | 26 | - | (163) | - | (3) | 87 | 70 |  |
| Total trading assets - debt and equity instruments | 2,279 | $(933){ }^{(c)}$ | 2,178 | $(1,035)$ | (399) | 1,630 | (439) | 3,281 | (544) |  |
| Net derivative receivables: ${ }^{(b)}$ |  |  |  |  |  |  |  |  |  |  |
| Interest rate | (16) | 393 | 225 | (229) | 256 | 17 | (226) | 420 | 428 |  |
| Credit | 74 | 331 | 8 | (7) | (161) | (2) | 6 | 249 | 330 |  |
| Foreign exchange | (419) | 538 | 147 | (43) | 32 | 18 | (28) | 245 | 486 |  |
| Equity | $(3,626)$ | 2,568 | 660 | $(1,025)$ | 303 | (558) | 444 | $(1,234)$ | 2,975 |  |
| Commodity | (907) | 804 | 68 | (206) | 268 | (1) | - | 26 | 469 |  |
| Total net derivative receivables | $(4,894)$ | 4,634 ${ }^{\text {(c) }}$ | 1,108 | $(1,510)$ | 698 | (526) | 196 | (294) | 4,688 | (c) |


| Available-for-sale securities: |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Corporate debt securities | 161 | 8 |  | 17 | - | - | - | - | 186 | 8 |  |
| Total available-for-sale securities | 161 | 8 | (d) | 17 | - | - | - | - | 186 | 8 | (d) |
| Loans | 1,933 | 16 | (c) | 394 | (100) | (531) | 616 | (308) | 2,020 | (24) | ${ }^{(c)}$ |
| Mortgage servicing rights | 5,494 | 1,613 | ) | 1,471 | (671) | (468) | - | - | 7,439 | 1,613 | (e) |
| Other assets | 306 | 125 | (c) | 46 | (28) | (37) | 2 | (6) | 408 | 119 | (c) |


| Fair value measurements using significant unobservable inputs |  |  |  |  |  |  |  |  |  | Change in unrealized (gains)/losses related to financial instruments held at June 30, 2022 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ```Six months ended June 30, 2022 (in millions)``` | $\begin{aligned} & \text { Fair value at } \\ & \text { Jan } 1 \text {, } \\ & 2022 \end{aligned}$ |  | Purchases | Sales | Issuances | Settlements ${ }^{(\mathrm{h})}$ | Transfers into level 3 | Transfers (out of) level 3 | $\begin{aligned} & \text { Fair value at } \\ & \text { June } 30, \\ & 2022 \end{aligned}$ |  |
| Liabilities: ${ }^{\left({ }^{\text {a }}\right.}$ |  |  |  |  |  |  |  |  |  |  |
| Deposits | \$ 2,317 | \$ (302) ${ }^{(c)(f)}$ | \$ | \$ | \$ 246 | \$ (69) | \$ - | \$ (160) | \$2,032 | \$ (298) ${ }^{(c)(f)}$ |
| Short-term borrowings | 2,481 | $(387){ }^{(c)(f)}$ | - | - | 2,386 | $(2,383)$ | 15 | (11) | 2,101 | 7 (c)(f) |
| Trading liabilities - debt and equity instruments | 30 | $(16){ }^{(c)}$ | (34) | 34 | - | - | 44 | (2) | 56 | 15 (c) |
| Accounts payable and other liabilities | 69 | (6) ${ }^{(c)}$ | (28) | 43 | - | - | 1 | (6) | 73 | (6) ${ }^{(c)}$ |
| Long-term debt | 24,374 | $(4,308)^{(c)(f)}$ | - | - | 7,520 | $(4,521)$ | 442 | (430) | 23,077 | $(4,151)^{(c)(f)}$ |

(a) Level 3 assets at fair value as a percentage of total Firm assets at fair value (including assets measured at fair value on a nonrecurring basis) were $2 \%$ at both June 30, 2023 and December 31, 2022. Level 3 liabilities at fair value as a percentage of total Firm liabilities at fair value (including liabilities measured at fair value on a nonrecurring basis) were $8 \%$ at both June 30, 2023 and December 31, 2022, respectively.
(b) All level 3 derivatives are presented on a net basis, irrespective of the underlying counterparty.
(c) Predominantly reported in principal transactions revenue, except for changes in fair value for CCB mortgage loans and lending-related commitments originated with the intent to sell, and mortgage loan purchase commitments, which are reported in mortgage fees and related income.
(d) Realized gains/(losses) on AFS securities are reported in investment securities gains/(losses). Unrealized gains/(losses) are reported in OCI. Realized and unrealized gains/(losses) recorded on level 3 AFS securities were not material both for the three and six months ended June 30, 2023 and 2022.
(e) Changes in fair value for MSRs are reported in mortgage fees and related income.
(f) Realized (gains)/losses due to DVA for fair value option elected liabilities are reported in principal transactions revenue, and were not material for the three and six months ended June 30,2023 and 2022. Unrealized (gains)/losses are reported in OCI, and were $\$ 23$ million and $\$(344)$ million for the three months ended June 30, 2023 and 2022, respectively and $\$(277)$ million and $\$(574)$ million for the six months ended June 30,2023 and 2022 , respectively.
(g) Loan originations are included in purchases.
(h) Includes financial assets and liabilities that have matured, been partially or fully repaid, impacts of modifications, deconsolidations associated with beneficial interests in VIEs and other items.

## Level 3 analysis

Consolidated balance sheets changes
The following describes significant changes to level 3 assets since December 31, 2022, for those items measured at fair value on a recurring basis. Refer to Assets and liabilities measured at fair value on a nonrecurring basis on page 115 for further information on changes impacting items measured at fair value on a nonrecurring basis.

Three and six months ended June 30, 2023
Level 3 assets were $\$ 26.8$ billion at June 30, 2023, reflecting an increase of $\$ 3.0$ billion from March 31, 2023, and an increase of $\$ 3.2$ billion from December 31, 2022.

The increase for the three and six months ended June 30, 2023 was predominantly driven by:

- $\$ 2.3$ billion and $\$ 2.4$ billion, respectively, in non-trading loans primarily due to $\$ 1.9$ billion of loans in CIB associated with the First Republic acquisition.
Refer to the sections below for additional information.
Transfers between levels for instruments carried at fair value on a recurring basis
For the three months ended June 30, 2023, significant transfers from level 2 into level 3 included the following:
- \$1.2 billion of gross interest rate derivative payables as a result of transition to term SOFR for certain interest rate options.
- $\$ 760$ million of non-trading loans driven by a decrease in observability.
For the three months ended June 30, 2023, there were no significant transfers from level 3 into level 2.
For the six months ended June 30, 2023, significant transfers from level 2 into level 3 included the following:
- $\$ 1.6$ billion of gross interest rate derivative payables as a result of transition to term SOFR for certain interest rate options.
- \$901 million of gross equity derivative receivables as a result of a decrease in observability and an increase in the significance of unobservable inputs.
- $\$ 917$ million of non-trading loans driven by a decrease in observability.
For the six months ended June 30, 2023, significant transfers
from level 3 into level 2 included the following:
- $\$ 1.3$ billion and $\$ 827$ million of gross equity derivative receivables and gross equity derivative payables, respectively, as a result of an increase in observability and a decrease in the significance of unobservable inputs.

For the three months ended June 30,2022 , there were no significant transfers from level 2 into level 3.
For the three months ended June 30, 2022, significant transfers from level 3 into level 2 included the following:

- \$930 million of gross interest rate derivative receivables as a result of an increase in observability and a decrease in the significance of unobservable inputs.

For the six months ended June 30, 2022, significant transfers from level 2 into level 3 included the following:

- \$1.6 billion of total debt and equity instruments, largely due to equity securities of $\$ 959$ million driven by a decrease in observability predominantly as a result of restricted access to certain markets.
- $\$ 1.3$ billion of gross equity derivative payables as a result of a decrease in observability and an increase in the significance of unobservable inputs.

For the six months ended June 30, 2022, significant transfers from level 3 into level 2 included the following:

- \$965 million of gross interest rate derivative receivables as a result of an increase in observability and a decrease in the significance of unobservable inputs.
- $\$ 920$ million and $\$ 1.4$ billion of gross equity derivative receivables and gross equity derivative payables, respectively, as a result of an increase in observability and a decrease in the significance of unobservable inputs.
All transfers are based on changes in the observability and/or significance of the valuation inputs and are assumed to occur at the beginning of the quarterly reporting period in which they occur.


## Gains and losses

The following describes significant components of total realized/unrealized gains/(losses) for instruments measured at fair value on a recurring basis for the periods indicated. These amounts exclude any effects of the Firm's risk management activities where the financial instruments are classified as level 1 and 2 of the fair value hierarchy. Refer to Changes in level 3 recurring fair value measurements rollforward tables on pages 108-113 for further information on these instruments.
Three months ended June 30, 2023

- \$752 million of net losses on assets, driven by losses in net derivative receivables due to market movements.
- $\$ 328$ million of net losses on liabilities, driven by losses in long-term debt due to market movements.
Three months ended June 30, 2022
- \$3.4 billion of net gains on assets, largely driven by gains in net equity derivative receivables due to market movements and MSRs reflecting lower prepayment speeds on higher rates.
- $\$ 2.8$ billion of net gains on liabilities, predominantly driven by gains in long-term debt due to market movements.
Six months ended June 30, 2023
- $\$ 139$ million of net gains on assets, driven by gains in MSR reflecting lower prepayment speeds on higher rates.
- \$1.8 billion of net losses on liabilities, predominantly driven by losses in long-term debt due to market movements.
Six months ended June 30, 2022
- $\$ 5.5$ billion of net gains on assets, predominantly driven by gains in net equity derivative receivables due to market movements and MSRs reflecting lower prepayment speeds on higher rates.
- \$5.0 billion of net gains on liabilities, predominantly driven by gains in long-term debt due to market movements.
Refer to Note 15 for information on MSRs.
Credit and funding adjustments - derivatives
The following table provides the impact of credit and funding adjustments on principal transactions revenue in the respective periods, excluding the effect of any associated hedging activities. The FVA presented below includes the impact of the Firm's own credit quality on the inception value of liabilities as well as the impact of changes in the Firm's own credit quality over time.

| (in millions) | Three months ended June 30, |  |  |  | Six months ended June 30 , |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 2023 |  | 2022 |  | 2023 |  | 2022 |
| Credit and funding adjustments: |  |  |  |  |  |  |  |  |
| Derivatives CVA | \$ | 66 | \$ | 147 | \$ | 121 | \$ | (165) |
| Derivatives FVA |  | 63 |  | 7 |  | 55 |  | (51) |

Refer to Note 2 of JPMorgan Chase's 2022 Form 10-K for further information about both credit and funding
adjustments, as well as information about valuation adjustments on fair value option elected liabilities.

Assets and liabilities measured at fair value on a nonrecurring basis
The following tables present the assets and liabilities held as of June 30, 2023 and 2022, for which nonrecurring fair value adjustments were recorded during the six months ended June 30, 2023 and 2022, by major product category and fair value hierarchy.

| June 30, 2023 (in millions) | Fair value hierarchy |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Level 1 |  | Level 2 |  | Level 3 |  | Total fair value |  |  |
| Loans | \$ | - | \$ | 803 | \$ | 840 | (b) | \$ | 1,643 |
| Other assets ${ }^{(\mathrm{a})}$ |  | - |  | 7 |  | 286 |  |  | 293 |
| Total assets measured at fair value on a nonrecurring basis | \$ | - | \$ | 810 | \$ | 1,126 |  | \$ | 1,936 |
| Accounts payable and other liabilities |  | - |  | - |  | - |  |  | - |
| Total liabilities measured at fair value on a nonrecurring basis | \$ | - | \$ | - | \$ | - |  | \$ | - |
| June 30, 2022 (in millions) | Fair value hierarchy |  |  |  |  |  |  |  |  |
|  |  | Level 1 |  | Level 2 |  | Level 3 |  |  | r value |
| Loans | \$ | - | \$ | 1,516 | \$ | 665 |  | \$ | 2,181 |
| Other assets |  | - |  | 22 |  | 1,083 |  |  | 1,105 |
| Total assets measured at fair value on a nonrecurring basis | \$ | - | \$ | 1,538 | \$ | 1,748 |  | \$ | 3,286 |
| Accounts payable and other liabilities |  | - |  | - |  | 293 |  |  | 293 |
| Total liabilities measured at fair value on a nonrecurring basis | \$ | - | \$ | - | \$ | 293 |  | \$ | 293 |

(a) Primarily includes equity securities without readily determinable fair values that were adjusted based on observable price changes in orderly transactions from an identical or similar investment of the same issuer (measurement alternative). Of the $\$ 286$ million in level 3 assets measured at fair value on a nonrecurring basis as of June $30,2023, \$ 220$ million related to equity securities adjusted based on the measurement alternative. These equity securities are classified as level 3 due to the infrequency of the observable prices and/or the restrictions on the shares.
(b) Of the $\$ 840$ million in level 3 assets measured at fair value on a nonrecurring basis as of June 30, 2023, $\$ 23$ million related to residential real estate loans carried at the net realizable value of the underlying collateral (e.g., collateral-dependent loans). These amounts are classified as level 3 as they are valued using information from broker's price opinions, appraisals and automated valuation models and discounted based upon the Firm's experience with actual liquidation values. These discounts ranged from $3 \%$ to $56 \%$ with a weighted average of $25 \%$.

## Nonrecurring fair value changes

The following table presents the total change in value of assets and liabilities for which fair value adjustments have been recognized for the three and six months ended June 30, 2023 and 2022, related to assets and liabilities held at those dates.

| (in millions) | Three months ended June 30 , |  |  |  | Six months ended June 30, |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  | 2022 |  | 2023 |  | 2022 |  |
| Loans | \$ | (96) | \$ | (80) | \$ | (128) | \$ | (91) |
| Other assets ${ }^{(a)}$ |  | (36) |  | (389) |  | (99) |  | (45) |
| Accounts payable and other liabilities |  | - |  | (269) |  | - |  | (288) |
| Total nonrecurring fair value gains/(losses) | \$ | (132) | \$ | (738) | \$ | (227) | \$ | (424) |

(a) Included $\$(32)$ million and $\$(387)$ million for the three months ended June 30, 2023 and 2022, respectively, and \$(93) million and \$(29)
million for the six months ended June 30, 2023 and 2022,
respectively, of net gains/(losses) as a result of the measurement alternative.

Refer to Note 12 for further information about the measurement of collateral-dependent loans.

## Equity securities without readily determinable fair values

The Firm measures certain equity securities without readily determinable fair values at cost less impairment (if any), plus or minus observable price changes from an identical or similar investment of the same issuer (i.e., measurement alternative), with such changes recognized in other income.

In its determination of the new carrying values upon observable price changes, the Firm may adjust the prices if deemed necessary to arrive at the Firm's estimated fair values. Such adjustments may include adjustments to reflect the different rights and obligations of similar securities, and other adjustments that are consistent with the Firm's valuation techniques for private equity direct investments.

The following table presents the carrying value of equity securities without readily determinable fair values held as of June 30 , 2023 and 2022, that are measured under the measurement alternative and the related adjustments recorded during the periods presented for those securities with observable price changes. These securities are included in the nonrecurring fair value tables when applicable price changes are observable.

| As of or for the period ended, (in millions) | Three months ended June 30, |  |  |  | Six months ended June 30, |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  | 2022 |  | 2023 |  | 2022 |  |
| Other assets |  |  |  |  |  |  |  |  |
| Carrying value ${ }^{(\mathrm{a})}$ | \$ | 4,673 | \$ | 4,196 | \$ | 4,673 | \$ | 4,196 |
| Upward carrying value changes ${ }^{(b)}$ |  | 5 |  | 76 |  | 40 |  | 445 |
| Downward carrying value changes/impairment ${ }^{(c)}$ |  | (37) |  | (463) |  | (133) |  | (474) |

(a) The carrying value as of December 31, 2022 was $\$ 4.1$ billion. The period-end carrying values reflect cumulative purchases and sales in addition to upward and downward carrying value changes.
(b) The cumulative upward carrying value changes between January 1, 2018 and June 30, 2023 were $\$ 1.5$ billion.
(c) The cumulative downward carrying value changes/impairment between January 1, 2018 and June 30, 2023 were $\$(1.0)$ billion.

Included in other assets above is the Firm's interest in approximately 37 million Visa Class B common shares ("Visa B shares"). These shares are subject to certain transfer restrictions and are convertible into Visa Class A common shares ("Visa A shares") at a specified conversion rate upon final resolution of certain litigation matters involving Visa. On June 29, 2023, Visa filed a Current Report on Form 8-K with the SEC indicating that the conversion rate of Visa B shares to Visa A shares decreased from 1.5991 to 1.5902 effective June 28,2023 . The conversion rate may be further adjusted by Visa depending on developments related to the litigation matters. The outcome of those litigation matters, and the effect that the resolution of those matters may have on the conversion rate, is unknown. Accordingly, as of June 30, 2023, there is significant uncertainty regarding when the transfer restrictions on Visa B shares may be terminated and what the final conversion rate for the Visa B shares will be. As a result of these considerations, as well as differences in voting rights, Visa B shares are not considered to be similar to Visa A shares, and they continue to be held at their nominal carrying value.

In connection with prior sales of Visa B shares, the Firm has entered into derivative instruments with the purchasers of the shares under which the Firm retains the risk associated with changes in the conversion rate. Under the terms of the derivative instruments, the Firm will (a) make or receive payments based on subsequent changes in the conversion rate and (b) make periodic interest payments to the purchasers of the Visa B shares. The payments under the derivative instruments will continue as long as the Visa B shares remain subject to transfer restrictions. The derivative instruments are accounted for at fair value using a discounted cash flow methodology based upon the Firm's estimate of the timing and magnitude of final resolution of the litigation matters. The derivative instruments are recorded in trading liabilities, and changes in fair value are recognized in other income. As of June 30, 2023, the Firm held derivative instruments associated with 23 million Visa B shares that the Firm had previously sold, which are all subject to similar terms and conditions.

## Additional disclosures about the fair value of financial instruments that are not carried on the Consolidated balance

 sheets at fair valueThe following table presents, by fair value hierarchy classification, the carrying values and estimated fair values at June 30 , 2023, and December 31, 2022, of financial assets and liabilities, excluding financial instruments that are carried at fair value on a recurring basis, and their classification within the fair value hierarchy.

| (in billions) | June 30, 2023 |  |  |  |  | December 31, 2022 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Estimated fair value hierarchy |  |  |  | Total estimated fair value | Carrying value | Estimated fair value hierarchy |  |  | Total estimated fair value |
|  | Carrying value | Level 1 | Level 2 | Level 3 |  |  | Level 1 | Level 2 | Level 3 |  |
| Financial assets |  |  |  |  |  |  |  |  |  |  |
| Cash and due from banks | \$ 26.1 | \$ 26.1 | \$ | \$ | \$ 26.1 | \$ 27.7 | \$ 27.7 | \$ | \$ | \$ 27.7 |
| Deposits with banks | 469.1 | 469.0 | 0.1 | - | 469.1 | 539.5 | 539.3 | 0.2 | - | 539.5 |
| Accrued interest and accounts receivable | 111.1 | - | 111.1 | 0.1 | 111.2 | 124.7 | - | 124.6 | 0.1 | 124.7 |
| Federal funds sold and securities purchased under resale agreements | 3.0 | - | 3.0 | - | 3.0 | 3.7 | - | 3.7 | - | 3.7 |
| Securities borrowed | 107.7 | - | 107.7 | - | 107.7 | 115.3 | - | 115.3 | - | 115.3 |
| Investment securities, held-tomaturity | 408.9 | 185.8 | 189.5 | - | 375.3 | 425.3 | 189.1 | 199.5 | - | 388.6 |
| Loans, net of allowance for loan losses ${ }^{(a)}$ | 1,239.3 | - | 279.8 | 936.1 | 1,215.9 | 1,073.9 | - | 194.0 | 853.9 | 1,047.9 |
| Other | 69.2 | - | 66.9 | 2.4 | 69.3 | 101.2 | - | 99.6 | 1.7 | 101.3 |
| Financial liabilities |  |  |  |  |  |  |  |  |  |  |
| Deposits | \$ 2,347.4 | \$ - | \$ 2,347.5 | \$ | \$ 2,347.5 | \$ 2,311.6 | \$ - | \$ 2,311.5 | \$ - | \$ 2,311.5 |
| Federal funds purchased and securities loaned or sold under repurchase agreements | 49.7 | - | 49.7 | - | 49.7 | 50.6 | - | 50.6 | - | 50.6 |
| Short-term borrowings ${ }^{(b)}$ | 23.1 | - | 23.1 | - | 23.1 | 28.2 | - | 28.2 | - | 28.2 |
| Accounts payable and other liabilities | 248.1 | - | 238.8 | 8.8 | 247.6 | 257.5 | - | 251.2 | 5.6 | 256.8 |
| Beneficial interests issued by consolidated VIEs | 19.6 | - | 19.6 | - | 19.6 | 12.6 | - | 12.6 | - | 12.6 |
| Long-term debt ${ }^{(b)}$ | 285.4 | - | 232.0 | 51.7 | 283.7 | 223.6 | - | 216.5 | 2.8 | 219.3 |

(a) Fair value is typically estimated using a discounted cash flow model that incorporates the characteristics of the underlying loans (including principal, contractual interest rate and contractual fees) and other key inputs, including expected lifetime credit losses, interest rates, prepayment rates, and primary origination or secondary market spreads. For certain loans, the fair value is measured based on the value of the underlying collateral. Carrying value of the loan takes into account the loan's allowance for loan losses, which represents the loan's expected credit losses over its remaining expected life. The difference between the estimated fair value and carrying value of a loan is generally attributable to changes in market interest rates, including credit spreads, market liquidity premiums and other factors that affect the fair value of a loan but do not affect its carrying value.
(b) Includes FHLB advances in level 2 of Long-term debt and Short-term borrowings and the Purchase Money Note in level 3 of Long-term debt associated with the First Republic acquisition. Refer to Notes 18 and 28 for additional information.

The majority of the Firm's lending-related commitments are not carried at fair value on a recurring basis on the Consolidated balance sheets. The carrying value and the estimated fair value of these wholesale lending-related commitments were as follows for the periods indicated.

| (in billions) | June 30, 2023 |  |  |  |  |  |  |  |  | December 31, 2022 |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Estimated fair value hierarchy |  |  |  |  |  |  | Total estimated fair value |  | Carrying value ${ }^{(a)}$ |  | Estimated fair value hierarchy |  |  |  |  |  | Total estimated fair value |  |
|  | Carrying value ${ }^{(\mathrm{a})}$ (b)ic) | Level 1 |  | Level 2 |  | Level 3 |  |  |  |  |  |  |  |  |  |  |  |
| Wholesale lendingrelated commitments | \$ 3.7 | \$ | - | \$ | - | \$ | 4.9 | \$ | 4.9 |  |  | \$ | 2.3 | \$ |  | \$ | - | \$ | 3.2 | \$ | 3.2 |

(a) Excludes the current carrying values of the guarantee liability and the offsetting asset, each of which is recognized at fair value at the inception of the guarantees.
(b) Includes the wholesale allowance for lending-related commitments.
(c) As of June 30, 2023, includes fair value adjustments associated with the First Republic acquisition for other unfunded commitments to extend credit totaling $\$ 1.6$ billion. Refer to Notes 24 and 28 for additional information.
The Firm does not estimate the fair value of consumer off-balance sheet lending-related commitments. In many cases, the Firm can reduce or cancel these commitments by providing the borrower notice or, in some cases as permitted by law, without notice. Refer to page 169 of JPMorgan Chase's 2022 Form 10-K for a further discussion of the valuation of lending-related commitments.

## Note 3 - Fair value option

The fair value option provides an option to elect fair value for selected financial assets, financial liabilities, unrecognized firm commitments, and written loan commitments.
The Firm has elected to measure certain instruments at fair value for several reasons including to mitigate income statement volatility caused by the differences between the measurement basis of elected instruments (e.g., certain instruments that otherwise would be accounted for on an accrual basis) and the associated risk management arrangements that are accounted for on a fair value basis, as well as to better reflect those instruments that are managed on a fair value basis.
The Firm's election of fair value includes the following instruments:

- Loans purchased or originated as part of securitization warehousing activity, subject to bifurcation accounting, or managed on a fair value basis, including lending-related commitments
- Certain securities financing agreements
- Owned beneficial interests in securitized financial assets that contain embedded credit derivatives, which would otherwise be required to be separately accounted for as a derivative instrument
- Structured notes and other hybrid instruments, which are predominantly financial instruments that contain embedded derivatives, that are issued or transacted as part of client-driven activities
- Certain long-term beneficial interests issued by CIB's consolidated securitization trusts where the underlying assets are carried at fair value

Changes in fair value under the fair value option election
The following table presents the changes in fair value included in the Consolidated statements of income for the three and six months ended June 30, 2023 and 2022, for items for which the fair value option was elected. The profit and loss information presented below only includes the financial instruments that were elected to be measured at fair value; related risk management instruments, which are required to be measured at fair value, are not included in the table.

| (in millions) | Three months ended June 30, |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  |  |  |  | 2022 |  |  |  |  |  |
|  | Principal transactions | All other income |  | Total changes in fair value recorded ${ }^{(\mathrm{e})}$ |  | Principal transactions |  | All other income |  | Total changes in fair value recorded ${ }^{(\mathrm{e})}$ |  |
| Federal funds sold and securities purchased under resale agreements | \$ 18 | \$ | - | \$ | 18 | \$ | (145) | \$ | - | \$ | (145) |
| Securities borrowed | (60) |  | - |  | (60) |  | (101) |  | - |  | (101) |
| Trading assets: |  |  |  |  |  |  |  |  |  |  |  |
| Debt and equity instruments, excluding loans | 1,160 |  | - |  | 1,160 |  | $(1,255)$ |  | - |  | $(1,255)$ |
| Loans reported as trading assets: |  |  |  |  |  |  |  |  |  |  |  |
| Changes in instrument-specific credit risk | 100 |  | - |  | 100 |  | $(136){ }^{(f)}$ |  | - |  | (136) |
| Other changes in fair value | 2 |  | 2 (c) |  | 4 |  | (11) |  | - |  | (11) |
| Loans: |  |  |  |  |  |  |  |  |  |  |  |
| Changes in instrument-specific credit risk | 6 |  | (5) ${ }^{(c)}$ |  | 1 |  | (83) |  | $11^{\text {(c) }}$ |  | (72) |
| Other changes in fair value | (76) |  | (6) ${ }^{(c)}$ |  | (82) |  | (501) |  | (260) ${ }^{\text {(c) }}$ |  | (761) |
| Other assets | (16) |  | (1) ${ }^{(d)}$ |  | (17) |  | (2) |  | $4{ }^{\text {(d) }}$ |  | 2 |
| Deposits ${ }^{(a)}$ | (395) |  | - |  | (395) |  | 382 |  | - |  | 382 |
| Federal funds purchased and securities loaned or sold under repurchase agreements | (8) |  | - |  | (8) |  | 124 |  | - |  | 124 |
| Short-term borrowings ${ }^{(a)}$ | (110) |  | - |  | (110) |  | 471 |  | - |  | 471 |
| Trading liabilities | (15) |  | - |  | (15) |  | 54 |  | - |  | 54 |
| Beneficial interests issued by consolidated VIEs | - |  | - |  | - |  | - |  | - |  | - |
| Other liabilities | (1) |  | - |  | (1) |  | (7) |  | - |  | (7) |
| Long-term debt ${ }^{(\mathrm{a})(\mathrm{b})}$ | (663) |  | $(2){ }^{(c)(d)}$ |  | (665) |  | 5,405 |  | $14^{(c)(d)}$ |  | 5,419 |


| (in millions) | Six months ended June 30, |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  |  |  |  | 2022 |  |  |  |  |  |
|  | Principal transactions | All other income |  | Total changes in fair value recorded ${ }^{(\text {e) }}$ |  | Principal transactions |  | All other income |  | Total changes in fair value recorded ${ }^{(e)}$ |  |
| Federal funds sold and securities purchased under resale agreements | \$ 220 | \$ | - | \$ | 220 | \$ | (375) | \$ | - | \$ | (375) |
| Securities borrowed | 28 |  | - |  | 28 |  | (299) |  | - |  | (299) |
| Trading assets: |  |  |  |  |  |  |  |  |  |  |  |
| Debt and equity instruments, excluding loans | 2,755 |  | - |  | 2,755 |  | (911) |  | - |  | (911) |
| Loans reported as trading assets: |  |  |  |  |  |  |  |  |  |  |  |
| Changes in instrument-specific credit risk | 231 |  | - |  | 231 |  | (142) ${ }^{(f)}$ |  | - |  | (142) |
| Other changes in fair value | 5 |  | $2{ }^{(c)}$ |  | 7 |  | (22) |  | - |  | (22) |
| Loans: |  |  |  |  |  |  |  |  |  |  |  |
| Changes in instrument-specific credit risk | 71 |  | (4) ${ }^{(c)}$ |  | 67 |  | (77) |  | $23{ }^{\text {(c) }}$ |  | (54) |
| Other changes in fair value | 119 |  | $104{ }^{(c)}$ |  | 223 |  | $(1,220)$ |  | (774) ${ }^{(c)}$ |  | $(1,994)$ |
| Other assets | 14 |  | (1) ${ }^{\text {(d) }}$ |  | 13 |  | 9 |  | $1{ }^{\text {(d) }}$ |  | 10 |
| Deposits ${ }^{\text {(a) }}$ | (868) |  | - |  | (868) |  | 784 |  | - |  | 784 |
| Federal funds purchased and securities loaned or sold under repurchase agreements | (69) |  | - |  | (69) |  | 206 |  | - |  | 206 |
| Short-term borrowings ${ }^{(\text {a }}$ | (269) |  | - |  | (269) |  | 773 |  | - |  | 773 |
| Trading liabilities | (30) |  | - |  | (30) |  | (12) |  | - |  | (12) |
| Beneficial interests issued by consolidated VIEs | - |  | - |  | - |  | (1) |  | - |  | (1) |
| Other liabilities | (1) |  | - |  | (1) |  | (4) |  | - |  | (4) |
| Long-term debt ${ }^{(a)(\text { (b) }}$ | $(3,461)$ |  | (28) ${ }^{(c)(d)}$ |  | $(3,489)$ |  | 9,365 |  | $33^{(c)(d)}$ |  | 9,398 |

(a) Unrealized gains/(losses) due to instrument-specific credit risk (DVA) for liabilities for which the fair value option has been elected are recorded in OCI, while realized gains/(losses) are recorded in principal transactions revenue. Realized gains/(losses) due to instrument-specific credit risk recorded in principal transactions revenue were not material both for the three and six months ended June 30, 2023 and 2022.
(b) Long-term debt measured at fair value predominantly relates to structured notes. Although the risk associated with the structured notes is actively managed, the gains/(losses) reported in this table do not include the income statement impact of the risk management instruments used to manage such risk.
(c) Reported in mortgage fees and related income.
(d) Reported in other income.
(e) Changes in fair value exclude contractual interest, which is included in interest income and interest expense for all instruments other than certain hybrid financial instruments in CIB. Refer to Note 7 for further information regarding interest income and interest expense.
(f) Prior-period amounts have been revised to conform with the current presentation.

Difference between aggregate fair value and aggregate remaining contractual principal balance outstanding The following table reflects the difference between the aggregate fair value and the aggregate remaining contractual principal balance outstanding as of June 30, 2023, and December 31, 2022, for loans, long-term debt and long-term beneficial interests for which the fair value option has been elected.

|  | June 30, 2023 |  |  | December 31, 2022 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (in millions) | Contractual principal outstanding | Fair value | Fair value over/(under) contractual principal outstanding | Contractual principal outstanding | Fair value | Fair value over/(under) contractual principal outstanding |

Loans
Nonaccrual loans

| Loans reported as trading assets | \$ | 2,737 |  | \$ | 529 | \$ | $(2,208)$ | \$ | 2,517 |  | \$ | 368 | \$ | $(2,149)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Loans |  | 911 |  |  | 760 |  | (151) |  | 967 |  |  | 829 |  | (138) |
| Subtotal |  | 3,648 |  |  | 1,289 |  | $(2,359)$ |  | 3,484 |  |  | 1,197 |  | $(2,287)$ |
| 90 or more days past due and government guaranteed |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Loans ${ }^{(a)}$ |  | 82 |  |  | 76 |  | (6) |  | 124 |  |  | 115 |  | (9) |
| All other performing loans ${ }^{(\text {b }}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Loans reported as trading assets |  | 9,217 |  |  | 7,560 |  | $(1,657)$ |  | 7,823 |  |  | 6,135 |  | $(1,688)$ |
| Loans |  | 39,995 |  |  | 37,953 |  | $(2,042)$ |  | 42,588 |  |  | 41,135 |  | $(1,453)$ |
| Subtotal |  | 49,212 |  |  | 45,513 |  | $(3,699)$ |  | 50,411 |  |  | 47,270 |  | $(3,141)$ |
| Total loans | \$ | 52,942 |  | \$ | 46,878 | \$ | $(6,064)$ | \$ | 54,019 |  | \$ | 48,582 | \$ | $(5,437)$ |
| Long-term debt |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Principal-protected debt | \$ | 42,889 | (d) | \$ | 34,524 | \$ | $(8,365)$ | \$ | 41,341 | (d) | \$ | 31,105 | \$ | $(10,236)$ |
| Nonprincipal-protected debt ${ }^{(\mathrm{c})}$ |  | NA |  |  | 44,085 |  | NA |  | NA |  |  | 41,176 |  | NA |
| Total long-term debt |  | NA |  | \$ | 78,609 |  | NA |  | NA |  | \$ | 72,281 |  | NA |
| Long-term beneficial interests |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Nonprincipal-protected debt ${ }^{(c)}$ |  | NA |  | \$ | 1 |  | NA |  | NA |  | \$ | 5 |  | NA |
| Total long-term beneficial interests |  | NA |  | \$ | 1 |  | NA |  | NA |  | \$ | 5 |  | NA |

(a) These balances are excluded from nonaccrual loans as the loans are insured and/or guaranteed by U.S. government agencies.
(b) There were no performing loans that were ninety days or more past due as of June 30, 2023, and December 31, 2022.
(c) Remaining contractual principal is not applicable to nonprincipal-protected structured notes and long-term beneficial interests. Unlike principal-protected structured notes and long-term beneficial interests, for which the Firm is obligated to return a stated amount of principal at maturity, nonprincipalprotected structured notes and long-term beneficial interests do not obligate the Firm to return a stated amount of principal at maturity, but for structured notes to return an amount based on the performance of an underlying variable or derivative feature embedded in the note. However, investors are exposed to the credit risk of the Firm as issuer for both nonprincipal-protected and principal-protected notes.
(d) Where the Firm issues principal-protected zero-coupon or discount notes, the balance reflects the contractual principal payment at maturity or, if applicable, the contractual principal payment at the Firm's next call date.

At June 30, 2023, and December 31, 2022, the contractual amount of lending-related commitments for which the fair value option was elected was $\$ 10.2$ billion and $\$ 7.6$ billion, respectively, with a corresponding fair value of $\$ 264$ million and $\$ 24$ million, respectively. Refer to Note 28 of JPMorgan Chase's 2022 Form 10-K, and Note 24 of this Form 10-Q for further information regarding off-balance sheet lending-related financial instruments.

Structured note products by balance sheet classification and risk component
The following table presents the fair value of structured notes, by balance sheet classification and the primary risk type.

| (in millions) | June 30, 2023 |  |  |  |  |  | December 31, 2022 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Long-term debt | Short-term borrowings |  | Deposits | Total |  | Long-term debt |  | Short-term borrowings |  | Deposits | Total |  |
| Risk exposure |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Interest rate | \$ 34,860 | \$ | 225 | \$46,527 |  | \$ 81,612 | \$ | 31,973 | \$ | 260 | \$ 24,655 |  | \$ 56,888 |
| Credit | 4,618 |  | 247 | - |  | 4,865 |  | 4,105 |  | 170 | - |  | 4,275 |
| Foreign exchange | 2,675 |  | 997 | 3 |  | 3,675 |  | 2,674 |  | 788 | 50 |  | 3,512 |
| Equity | 33,590 |  | 4,830 | 3,202 |  | 41,622 |  | 30,864 |  | 4,272 | 3,545 |  | 38,681 |
| Commodity | 2,017 |  | - | 1 | (a) | 2,018 |  | 1,655 |  | 16 | 2 | (a) | 1,673 |
| Total structured notes | \$ 77,760 | \$ | 6,299 | \$49,733 |  | \$133,792 | \$ | 71,271 | \$ | 5,506 | \$ 28,252 |  | \$105,029 |

(a) Excludes deposits linked to precious metals for which the fair value option has not been elected of $\$ 590$ million and $\$ 602$ million for the periods ended June 30, 2023 and December 31, 2022, respectively.

## Note 4 - Credit risk concentrations

Concentrations of credit risk arise when a number of clients, counterparties or customers are engaged in similar business activities or activities in the same geographic region, or when they have similar economic features that would cause their ability to meet contractual obligations to be similarly affected by changes in economic conditions.

JPMorgan Chase regularly monitors various segments of its credit portfolios to assess potential credit risk concentrations and to obtain additional collateral when deemed necessary and permitted under the Firm's agreements. Senior management is significantly involved in the credit approval and review process, and risk levels are adjusted as needed to reflect the Firm's risk appetite.
In the Firm's consumer portfolio, concentrations are managed primarily by product and by U.S. geographic region, with a key focus on trends and concentrations at the portfolio level, where potential credit risk concentrations can be remedied through changes in underwriting policies and portfolio guidelines. Refer to Note 12 for additional information on the geographic composition of the Firm's consumer loan portfolios. In the wholesale portfolio, credit risk concentrations are evaluated primarily by industry and monitored regularly on both an aggregate portfolio level and on an individual client or counterparty basis.

The Firm's wholesale exposure is managed through loan syndications and participations, loan sales, securitizations, credit derivatives, master netting agreements, collateral and other risk-reduction techniques. Refer to Note 12 for additional information on loans.

The Firm does not believe that its exposure to any particular loan product or industry segment results in a significant concentration of credit risk.

Terms of loan products and collateral coverage are included in the Firm's assessment when extending credit and establishing its allowance for loan losses.

The table below presents both on-balance sheet and off-balance sheet consumer and wholesale credit exposure by the Firm's three credit portfolio segments as of June 30, 2023 and December 31, 2022. The wholesale industry of risk category is generally based on the client or counterparty's primary business activity.

| (in millions) | June 30, 2023 |  |  |  |  |  | December 31, 2022 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \text { Credit }_{(\text {(i) }} \\ & \text { exposure } \end{aligned}$ | On-balance sheet |  |  | Off-balance sheet |  | $\begin{gathered} \text { Credit } \\ \text { exposure }^{(h)} \\ \hline \end{gathered}$ | On-balance sheet |  |  |  | Off-balance sheet ${ }^{(j)}$ |  |
|  |  | Loans |  | Derivatives |  |  |  | Loans |  | rivatives |  |  |
| Consumer, excluding credit card | \$ 459,050 | \$ 408,204 | \$ | - | \$ | 50,846 |  | \$ 344,893 | \$ | 311,375 | \$ | - | \$ | 33,518 |
| Credit card ${ }^{(a)}$ | 1,072,833 | 191,348 |  | - |  | 881,485 | 1,006,459 |  | 185,175 |  | - |  | 821,284 |
| Total consumer ${ }^{\text {(a) }}$ | 1,531,883 | 599,552 |  | - |  | 932,331 | 1,351,352 |  | 496,550 |  | - |  | 854,802 |
| Wholesale ${ }^{\text {(b) }}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Real Estate | 206,912 | 165,069 |  | 331 |  | 41,512 | 170,857 |  | 131,681 |  | 249 |  | 38,927 |
| Individuals and Individual Entities ${ }^{(c)}$ | 141,178 | 122,056 |  | 730 |  | 18,392 | 130,815 |  | 120,424 |  | 434 |  | 9,957 |
| Asset Managers | 138,143 | 52,730 |  | 14,751 |  | 70,662 | 95,656 |  | 40,511 |  | 16,397 |  | 38,748 |
| Consumer \& Retail | 125,935 | 47,410 |  | 2,278 |  | 76,247 | 120,555 |  | 45,867 |  | 1,650 |  | 73,038 |
| Industrials | 77,206 | 27,537 |  | 1,424 |  | 48,245 | 72,483 |  | 26,960 |  | 1,770 |  | 43,753 |
| Technology, Media \& Telecommunications | 76,444 | 21,159 |  | 2,601 |  | 52,684 | 72,286 |  | 21,622 |  | 2,950 |  | 47,714 |
| Healthcare | 65,547 | 22,727 |  | 1,720 |  | 41,100 | 62,613 |  | 22,970 |  | 1,683 |  | 37,960 |
| Banks \& Finance Cos | 61,659 | 34,934 |  | 4,679 |  | 22,046 | 51,816 |  | 32,172 |  | 3,246 |  | 16,398 |
| State \& Municipal Govt ${ }^{(d)}$ | 37,157 | 20,656 |  | 457 |  | 16,044 | 33,847 |  | 18,147 |  | 585 |  | 15,115 |
| Utilities | 35,757 | 7,162 |  | 3,089 |  | 25,506 | 36,218 |  | 9,107 |  | 3,269 |  | 23,842 |
| Oil \& Gas | 33,233 | 9,607 |  | 1,352 |  | 22,274 | 38,668 |  | 9,632 |  | 5,121 |  | 23,915 |
| Automotive | 32,947 | 15,169 |  | 602 |  | 17,176 | 33,287 |  | 14,735 |  | 529 |  | 18,023 |
| Chemicals \& Plastics | 22,195 | 6,343 |  | 510 |  | 15,342 | 20,030 |  | 5,771 |  | 407 |  | 13,852 |
| Insurance | 21,874 | 2,772 |  | 8,175 |  | 10,927 | 21,045 |  | 2,387 |  | 8,081 |  | 10,577 |
| Central Govt | 16,845 | 3,670 |  | 10,827 |  | 2,348 | 19,095 |  | 3,167 |  | 12,955 |  | 2,973 |
| Metals \& Mining | 15,631 | 4,786 |  | 311 |  | 10,534 | 15,915 |  | 5,398 |  | 475 |  | 10,042 |
| Transportation | 15,447 | 5,779 |  | 606 |  | 9,062 | 15,009 |  | 5,005 |  | 567 |  | 9,437 |
| Securities Firms | 9,077 | 957 |  | 3,392 |  | 4,728 | 8,066 |  | 556 |  | 3,387 |  | 4,123 |
| Financial Markets Infrastructure | 4,993 | 184 |  | 2,491 |  | 2,318 | 4,962 |  | 13 |  | 3,050 |  | 1,899 |
| All other ${ }^{(\text {e })}$ | 135,271 | 97,438 |  | 3,891 |  | 33,942 | 123,307 |  | 87,545 |  | 4,075 |  | 31,687 |
| Subtotal | 1,273,451 | 668,145 |  | 64,217 |  | 541,089 | 1,146,530 |  | 603,670 |  | 70,880 |  | 471,980 |
| Loans held-for-sale and loans at fair value | 32,372 | 32,372 |  | - |  | - | 35,427 |  | 35,427 |  | - |  | - |
| Receivables from customers ${ }^{(f)}$ | 42,741 | - |  | - |  | - | 49,257 |  | - |  | - |  | - |
| Total wholesale | 1,348,564 | 700,517 |  | 64,217 |  | 541,089 | 1,231,214 |  | 639,097 |  | 70,880 |  | 471,980 |
| Total exposure ${ }^{(\mathrm{g})(\mathrm{h})}$ | \$ 2,880,447 | \$1,300,069 | \$ | 64,217 |  | 1,473,420 | \$2,582,566 |  | 1,135,647 | \$ | 70,880 | \$ | 1,326,782 |

(a) Also includes commercial card lending-related commitments primarily in CB and CIB.
(b) The industry rankings presented in the table as of December 31, 2022, are based on the industry rankings of the corresponding exposures as of June 30 , 2023, not actual rankings of such exposures at December 31, 2022.
(c) Individuals and Individual Entities predominantly consists of Global Private Bank clients within AWM and J.P. Morgan Wealth Management within CCB, and includes exposure to personal investment companies and personal and testamentary trusts.
(d) In addition to the credit risk exposure to states and municipal governments (both U.S. and non-U.S.) as of June 30, 2023 and December 31, 2022, noted above, the Firm held: $\$ 6.8$ billion and $\$ 6.6$ billion, respectively, of trading assets; $\$ 24.0$ billion and $\$ 6.8$ billion, respectively, of AFS securities; and $\$ 11.6$ billion and $\$ 19.7$ billion, respectively, of HTM securities, issued by U.S. state and municipal governments. Refer to Note 2 and Note 10 for further information.
(e) All other includes: SPEs and Private education and civic organizations, representing approximately $94 \%$ and $6 \%$, respectively, as of June 30,2023 and $95 \%$ and $5 \%$, respectively, as of December 31, 2022. Refer to Note 14 for more information on exposures to SPES.
(f) Receivables from customers reflect held-for-investment margin loans to brokerage clients in CIB, CCB and AWM that are collateralized by assets maintained in the clients' brokerage accounts (e.g., cash on deposit, liquid and readily marketable debt or equity securities). Because of this collateralization, no allowance for credit losses is generally held against these receivables. To manage its credit risk the Firm establishes margin requirements and monitors the required margin levels on an ongoing basis, and requires clients to deposit additional cash or other collateral, or to reduce positions, when appropriate. These receivables are reported within accrued interest and accounts receivable on the Firm's Consolidated balance sheets.
(g) Excludes cash placed with banks of $\$ 485.4$ billion and $\$ 556.6$ billion, as of June 30,2023 and December 31, 2022, respectively, which is predominantly placed with various central banks, primarily Federal Reserve Banks.
(h) Credit exposure is net of risk participations and excludes the benefit of credit derivatives used in credit portfolio management activities held against derivative receivables or loans and liquid securities and other cash collateral held against derivative receivables.
(i) Included credit exposure associated with the First Republic acquisition consisting of $\$ 104.6$ billion in the Consumer, excluding credit card portfolio, and $\$ 98.2$ billion in the Wholesale portfolio predominantly in Asset Managers, Real Estate, and Individuals and Individual Entities.
(j) Represents lending-related financial instruments.

## Note 5 - Derivative instruments

JPMorgan Chase makes markets in derivatives for clients and also uses derivatives to hedge or manage its own risk exposures. Refer to Note 5 of JPMorgan Chase's 2022 Form $10-\mathrm{K}$ for a further discussion of the Firm's use of and accounting policies regarding derivative instruments.

The Firm's disclosures are based on the accounting treatment and purpose of these derivatives. A limited number of the Firm's derivatives are designated in hedge
accounting relationships and are disclosed according to the type of hedge (fair value hedge, cash flow hedge, or net investment hedge). Derivatives not designated in hedge accounting relationships include certain derivatives that are used to manage risks associated with specified assets and liabilities ("specified risk management" positions) as well as derivatives used in the Firm's market-making businesses or for other purposes.

The following table outlines the Firm's primary uses of derivatives and the related hedge accounting designation or disclosure category.

| Type of Derivative | Use of Derivative | Designation and disclosure | Affected segment or unit | 10-Q page reference |
| :---: | :---: | :---: | :---: | :---: |
| Manage specifically identified risk exposures in qualifying hedge accounting relationships: |  |  |  |  |
| - Interest rate | Hedge fixed rate assets and liabilities | Fair value hedge | Corporate | 130-131 |
| - Interest rate | Hedge floating-rate assets and liabilities | Cash flow hedge | Corporate | 132 |
| - Foreign exchange | Hedge foreign currency-denominated assets and liabilities | Fair value hedge | Corporate | 130-131 |
| - Foreign exchange | Hedge foreign currency-denominated forecasted revenue and expense | Cash flow hedge | Corporate | 132 |
| - Foreign exchange | Hedge the value of the Firm's investments in non-U.S. dollar functional currency entities | Net investment hedge | Corporate | 133 |
| - Commodity | Hedge commodity inventory | Fair value hedge | CIB, AWM | 130-131 |
| Manage specifically identified risk exposures not designated in qualifying hedge accounting relationships: |  |  |  |  |
| - Interest rate | Manage the risk associated with mortgage commitments, warehouse loans and MSRs | Specified risk management | CCB | 134 |
| - Credit | Manage the credit risk associated with wholesale lending exposures | Specified risk management | CIB | 134 |
| - Interest rate and foreign exchange | Manage the risk associated with certain other specified assets and liabilities | Specified risk management | Corporate | 134 |
| Market-making derivatives and other activities: |  |  |  |  |
| - Various | Market-making and related risk management | Market-making and other | CIB | 134 |
| - Various | Other derivatives | Market-making and other | CIB, AWM, Corporate | 134 |

Notional amount of derivative contracts
The following table summarizes the notional amount of free-standing derivative contracts outstanding as of June 30, 2023, and December 31, 2022.

| (in billions) | Notional amounts ${ }^{(\mathrm{b})}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | $\begin{array}{r} \text { June } 30, \\ 2023 \end{array}$ |  | December 31, 2022 |  |
| Interest rate contracts |  |  |  |  |
| Swaps | \$ | 29,292 | \$ | 24,491 |
| Futures and forwards |  | 3,341 |  | 2,636 |
| Written options |  | 3,329 |  | 3,047 |
| Purchased options |  | 3,390 |  | 2,992 |
| Total interest rate contracts |  | 39,352 |  | 33,166 |
| Credit derivatives ${ }^{(\mathrm{a})}$ |  | 1,477 |  | 1,132 |
| Foreign exchange contracts |  |  |  |  |
| Cross-currency swaps |  | 4,436 |  | 4,196 |
| Spot, futures and forwards |  | 8,681 |  | 7,017 |
| Written options |  | 867 |  | 775 |
| Purchased options |  | 826 |  | 759 |
| Total foreign exchange contracts |  | 14,810 |  | 12,747 |
| Equity contracts |  |  |  |  |
| Swaps |  | 598 |  | 618 |
| Futures and forwards |  | 110 |  | 110 |
| Written options |  | 755 |  | 636 |
| Purchased options |  | 707 |  | 580 |
| Total equity contracts |  | 2,170 |  | 1,944 |
| Commodity contracts |  |  |  |  |
| Swaps |  | 137 |  | 136 |
| Spot, futures and forwards |  | 142 |  | 136 |
| Written options |  | 133 |  | 117 |
| Purchased options |  | 110 |  | 98 |
| Total commodity contracts |  | 522 |  | 487 |
| Total derivative notional amounts | \$ | 58,331 | \$ | 49,476 |

(a) Refer to the Credit derivatives discussion on page 135 for more information on volumes and types of credit derivative contracts.
(b) Represents the sum of gross long and gross short third-party notional derivative contracts.

While the notional amounts disclosed above give an indication of the volume of the Firm's derivatives activity, the notional amounts significantly exceed, in the Firm's view, the possible losses that could arise from such transactions. For most derivative contracts, the notional amount is not exchanged; it is simply a reference amount used to calculate payments.

Impact of derivatives on the Consolidated balance sheets
The following table summarizes information on derivative receivables and payables (before and after netting adjustments) that are reflected on the Firm's Consolidated balance sheets as of June 30, 2023, and December 31, 2022, by accounting designation (e.g., whether the derivatives were designated in qualifying hedge accounting relationships or not) and contract type.

Free-standing derivative receivables and payables ${ }^{(2)}$

| June 30, 2023 (in millions) | Gross derivative receivables |  |  | Net derivative receivables ${ }^{(b)}$ |  | Gross derivative payables |  |  |  | $\begin{gathered} \text { Net } \\ \text { derivative } \\ \text { payables } \end{gathered}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Not designated as hedges | Designated as hedges | Total derivative receivables |  |  | Notdesignatedas hedges |  | Designated as hedges | Total derivative payables |  |  |
| Trading assets and liabilities |  |  |  |  |  |  |  |  |  |  |  |
| Interest rate | \$ 288,312 | \$ | \$ 288,312 | \$ | 27,709 | \$ | 277,334 | 8 | \$ 277,342 | \$ | 15,157 |
| Credit | 13,685 | - | 13,685 |  | 1,245 |  | 13,767 | - | 13,767 |  | 566 |
| Foreign exchange | 226,793 | 886 | 227,679 |  | 22,194 |  | 222,739 | 846 | 223,585 |  | 14,177 |
| Equity | 61,392 | - | 61,392 |  | 7,324 |  | 67,670 | - | 67,670 |  | 9,805 |
| Commodity | 16,872 | 768 | 17,640 |  | 5,745 |  | 18,465 | 820 | 19,285 |  | 6,840 |
| Total fair value of trading assets and liabilities | \$ 607,054 | \$ 1,654 | \$ 608,708 | \$ | 64,217 | \$ | 599,975 | \$ 1,674 | \$ 601,649 | \$ | 46,545 |


| December 31, 2022 (in millions) | Gross derivative receivables |  |  |  | Net derivative receivables ${ }^{(b)}$ |  | Gross derivative payables |  |  |  |  |  | Net derivative payables ${ }^{(b)}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Not designated as hedges | Designated as hedges | Total derivative receivables |  |  |  | Not designated as hedges |  | Designated as hedges |  | Total derivative payables |  |  |  |
| Trading assets and liabilities |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Interest rate | \$ 300,411 | \$ 4 | \$ | 300,415 | \$ | 28,419 | \$ | 290,291 | \$ | - | \$ | 290,291 | \$ | 15,970 |
| Credit | 10,329 | - |  | 10,329 |  | 1,090 |  | 9,971 |  | - |  | 9,971 |  | 754 |
| Foreign exchange | 239,946 | 1,633 |  | 241,579 |  | 23,365 |  | 248,911 |  | 2,610 |  | 251,521 |  | 18,856 |
| Equity | 61,913 | - |  | 61,913 |  | 9,139 |  | 62,461 |  | - |  | 62,461 |  | 8,804 |
| Commodity | 23,652 | 1,705 |  | 25,357 |  | 8,867 |  | 20,758 |  | 2,511 |  | 23,269 |  | 6,757 |
| Total fair value of trading assets and liabilities | \$ 636,251 | \$ 3,342 | \$ | 639,593 | \$ | 70,880 | \$ | 632,392 | \$ | 5,121 | \$ | 637,513 | \$ | 51,141 |

(a) Balances exclude structured notes for which the fair value option has been elected. Refer to Note 3 for further information.
(b) As permitted under U.S. GAAP, the Firm has elected to net derivative receivables and derivative payables and the related cash collateral receivables and payables when a legally enforceable master netting agreement exists.

Derivatives netting
The following tables present, as of June 30, 2023, and December 31, 2022, gross and net derivative receivables and payables by contract and settlement type. Derivative receivables and payables, as well as the related cash collateral from the same counterparty, have been netted on the Consolidated balance sheets where the Firm has obtained an appropriate legal opinion with respect to the master netting agreement. Where such a legal opinion has not been either sought or obtained, amounts are not eligible for netting on the Consolidated balance sheets, and those derivative receivables and payables are shown separately in the tables below.

In addition to the cash collateral received and transferred that is presented on a net basis with derivative receivables and payables, the Firm receives and transfers additional collateral (financial instruments and cash). These amounts mitigate counterparty credit risk associated with the Firm's derivative instruments, but are not eligible for net presentation:

- collateral that consists of liquid securities and other cash collateral held at third-party custodians, which are shown separately as "Collateral not nettable on the Consolidated balance sheets" in the tables below, up to the fair value exposure amount. For the purpose of this disclosure, the definition of liquid securities is consistent with the definition of high quality liquid assets as defined in the LCR rule;
- the amount of collateral held or transferred that exceeds the fair value exposure at the individual counterparty level, as of the date presented, which is excluded from the tables below; and
- collateral held or transferred that relates to derivative receivables or payables where an appropriate legal opinion has not been either sought or obtained with respect to the master netting agreement, which is excluded from the tables below.

| (in millions) | June 30, 2023 |  |  |  |  |  | December 31, 2022 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Gross derivative receivables |  | Amounts netted on the Consolidated balance sheets |  | Net derivative receivables |  | Gross derivative receivables |  | Amounts netted on the Consolidated balance sheets | Net derivative receivables |
| U.S. GAAP nettable derivative receivables |  |  |  |  |  |  |  |  |  |  |
| Interest rate contracts: |  |  |  |  |  |  |  |  |  |  |
| Over-the-counter ("OTC") | \$ | 194,218 | \$ | $(168,569)$ | \$ | 25,649 | \$ | 203,922 | \$ $(178,261)$ | \$ 25,661 |
| OTC-cleared |  | 91,665 |  | $(91,508)$ |  | 157 |  | 93,800 | $(93,424)$ | 376 |
| Exchange-traded ${ }^{(\mathrm{a})}$ |  | 573 |  | (526) |  | 47 |  | 559 | (311) | 248 |
| Total interest rate contracts |  | 286,456 |  | $(260,603)$ |  | 25,853 |  | 298,281 | $(271,996)$ | 26,285 |
| Credit contracts: |  |  |  |  |  |  |  |  |  |  |
| OTC |  | 8,850 |  | $(7,818)$ |  | 1,032 |  | 8,474 | $(7,535)$ | 939 |
| OTC-cleared |  | 4,674 |  | $(4,622)$ |  | 52 |  | 1,746 | $(1,704)$ | 42 |
| Total credit contracts |  | 13,524 |  | $(12,440)$ |  | 1,084 |  | 10,220 | $(9,239)$ | 981 |
| Foreign exchange contracts: |  |  |  |  |  |  |  |  |  |  |
| OTC |  | 223,998 |  | $(204,582)$ |  | 19,416 |  | 237,941 | $(216,796)$ | 21,145 |
| OTC-cleared |  | 910 |  | (901) |  | 9 |  | 1,461 | $(1,417)$ | 44 |
| Exchange-traded ${ }^{(\mathrm{a})}$ |  | 11 |  | (2) |  | 9 |  | 15 | (1) | 14 |
| Total foreign exchange contracts |  | 224,919 |  | $(205,485)$ |  | 19,434 |  | 239,417 | $(218,214)$ | 21,203 |
| Equity contracts: |  |  |  |  |  |  |  |  |  |  |
| OTC |  | 24,672 |  | $(21,496)$ |  | 3,176 |  | 30,323 | $(25,665)$ | 4,658 |
| Exchange-traded ${ }^{(\mathrm{a})}$ |  | 34,196 |  | $(32,572)$ |  | 1,624 |  | 28,467 | $(27,109)$ | 1,358 |
| Total equity contracts |  | 58,868 |  | $(54,068)$ |  | 4,800 |  | 58,790 | $(52,774)$ | 6,016 |
| Commodity contracts: |  |  |  |  |  |  |  |  |  |  |
| OTC |  | 9,317 |  | $(5,539)$ |  | 3,778 |  | 14,430 | $(7,633)$ | 6,797 |
| OTC-cleared |  | 111 |  | (111) |  | - |  | 120 | (112) | 8 |
| Exchange-traded ${ }^{(\mathrm{a})}$ |  | 6,266 |  | $(6,245)$ |  | 21 |  | 9,103 | $(8,745)$ | 358 |
| Total commodity contracts |  | 15,694 |  | $(11,895)$ |  | 3,799 |  | 23,653 | $(16,490)$ | 7,163 |
| Derivative receivables with appropriate legal opinion |  | 599,461 |  | $(544,491)$ |  | 54,970 |  | 630,361 | $(568,713)$ | 61,648 ${ }^{\text {(d) }}$ |
| Derivative receivables where an appropriate legal opinion has not been either sought or obtained |  | 9,247 |  |  |  | 9,247 |  | 9,232 |  | 9,232 |
| Total derivative receivables recognized on the Consolidated balance sheets | \$ | 608,708 |  |  | \$ | 64,217 | \$ | 639,593 |  | \$ 70,880 |
| Collateral not nettable on the Consolidated balance sheets ${ }^{(b)(c)}$ |  |  |  |  |  | $(23,282)$ |  |  |  | $(23,014)$ |
| Net amounts |  |  |  |  | \$ | 40,935 |  |  |  | \$ 47,866 |


|  | June 30, 2023 |  |  | December 31, 2022 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (in millions) | Gross derivative payables | Amounts netted on the Consolidated balance sheets | Net derivative payables | Gross derivative payables | Amounts netted on the Consolidated balance sheets | Net derivative payables |


| U.S. GAAP nettable derivative payables |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Interest rate contracts: |  |  |  |  |  |  |  |  |  |  |
| OTC | \$ | 180,016 | \$ $(167,127)$ | \$ | 12,889 | \$ | 190,108 | \$ $(176,890)$ | \$ 13,218 |  |
| OTC-cleared |  | 94,771 | $(94,554)$ |  | 217 |  | 97,417 | $(97,126)$ | 291 |  |
| Exchange-traded ${ }^{(\mathrm{a})}$ |  | 512 | (504) |  | 8 |  | 327 | (305) | 22 |  |
| Total interest rate contracts |  | 275,299 | $(262,185)$ |  | 13,114 |  | 287,852 | $(274,321)$ | 13,531 |  |
| Credit contracts: |  |  |  |  |  |  |  |  |  |  |
| OTC |  | 9,240 | $(8,768)$ |  | 472 |  | 8,054 | $(7,572)$ | 482 |  |
| OTC-cleared |  | 4,438 | $(4,433)$ |  | 5 |  | 1,674 | $(1,645)$ | 29 |  |
| Total credit contracts |  | 13,678 | $(13,201)$ |  | 477 |  | 9,728 | $(9,217)$ | 511 |  |
| Foreign exchange contracts: |  |  |  |  |  |  |  |  |  |  |
| OTC |  | 220,326 | $(208,507)$ |  | 11,819 |  | 246,457 | $(231,248)$ | 15,209 |  |
| OTC-cleared |  | 993 | (901) |  | 92 |  | 1,488 | $(1,417)$ | 71 |  |
| Exchange-traded ${ }^{(\mathrm{a})}$ |  | 15 | - |  | 15 |  | 20 | - | 20 |  |
| Total foreign exchange contracts |  | 221,334 | $(209,408)$ |  | 11,926 |  | 247,965 | $(232,665)$ | 15,300 |  |
| Equity contracts: |  |  |  |  |  |  |  |  |  |  |
| OTC |  | 28,206 | $(25,293)$ |  | 2,913 |  | 29,833 | $(26,554)$ | 3,279 |  |
| Exchange-traded ${ }^{(\mathrm{a})}$ |  | 35,657 | $(32,572)$ |  | 3,085 |  | 28,291 | $(27,103)$ | 1,188 |  |
| Total equity contracts |  | 63,863 | $(57,865)$ |  | 5,998 |  | 58,124 | $(53,657)$ | 4,467 |  |
| Commodity contracts: |  |  |  |  |  |  |  |  |  |  |
| OTC |  | 9,591 | $(6,061)$ |  | 3,530 |  | 11,954 | $(7,642)$ | 4,312 |  |
| OTC-cleared |  | 116 | (116) |  | - |  | 112 | (112) | - |  |
| Exchange-traded ${ }^{(\mathrm{a})}$ |  | 7,050 | $(6,268)$ |  | 782 |  | 9,021 | $(8,758)$ | 263 |  |
| Total commodity contracts |  | 16,757 | $(12,445)$ |  | 4,312 |  | 21,087 | $(16,512)$ | 4,575 |  |
| Derivative payables with appropriate legal opinion |  | 590,931 | $(555,104)$ |  | 35,827 | (d) | 624,756 | $(586,372)$ | 38,384 | (d) |
| Derivative payables where an appropriate legal opinion has not been either sought or obtained |  | 10,718 |  |  | 10,718 |  | 12,757 |  | 12,757 |  |
| Total derivative payables recognized on the Consolidated balance sheets | \$ | 601,649 |  | \$ | 46,545 | \$ | 637,513 |  | \$ 51,141 |  |
| Collateral not nettable on the Consolidated balance sheets ${ }^{(b)(c)}$ |  |  |  |  | $(4,248)$ |  |  |  | $(3,318)$ |  |
| Net amounts |  |  |  | \$ | 42,297 |  |  |  | \$ 47,823 |  |

(a) Exchange-traded derivative balances that relate to futures contracts are settled daily.
(b) Includes liquid securities and other cash collateral held at third-party custodians related to derivative instruments where an appropriate legal opinion has been obtained. For some counterparties, the collateral amounts of financial instruments may exceed the derivative receivables and derivative payables balances. Where this is the case, the total amount reported is limited to the net derivative receivables and net derivative payables balances with that counterparty.
(c) Derivative collateral relates only to OTC and OTC-cleared derivative instruments.
(d) Net derivatives receivable included cash collateral netted of $\$ 52.5$ billion and $\$ 51.5$ billion at June 30, 2023, and December 31, 2022, respectively. Net derivatives payable included cash collateral netted of $\$ 63.2$ billion and $\$ 69.2$ billion at June 30, 2023, and December 31, 2022, respectively. Derivative cash collateral relates to OTC and OTC-cleared derivative instruments.

## Liquidity risk and credit-related contingent features

Refer to Note 5 of JPMorgan Chase's 2022 Form 10-K for a more detailed discussion of liquidity risk and credit-related contingent features related to the Firm's derivative contracts.
The following table shows the aggregate fair value of net derivative payables related to OTC and OTC-cleared derivatives that contain contingent collateral or termination features that may be triggered upon a ratings downgrade, and the associated collateral the Firm has posted in the normal course of business, at June 30, 2023, and December 31, 2022.

OTC and OTC-cleared derivative payables containing downgrade triggers

| (in millions) | June $\mathbf{3 0 , 2 0 2 3}$ | December 31, 2022 |  |
| :--- | ---: | ---: | ---: |
| Aggregate fair value of net derivative payables | $\mathbf{1 5 , 2 4 3}$ | $\$$ | 16,023 |
| Collateral posted | $\mathbf{1 4 , 1 4 4}$ | $\mathbf{1 5 , 5 0 5}$ |  |

The following table shows the impact of a single-notch and two-notch downgrade of the long-term issuer ratings of JPMorgan Chase \& Co. and its subsidiaries, predominantly JPMorgan Chase Bank, N.A., at June 30, 2023, and December 31, 2022, related to OTC and OTC-cleared derivative contracts with contingent collateral or termination features that may be triggered upon a ratings downgrade. Derivatives contracts generally require additional collateral to be posted or terminations to be triggered when the predefined rating threshold is breached. A downgrade by a single rating agency that does not result in a rating lower than a preexisting corresponding rating provided by another major rating agency will generally not result in additional collateral (except in certain instances in which additional initial margin may be required upon a ratings downgrade), nor in termination payment requirements. The liquidity impact in the table is calculated based upon a downgrade below the lowest current rating of the rating agencies referred to in the derivative contract.

## Liquidity impact of downgrade triggers on OTC and OTC-cleared derivatives

| (in millions) | June 30, 2023 |  |  |  | December 31, 2022 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Single-notch downgrade |  | Two-notch downgrade |  | Single-notch downgrade |  | Two-notch downgrade |  |
| Amount of additional collateral to be posted upon downgrade ${ }^{(\text {a }}$ | \$ | 81 | \$ | 1,241 | \$ | 128 | \$ | 1,293 |
| Amount required to settle contracts with termination triggers upon downgrade ${ }^{(b)}$ |  | 80 |  | 811 |  | 88 |  | 925 |

(a) Includes the additional collateral to be posted for initial margin.
(b) Amounts represent fair values of derivative payables, and do not reflect collateral posted.

## Derivatives executed in contemplation of a sale of the underlying financial asset

In certain instances the Firm enters into transactions in which it transfers financial assets but maintains the economic exposure to the transferred assets by entering into a derivative with the same counterparty in contemplation of the initial transfer. The Firm generally accounts for such transfers as collateralized financing transactions as described in Note 11, but in limited circumstances they may qualify to be accounted for as a sale and a derivative under U.S. GAAP. The amount of such transfers accounted for as a sale where the associated derivative was outstanding was not material at both June 30, 2023 and December 31, 2022.

## Impact of derivatives on the Consolidated statements of income

The following tables provide information related to gains and losses recorded on derivatives based on their hedge accounting designation or purpose.

## Fair value hedge gains and losses

The following tables present derivative instruments, by contract type, used in fair value hedge accounting relationships, as well as pre-tax gains/(losses) recorded on such derivatives and the related hedged items for the three and six months ended June 30, 2023 and 2022, respectively. The Firm includes gains/(losses) on the hedging derivative in the same line item in the Consolidated statements of income as the related hedged item.

| Three months ended June 30, 2023 (in millions) | Gains/(losses) recorded in income |  |  |  |  |  | Income statement impact of excluded components ${ }^{(\mathrm{e}}$ |  |  |  | OCI impact |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Derivatives |  | Hedged items |  | Income statement impact |  | Amortization approach |  | Changes in fair value |  | Derivatives - Gains/ (losses) recorded in $\mathrm{OCl}^{(\mathrm{f})}$ |  |
| Contract type |  |  |  |  |  |  |  |  |  |  |  |  |
| Interest rate ${ }^{(\mathrm{a})(\mathrm{b})}$ | \$ | (151) | \$ | 164 | \$ | 13 | \$ | - | \$ | 5 | \$ | - |
| Foreign exchange ${ }^{(c)}$ |  | 254 |  | (188) |  | 66 |  | (156) |  | 66 |  | 15 |
| Commodity ${ }^{(0)}$ |  | 422 |  | (290) |  | 132 |  | - |  | 133 |  | - |
| Total | \$ | 525 | \$ | (314) | \$ | 211 | \$ | (156) | \$ | 204 | \$ | 15 |
| Three months ended June 30, 2022 (in millions) | Gains/(losses) recorded in income |  |  |  |  |  | Income statement impact of excluded components ${ }^{(\mathrm{e}}$ |  |  |  | OCl impact |  |
|  | Derivatives |  | Hedged items |  | Income statement impact |  | Amortization approach |  | Changes in fair value |  | Derivatives - Gains/ (losses) recorded in $\mathrm{OCl}^{(\dagger)}$ |  |
| Contract type |  |  |  |  |  |  |  |  |  |  |  |  |
| Interest rate ${ }^{(\mathrm{a})(\mathrm{b})}$ | \$ | $(4,467)$ | \$ | 4,367 | \$ | (100) | \$ | - | \$ | (79) | \$ | - |
| Foreign exchange ${ }^{(c)}$ |  | (818) |  | 830 |  | 12 |  | (115) |  | 12 |  | 67 |
| Commodity ${ }^{(d)}$ |  | $(1,536)$ |  | 1,464 |  | (72) |  | - |  | (73) |  | - |
| Total | \$ | $(6,821)$ | \$ | 6,661 | \$ | (160) | \$ | (115) | \$ | (140) | \$ | 67 |
| Six months ended June 30, 2023 (in millions) | Gains/(losses) recorded in income |  |  |  |  |  | Income statement impact of excluded components ${ }^{(\text {en }}$ |  |  |  | OCl impact |  |
|  | Derivatives |  | Hedged items |  | Income statement impact |  | Amortization approach |  | Changes in fair value |  | Derivatives - Gains/ (losses) recorded in $\mathrm{OCl}{ }^{(f)}$ |  |
| Contract type |  |  |  |  |  |  |  |  |  |  |  |  |
| Interest rate ${ }^{(\mathrm{a})(\mathrm{b})}$ | \$ | 1,021 | \$ | (940) | \$ | 81 | \$ | - | \$ | 15 | \$ | - |
| Foreign exchange ${ }^{(\mathrm{c})}$ |  | 412 |  | (282) |  | 130 |  | (329) |  | 130 |  | (13) |
| Commodity ${ }^{(d)}$ |  | $(1,118)$ |  | 1,335 |  | 217 |  | - |  | 217 |  | - |
| Total | \$ | 315 | \$ | 113 | \$ | 428 | \$ | (329) | \$ | 362 | \$ | (13) |
| Six months ended June 30, 2022(in millions) | Gains/(losses) recorded in income |  |  |  |  |  | Income statement impact of excluded components ${ }^{(\text {en }}$ |  |  |  | OCI impact |  |
|  | Derivatives |  | Hedged items |  | Income statement impact |  | Amortization approach |  | Changes in fair value |  | Derivatives - Gains/ (losses) recorded in $\mathrm{OCl}^{(f)}$ |  |
| Contract type |  |  |  |  |  |  |  |  |  |  |  |  |
| Interest rate ${ }^{(a)(b)}$ | \$ | $(11,537)$ | \$ | 11,348 | \$ | (189) | \$ | - | \$ | (145) | \$ | - |
| Foreign exchange ${ }^{(c)}$ |  | $(1,508)$ |  | 1,518 |  | 10 |  | (180) |  | 10 |  | 212 |
| Commodity ${ }^{(0)}$ |  | $(1,712)$ |  | 1,611 |  | (101) |  | - |  | (110) |  | - |
| Total |  | $(14,757)$ |  | 14,477 | \$ | (280) | \$ | (180) | \$ | (245) | \$ | 212 |

(a) Primarily consists of hedges of the benchmark (e.g., Secured Overnight Financing Rate ("SOFR")) interest rate risk of fixed-rate long-term debt and AFS securities. Gains and losses were recorded in net interest income.
(b) Includes the amortization of income/expense associated with the inception hedge accounting adjustment applied to the hedged item. Excludes the accrual of interest on interest rate swaps and the related hedged items.
(c) Primarily consists of hedges of the foreign currency risk of long-term debt and AFS securities for changes in spot foreign currency rates. Gains and losses related to the derivatives and the hedged items due to changes in foreign currency rates and the income statement impact of excluded components were recorded primarily in principal transactions revenue and net interest income.
(d) Consists of overall fair value hedges of physical commodities inventories that are generally carried at the lower of cost or net realizable value (net realizable value approximates fair value). Gains and losses were recorded in principal transactions revenue.
(e) The assessment of hedge effectiveness excludes certain components of the changes in fair values of the derivatives and hedged items such as forward points on foreign exchange forward contracts, time values and cross-currency basis spreads. Excluded components may impact earnings either through amortization of the initial amount over the life of the derivative, or through fair value changes recognized in the current period.
(f) Represents the change in value of amounts excluded from the assessment of effectiveness under the amortization approach, predominantly crosscurrency basis spreads. The amount excluded at inception of the hedge is recognized in earnings over the life of the derivative.

As of June 30, 2023 and December 31, 2022, the following amounts were recorded on the Consolidated balance sheets related to certain cumulative fair value hedge basis adjustments that are expected to reverse through the income statement in future periods as an adjustment to yield.

| June 30, 2023 (in millions) | Carrying amount of the hedged items ${ }^{(\mathrm{a})(\mathrm{b})}$ |  |  | Cumulative amount of fair value hedging adjustments included in the carrying amount of hedged items: |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Active hedging relationships ${ }^{(\sigma)}$ |  | Discontinued hedging relationships ${ }^{(d)(e)}$ |  |  | Total |
| Assets |  |  |  |  |  |  |  |  |  |
| Investment securities - AFS | \$ | 136,444 | (c) | \$ | $(2,752)$ | \$ | $(3,462) \$$ | \$ | $(6,214)$ |
| Liabilities |  |  |  |  |  |  |  |  |  |
| Long-term debt |  | 176,509 |  |  | $(5,857)$ |  | $(9,105)$ |  | $(14,962)$ |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | Cumulative amount of fair value hedging adjustments included in the carrying amount of hedged items: |  |  |  |  |  |
| December 31, 2022 (in millions) | Carrying amount of the hedged items ${ }^{(b)(c)}$ |  |  | Active hedging relationships ${ }^{(d)}$ |  | Discontinued hedging relationships ${ }^{\text {(d) }}$ ) |  |  | Total |
| Assets |  |  |  |  |  |  |  |  |  |
| Investment securities - AFS | \$ | 84,073 | (c) | \$ | $(4,149)$ | \$ | $(1,542) \$$ | \$ | $(5,691)$ |
| Liabilities |  |  |  |  |  |  |  |  |  |
| Long-term debt |  | 175,257 |  |  | $(11,879)$ |  | $(3,313)$ |  | $(15,192)$ |

(a) Excludes physical commodities with a carrying value of $\$ 12.8$ billion and $\$ 26.0$ billion at June 30, 2023 and December 31, 2022, respectively, to which the Firm applies fair value hedge accounting. As a result of the application of hedge accounting, these inventories are carried at fair value, thus recognizing unrealized gains and losses in current periods. Since the Firm exits these positions at fair value, there is no incremental impact to net income in future periods.
(b) Excludes hedged items where only foreign currency risk is the designated hedged risk, as basis adjustments related to foreign currency hedges will not reverse through the income statement in future periods. At June 30, 2023 and December 31, 2022, the carrying amount excluded for AFS securities is $\$ 20.9$ billion and $\$ 20.3$ billion, respectively, and for long-term debt is $\$ 216$ million and $\$ 221$ million, respectively.
(c) Carrying amount represents the amortized cost, net of allowance if applicable. Effective January 1, 2023, the Firm adopted the new portfolio layer method hedge accounting guidance which expanded the ability to hedge a portfolio of prepayable assets to allow more of the portfolio to be hedged. At June 30 , 2023, the amortized cost of the portfolio layer method closed portfolios was $\$ 67.8$ billion, of which $\$ 49.6$ billion was designated as hedged. The cumulative amount of basis adjustments was $\$(1.1)$ billion, reflecting $\$(865)$ million and $\$(229)$ million for active and discontinued hedging relationships, respectively. Refer to Note 1 and Note 10 for additional information.
(d) Positive (negative) amounts related to assets represent cumulative fair value hedge basis adjustments that will reduce (increase) net interest income in future periods. Positive (negative) amounts related to liabilities represent cumulative fair value hedge basis adjustments that will increase (reduce) net interest income in future periods.
(e) Represents basis adjustments existing on the balance sheet date associated with hedged items that have been de-designated from qualifying fair value hedging relationships.

## Cash flow hedge gains and losses

The following tables present derivative instruments, by contract type, used in cash flow hedge accounting relationships, and the pre-tax gains/(losses) recorded on such derivatives, for the three and six months ended June 30, 2023 and 2022, respectively. The Firm includes the gains/(losses) on the hedging derivative in the same line item in the Consolidated statements of income as the change in cash flows on the related hedged item.

(a) Primarily consists of hedges of SOFR-indexed floating-rate assets. Gains and losses were recorded in net interest income.
(b) Primarily consists of hedges of the foreign currency risk of non-U.S. dollar-denominated revenue and expense. The income statement classification of gains and losses follows the hedged item - primarily noninterest revenue and compensation expense.

The Firm did not experience any forecasted transactions that failed to occur for the three and six months ended June 30, 2023 and 2022.
Over the next 12 months, the Firm expects that approximately $\$(1.3)$ billion (after-tax) of net losses recorded in AOCI at June 30, 2023, related to cash flow hedges will be recognized in income. For cash flow hedges that have been terminated, the maximum length of time over which the derivative results recorded in AOCI will be recognized in earnings is approximately seven years, corresponding to the timing of the originally hedged forecasted cash flows. For open cash flow hedges, the maximum length of time over which forecasted transactions are hedged is approximately seven years. The Firm's longer-dated forecasted transactions relate to core lending and borrowing activities.

## Net investment hedge gains and losses

The following table presents hedging instruments, by contract type, that were used in net investment hedge accounting relationships, and the pre-tax gains/(losses) recorded on such instruments for the three and six months ended June 30, 2023 and 2022.

| Three months ended June 30, (in millions) | Gains/(losses) recorded in income and other comprehensive income/(loss) |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  |  |  | 2022 |  |  |  |
|  | Amounts recorded in income ${ }^{(a)(b)}$ |  | Amounts recorded in OCI |  | Amounts recorded in income ${ }^{(a)(b)}$ |  | Amounts recorded in OCl |  |
| Foreign exchange derivatives | \$ | 121 | \$ | (88) | \$ | (116) | \$ | 3,520 |


| $\begin{aligned} & \text { Six months ended June 30, } \\ & \text { (in millions) } \end{aligned}$ | Gains/(losses) recorded in income and other comprehensive income/(loss) |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  |  |  | 2022 |  |  |  |
|  | Amounts recorded in income ${ }^{(a)(b)}$ |  | $\begin{aligned} & \text { Amounts } \\ & \text { recorded in OCI } \end{aligned}$ |  | Amounts recorded in income ${ }^{\text {(a)(b) }}$ |  | Amounts recorded in OCl |  |
| Foreign exchange derivatives | \$ | 205 | \$ | $(1,092)$ | \$ | (247) | \$ | 3,858 |

(a) Certain components of hedging derivatives are permitted to be excluded from the assessment of hedge effectiveness, such as forward points on foreign exchange forward contracts. The Firm elects to record changes in fair value of these amounts directly in other income.
(b) Excludes amounts reclassified from AOCI to income on the sale or liquidation of hedged entities. Excludes amounts reclassified from AOCI to income on the sale or liquidation of hedged entities. During the six months ended June 30,2023, the Firm reclassified a pre-tax loss of $\$ 41$ million to other revenue related to the acquisition of CIFM. The amounts reclassified for the three months ended June 30, 2023 and three and six months ended June 30,2022 were not material. Refer to Note 21 for further information.

## Gains and losses on derivatives used for specified risk

 management purposesThe following table presents pre-tax gains/(losses) recorded on a limited number of derivatives, not designated in hedge accounting relationships, that are used to manage risks associated with certain specified assets and liabilities, including certain risks arising from mortgage commitments, warehouse loans, MSRs, wholesale lending exposures, and foreign currency-denominated assets and liabilities.

| (in millions) | Derivatives gains/(losses) recorded in income |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Three months ended June 30 , |  |  |  | Six months endedJune 30 , |  |  |  |
|  | 2023 |  |  | 2022 | 2023 |  | 2022 |  |
| Contract type |  |  |  |  |  |  |  |  |
| Interest rate ${ }^{(\sqrt{2})}$ | \$ | (112) | \$ | (309) | \$ | (126) | \$ | (538) |
| Credit ${ }^{(b)}$ |  | (67) |  | 89 |  | (163) |  | 122 |
| Foreign exchange ${ }^{(c)}$ |  | 41 |  | 6 |  | 43 |  | (76) |
| Total | \$ | (138) | \$ | (214) | \$ | (246) | \$ | (492) |

(a) Primarily represents interest rate derivatives used to hedge the interest rate risk inherent in mortgage commitments, warehouse loans and MSRs, as well as written commitments to originate warehouse loans. Gains and losses were recorded predominantly in mortgage fees and related income.
(b) Relates to credit derivatives used to mitigate credit risk associated with lending exposures in the Firm's wholesale businesses. These derivatives do not include credit derivatives used to mitigate counterparty credit risk arising from derivative receivables, which is included in gains and losses on derivatives related to market-making activities and other derivatives. Gains and losses were recorded in principal transactions revenue.
(c) Primarily relates to derivatives used to mitigate foreign exchange risk of specified foreign currency-denominated assets and liabilities. Gains and losses were recorded in principal transactions revenue.

Gains and losses on derivatives related to market-making activities and other derivatives
The Firm makes markets in derivatives in order to meet the needs of customers and uses derivatives to manage certain risks associated with net open risk positions from its market-making activities, including the counterparty credit risk arising from derivative receivables. All derivatives not included in the hedge accounting or specified risk management categories above are included in this category. Gains and losses on these derivatives are primarily recorded in principal transactions revenue. Refer to Note 6 for information on principal transactions revenue.

Credit derivatives
Refer to Note 5 of JPMorgan Chase's 2022 Form 10-K for a more detailed discussion of credit derivatives. The following tables present a summary of the notional amounts of credit derivatives and credit-related notes the Firm sold and purchased as of June 30, 2023 and December 31, 2022. The Firm does not use notional amounts of credit derivatives as the primary measure of risk management for such derivatives, because the notional amount does not take into account the probability of the occurrence of a credit event, the recovery value of the reference obligation, or related cash instruments and economic hedges, each of which reduces, in the Firm's view, the risks associated with such derivatives.

Total credit derivatives and credit-related notes

| June 30, 2023 (in millions) | Maximum payout/Notional amount |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Protection sold |  | Protection purchased with identical underlyings ${ }^{\text {(c) }}$ |  | Net protection (sold)/ purchased ${ }^{\text {(d) }}$ |  | Other protection purchased ${ }^{(\mathrm{e})}$ |  |
| Credit derivatives |  |  |  |  |  |  |  |  |
| Credit default swaps | \$ | $(649,720)$ | \$ | 677,813 | \$ | 28,093 | \$ | 5,774 |
| Other credit derivatives ${ }^{(\mathrm{a})}$ |  | $(55,887)$ |  | 73,831 |  | 17,944 |  | 13,765 |
| Total credit derivatives |  | $(705,607)$ |  | 751,644 |  | 46,037 |  | 19,539 |
| Credit-related notes ${ }^{(\mathrm{b})}$ |  | - |  | - |  | - |  | 8,064 |
| Total | \$ | $(705,607)$ | \$ | 751,644 | \$ | 46,037 | \$ | 27,603 |
|  |  |  |  | mum pay | tio |  |  |  |
| December 31, 2022 (in millions) |  | on sold | Prote iden | ased with lyings ${ }^{\text {(c) }}$ |  | $\begin{aligned} & \mathrm{n}(\text { (sold }) / \\ & \mathrm{dd}^{\mathrm{d})} \end{aligned}$ |  | $\begin{aligned} & \text { ection } \\ & d^{(\mathrm{e})} \end{aligned}$ |
| Credit derivatives |  |  |  |  |  |  |  |  |
| Credit default swaps | \$ | $(495,557)$ | \$ | 509,846 | \$ | 14,289 | \$ | 2,917 |
| Other credit derivatives ${ }^{(a)}$ |  | $(47,165)$ |  | 65,029 |  | 17,864 |  | 11,746 |
| Total credit derivatives |  | $(542,722)$ |  | 574,875 |  | 32,153 |  | 14,663 |
| Credit-related notes ${ }^{(b)}$ |  | - |  | - |  | - |  | 7,863 |
| Total | \$ | $(542,722)$ | \$ | 574,875 | \$ | 32,153 | \$ | 22,526 |

(a) Other credit derivatives predominantly consist of credit swap options and total return swaps.
(b) Represents Other protection purchased by CIB, primarily in its market-making businesses.
(c) Represents the total notional amount of protection purchased where the underlying reference instrument is identical to the reference instrument on protection sold; the notional amount of protection purchased for each individual identical underlying reference instrument may be greater or lower than the notional amount of protection sold.
(d) Does not take into account the fair value of the reference obligation at the time of settlement, which would generally reduce the amount the seller of protection pays to the buyer of protection in determining settlement value.
(e) Represents protection purchased by the Firm on referenced instruments (single-name, portfolio or index) where the Firm has not sold any protection on the identical reference instrument.

The following tables summarize the notional amounts by the ratings, maturity profile, and total fair value, of credit derivatives as of June 30, 2023, and December 31, 2022, where JPMorgan Chase is the seller of protection. The maturity profile is based on the remaining contractual maturity of the credit derivative contracts. The ratings profile is based on the rating of the reference entity on which the credit derivative contract is based. The ratings and maturity profile of credit derivatives where JPMorgan Chase is the purchaser of protection are comparable to the profile reflected below.

Protection sold - credit derivatives ratings ${ }^{(\mathrm{a})}$ /maturity profile

| June 30, 2023 (in millions) | <1 year | 1-5 years |  | >5 years |  | Total notional amount |  | Fair value of receivables ${ }^{(b)}$ |  | Fair value of payables ${ }^{(b)}$ | Net fair value |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Risk rating of reference entity |  |  |  |  |  |  |  |  |  |  |  |
| Investment-grade | \$ $(103,323)$ | \$ $(412,661)$ | \$ | $(37,836)$ | \$ | $(553,820)$ | \$ | \$ 4,357 | \$ | $(1,281)$ | \$ 3,076 |
| Noninvestment-grade | $(38,784)$ | $(106,800)$ |  | $(6,203)$ |  | $(151,787)$ |  | 2,575 |  | $(3,606)$ | $(1,031)$ |
| Total | \$ $(142,107)$ | \$ $(519,461)$ | \$ | $(44,039)$ | \$ | $(705,607)$ | \$ | 6,932 | \$ | $(4,887)$ | \$ 2,045 |
| December 31, 2022 (in millions) | <1 year | 1-5 years |  | >5 years |  | Total otional amount |  | Fair value of receivables ${ }^{(b)}$ |  | Fair value of payables ${ }^{(b)}$ | Net fair value |
| Risk rating of reference entity |  |  |  |  |  |  |  |  |  |  |  |
| Investment-grade | \$ $(90,484)$ | \$ $(294,791)$ | \$ | $(30,822)$ | \$ | $(416,097)$ | \$ | 2,324 | \$ | $(1,495)$ | \$ 829 |
| Noninvestment-grade | $(33,244)$ | $(87,011)$ |  | $(6,370)$ |  | $(126,625)$ |  | 1,267 |  | $(3,209)$ | $(1,942)$ |
| Total | \$ $(123,728)$ | \$ $(381,802)$ | \$ | $(37,192)$ | \$ | $(542,722)$ | \$ | 3,591 | \$ | $(4,704)$ | \$ $(1,113)$ |

(a) The ratings scale is primarily based on external credit ratings defined by S\&P and Moody's.
(b) Amounts are shown on a gross basis, before the benefit of legally enforceable master netting agreements including cash collateral netting.

## Note 6 - Noninterest revenue and noninterest expense

## Noninterest revenue

Refer to Note 6 of JPMorgan Chase's 2022 Form 10-K for a discussion of the components of and accounting policies for the Firm's noninterest revenue.

Investment banking fees
The following table presents the components of investment banking fees.

| (in millions) | Three months ended June 30, |  |  |  | Six months ended June 30 , |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 2023 |  | 2022 | 2023 | 2022 |
| Underwriting |  |  |  |  |  |  |
| Equity | \$ | 317 | \$ | 230 | \$ 550 | \$ 472 |
| Debt |  | 704 |  | 711 | 1,376 | 1,685 |
| Total underwriting |  | 1,021 |  | 941 | 1,926 | 2,157 |
| Advisory |  | 492 |  | 645 | 1,236 | 1,437 |
| Total investment banking fees | \$ | 1,513 | \$ | 1,586 | \$ 3,162 | \$ 3,594 |

## Principal transactions

The following table presents all realized and unrealized gains and losses recorded in principal transactions revenue. This table excludes interest income and interest expense on trading assets and liabilities, which are an integral part of the overall performance of the Firm's client-driven marketmaking activities in CIB and fund deployment activities in Treasury and CIO. Refer to Note 7 for further information on interest income and interest expense.
Trading revenue is presented primarily by instrument type. The Firm's client-driven market-making businesses generally utilize a variety of instrument types in connection with their market-making and related risk-management activities; accordingly, the trading revenue presented in the table below is not representative of the total revenue of any individual LOB.

| (in millions) | Three months ended June 30, |  |  |  | Six months ended June 30, |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  | 2022 |  | 2023 |  | 2022 |
| Trading revenue by instrument type |  |  |  |  |  |  |  |
| Interest rate ${ }^{(\mathrm{a})}$ | \$ 1,781 | \$ | 376 |  | \$ 3,567 | \$ | 845 |
| Credit ${ }^{\text {(b) }}$ | 419 |  | 279 | (c) | 1,053 |  | 736 |
| Foreign exchange | 1,435 |  | 1,425 |  | 2,986 |  | 2,749 |
| Equity | 2,941 |  | 2,303 |  | 5,634 |  | 4,558 |
| Commodity | 368 |  | 499 |  | 1,294 |  | 1,246 |
| Total trading revenue | 6,944 |  | 4,882 |  | 14,534 |  | 10,134 |
| Private equity gains/(losses) | (34) |  | 108 |  | (9) |  | (39) |
| Principal transactions | \$ 6,910 | \$ | 4,990 |  | \$ 14,525 |  | 10,095 |

(a) Includes the impact of changes in funding valuation adjustments on derivatives.
(b) Includes the impact of changes in credit valuation adjustments on derivatives, net of the associated hedging activities.
(c) Includes markdowns on held-for-sale positions, primarily unfunded commitments, in the bridge financing portfolio.

Lending- and deposit-related fees
The following table presents the components of lendingand deposit-related fees.

| (in millions) | Three months ended June 30 , |  |  |  | Six months ended June 30, |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 2023 |  | 2022 |  | 2023 |  | 2022 |
| Lending-related fees ${ }^{(\mathrm{a})}$ | \$ | 590 | \$ | 362 | \$ | 959 | \$ | 724 |
| Deposit-related fees |  | 1,238 |  | 1,511 |  | 2,489 |  | 2,988 |
| Total lending- and deposit-related fees | \$ | 1,828 | \$ | 1,873 | \$ | 3,448 | \$ | 3,712 |

(a) Includes the impact of the First Republic acquisition. Refer to Note 28 for additional information.
Deposit-related fees include the impact of credits earned by clients that reduce such fees.

## Asset management fees

The following table presents the components of asset management fees.

| (in millions) | Three months ended June 30, |  |  |  | Six months ended June 30 , |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 2023 |  | 2022 |  | 2023 |  | 2022 |
| Asset management fees |  |  |  |  |  |  |  |  |
| Investment management fees ${ }^{(a)(b)}$ | \$ | 3,695 | \$ | 3,425 | \$ | 7,085 | \$ | 6,987 |
| All other asset management fees ${ }^{(c)}$ |  | 79 |  | 92 |  | 154 |  | 182 |
| Total asset management fees | \$ | 3,774 | \$ | 3,517 | \$ | 7,239 | \$ | 7,169 |

(a) Represents fees earned from managing assets on behalf of the Firm's clients, including investors in Firm-sponsored funds and owners of separately managed investment accounts.
(b) Includes the impact of the First Republic acquisition. Refer to Note 28 for additional information.
(c) Represents fees for services that are ancillary to investment management services, such as commissions earned on the sales or distribution of mutual funds to clients.

## Commissions and other fees

The following table presents the components of commissions and other fees.

| (in millions) | Three months ended June 30, |  |  |  | Six months ended June 30 , |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 2023 |  | 2022 |  | 2023 |  | 2022 |
| Commissions and other fees |  |  |  |  |  |  |  |  |
| Brokerage commissions ${ }^{(\mathrm{a})}$ | \$ | 722 | \$ | 738 | \$ | 1,469 | \$ | 1,548 |
| Administration fees ${ }^{\text {(b) }}$ |  | 575 |  | 590 |  | 1,132 |  | 1,223 |
| All other commissions and fees ${ }^{\text {( }}$ |  | 442 |  | 395 |  | 833 |  | 662 |
| Total commissions and other fees | \$ | 1,739 | \$ | 1,723 | \$ | 3,434 | \$ | 3,433 |

(a) Represents commissions earned when the Firm acts as a broker, by facilitating its clients' purchases and sales of securities and other financial instruments.
(b) Predominantly includes fees for custody, securities lending, funds services and securities clearance.
(c) Includes travel-related and annuity sales commissions, depositary receipt-related service fees, as well as other service fees, which are recognized as revenue when the services are rendered.

Card income
The following table presents the components of card income.

| (in millions) | Three months ended June 30, |  |  | Six months ended June 30 , |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  | 2022 | 2023 | 2022 |
| Interchange and merchant processing income | \$ 7,885 | \$ | 7,214 | \$ 15,024 | \$ 13,449 |
| Rewards costs and partner payments | $(6,392)$ |  | $(5,641)$ | $(11,901)$ | $(10,511)$ |
| Other card income ${ }^{\text {a }}$ | (399) |  | (440) | (795) | (830) |
| Total card income | \$ 1,094 | \$ | 1,133 | \$ 2,328 | \$ 2,108 |

(a) Predominantly represents the amortization of account origination costs and annual fees.
Refer to Note 15 for further information on mortgage fees and related income.

## Other income

This revenue category includes operating lease income, as well as losses associated with the Firm's tax-oriented investments, predominantly alternative energy equitymethod investments in CIB.
The following table presents certain components of other income:

| (in millions) | Three months ended June 30, |  |  |  | Six months ended June 30, |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 2023 |  | 2022 |  | 2023 |  | 2022 |
| Operating lease income | \$ | 716 | \$ | 945 | \$ | 1,471 | \$ | 1,993 |
| Losses on taxoriented investments ${ }^{(\mathrm{a})}$ |  | (462) |  | (427) |  | (874) |  | (835) |
| Estimated bargain purchase gain associated with the First Republic acquisition ${ }^{(b)}$ |  | 2,712 |  | - |  | 2,712 |  | - |
| Gain related to the acquisition of CIFM ${ }^{\text {(c) }}$ |  | - |  | - |  | 339 |  |  |

(a) The losses associated with these tax-oriented investments are more than offset by lower income tax expense from the associated tax credits.
(b) Refer to Note 28 for additional information on the First Republic acquisition.
(c) Gain on the original minority interest in CIFM upon the Firm's acquisition of the remaining $51 \%$ of the entity.
Refer to Note 17 for information on operating lease income included within other income.

## Noninterest expense

## Other expense

Other expense on the Firm's Consolidated statements of income includes the following:

| (in millions) | Three months ended June 30 , |  |  |  | Six months ended June 30, |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 2023 |  | 2022 |  | 2023 |  | 2022 |
| Legal expense | \$ | 420 | \$ | 73 | \$ | 596 | \$ | 192 |
| FDIC-related expense |  | 338 |  | 216 |  | 655 |  | 414 |
| First Republic-related expense ${ }^{(a)}$ |  | 599 |  | - |  | 599 |  | - |

(a) Refer to Note 28 for additional information on the First Republic acquisition.

## FDIC Special Assessment

In May 2023, the FDIC issued a notice of proposed rulemaking recommending a special assessment related to the systemic risk determination made on March 12, 2023, to recover losses to the Deposit Insurance Fund ("DIF") arising from the protection of uninsured depositors resulting from recent bank resolutions. In its current form, the rule would impose a special assessment at an annual rate of 12.5 basis points on certain banks' estimated uninsured deposits reported as of December 31, 2022. The Firm expects to be subject to special assessments imposed by the FDIC to recover losses to the DIF.

## Note 7 - Interest income and Interest expense

Refer to Note 7 of JPMorgan Chase’s 2022 Form 10-K for a description of JPMorgan Chase's accounting policies regarding interest income and interest expense.

The following table presents the components of interest income and interest expense.

| (in millions) | Three months ended June 30, |  | Six months ended June 30, |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2023 | 2022 | 2023 | 2022 |
| Interest income |  |  |  |  |
| Loans ${ }^{(a)}$ | \$ 20,306 | \$ 11,626 | \$ 38,014 | \$ 22,259 |
| Taxable securities | 4,194 | 2,289 | 8,161 | 4,268 |
| Non-taxable securities ${ }^{(b)}$ | 343 | 245 | 591 | 490 |
| Total investment securities ${ }^{\left({ }^{(a)}\right.}$ | 4,537 | 2,534 | 8,752 | 4,758 |
| Trading assets - debt instruments | 4,013 | 2,049 | 7,659 | 3,816 |
| Federal funds sold and securities purchased under resale agreements | 3,767 | 543 | 6,898 | 940 |
| Securities borrowed | 1,866 | 173 | 3,582 | 86 |
| Deposits with banks | 5,189 | 1,079 | 10,008 | 1,317 |
| All other interestearning assets ${ }^{\text {(c) }}$ | 1,966 | 642 | 3,735 | 966 |
| Total interest income | \$ 41,644 | \$ 18,646 | \$ 78,648 | \$ 34,142 |
| Interest expense |  |  |  |  |
| Interest-bearing deposits | \$ 9,591 | \$ 898 | \$ 17,228 | \$ 1,080 |
| Federal funds purchased and securities loaned or sold under repurchase agreements | 3,400 | 445 | 6,204 | 558 |
| Short-term borrowings ${ }^{(d)}$ | 428 | 113 | 849 | 157 |
| Trading liabilities - debt and all other interestbearing liabilities ${ }^{(\mathrm{e})}$ | 2,373 | 471 | 4,344 | 662 |
| Long-term debt | 3,876 | 1,561 | 7,189 | 2,637 |
| Beneficial interest issued by consolidated VIEs | 197 | 30 | 344 | 48 |
| Total interest expense | \$ 19,865 | \$ 3,518 | \$ 36,158 | \$ 5,142 |
| Net interest income | \$ 21,779 | \$ 15,128 | \$ 42,490 | \$ 29,000 |
| Provision for credit losses | 2,899 | 1,101 | 5,174 | 2,564 |
| Net interest income after provision for credit losses | \$ 18,880 | \$ 14,027 | \$ 37,316 | \$ 26,436 |

(a) Includes the amortization/accretion of unearned income (e.g., purchase premiums/discounts and net deferred fees/costs).
(b) Represents securities which are tax-exempt for U.S. federal income tax purposes.
(c) Includes interest earned on brokerage-related held-for-investment customer receivables, which are classified in accrued interest and accounts receivable, and all other interest-earning assets which are classified in other assets on the Consolidated balance sheets.
(d) Includes commercial paper.
(e) All other interest-bearing liabilities includes interest expense on brokerage-related customer payables.

## Note 8 - Pension and other postretirement employee benefit plans

Refer to Note 8 of JPMorgan Chase's 2022 Form 10-K for a discussion of JPMorgan Chase's pension and OPEB plans.
The following table presents the net periodic benefit costs reported in the Consolidated statements of income for the Firm's defined benefit pension, defined contribution and OPEB plans.

| (in millions) | Three months ended June 30, |  |  |  | Six months ended June 30, |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  | 2022 |  | 2023 |  | 2022 |  |
|  | Pension and OPEB plans |  |  |  | Pension and OPEB plans |  |  |  |
| Total net periodic defined benefit plan cost/(credit) | \$ | (94) | \$ | (75) | \$ | (188) | \$ | (139) |
| Total defined contribution plans |  | 397 |  | 357 |  | 762 |  | 701 |
| Total pension and OPEB cost included in noninterest expense | \$ | 303 | \$ | 282 | \$ | 574 | \$ | 562 |

As of June 30, 2023 and December 31, 2022, the fair values of plan assets for the Firm's significant defined benefit pension and OPEB plans were $\$ 20.5$ billion and $\$ 19.9$ billion, respectively.

## Note 9 - Employee share-based incentives

Refer to Note 9 of JPMorgan Chase's 2022 Form 10-K for a discussion of the accounting policies and other information relating to employee share-based incentives.
The Firm recognized the following noncash compensation expense related to its various employee share-based incentive plans in its Consolidated statements of income.

| (in millions) | Three months ended June 30, |  |  |  | Six months ended June 30, |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 2023 |  | 2022 |  | 2023 |  | 2022 |
| Cost of prior grants of restricted stock units ("RSUs"), performance share units ("PSUs") and stock appreciation rights ("SARs") that are amortized over their applicable vesting periods | \$ | 449 | \$ | 378 | \$ | 806 | \$ | 649 |
| Accrual of estimated costs of share-based awards to be granted in future periods, predominantly those to full-career eligible employees |  | 385 |  | 441 |  | 898 |  | 976 |
| Total noncash compensation expense related to employee share-based incentive plans | \$ | 834 | \$ | 819 | \$ | 1,704 | \$ | 1,625 |

In the first quarter of 2023, in connection with its annual incentive grant for the 2022 performance year, the Firm granted 20 million RSUs and 801 thousand PSUs with weighted-average grant date fair values of $\$ 138.57$ per RSU and $\$ 139.81$ per PSU.

## Note 10 - Investment securities

Investment securities consist of debt securities that are classified as AFS or HTM. Debt securities classified as trading assets are discussed in Note 2. Predominantly all of the Firm's AFS and HTM securities are held by Treasury and CIO in connection with its asset-liability management activities. At June 30, 2023, the investment securities portfolio consisted of debt securities with an average credit rating of AA+ (based upon external ratings where available, and where not available, based primarily upon internal risk ratings).
Effective January 1, 2023, the Firm adopted the portfolio layer method hedge accounting guidance which permitted a transfer of HTM securities to AFS upon adoption. The Firm
transferred obligations of U.S. states and municipalities with a carrying value of $\$ 7.1$ billion resulting in the recognition of $\$ 38$ million net pre-tax unrealized losses in AOCI. This transfer was a noncash transaction. Refer to Note 1 and Note 21 for additional information.

During 2022, the Firm transferred $\$ 78.3$ billion of investment securities from AFS to HTM for capital management purposes. AOCI included pretax unrealized losses of $\$ 4.8$ billion on the securities at the date of transfer.

Refer to Note 10 of JPMorgan Chase’s 2022 Form 10-K for additional information regarding the investment securities portfolio.

The amortized costs and estimated fair values of the investment securities portfolio were as follows for the dates indicated.

| (in millions) | June 30, 2023 |  |  |  |  |  |  |  | December 31, 2022 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Amortized cost ${ }^{(\mathrm{c})(\mathrm{d})}$ | Grossunrealizedgains |  | Grossunrealizedlosses |  | Fair value |  |  | $\begin{aligned} & \text { Amortized } \\ & \text { cost }^{(\mathrm{c})(\mathrm{d})} \end{aligned}$ |  | Grossunrealizedgains |  | Gross unrealized losses | Fair value |  |
| Available-for-sale securities |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mortgage-backed securities: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| U.S. GSEs and government agencies | \$ 84,749 | \$ | 326 | \$ | 5,307 | \$ | 79,768 |  | \$ | 77,194 | \$ | 479 | \$ 6,170 | \$ | 71,503 |
| Residential: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| U.S. | 1,803 |  | 1 |  | 119 |  | 1,685 |  |  | 1,576 |  | 1 | 111 |  | 1,466 |
| Non-U.S. | 1,861 |  | 4 |  | 6 |  | 1,859 |  |  | 3,176 |  | 5 | 27 |  | 3,154 |
| Commercial | 2,223 |  | 1 |  | 168 |  | 2,056 |  |  | 2,113 |  | - | 155 |  | 1,958 |
| Total mortgage-backed securities | 90,636 |  | 332 |  | 5,600 |  | 85,368 |  |  | 84,059 |  | 485 | 6,463 |  | 78,081 |
| U.S. Treasury and government agencies | 63,998 |  | 297 |  | 1,558 |  | 62,737 |  |  | 95,217 |  | 302 | 3,459 |  | 92,060 |
| Obligations of U.S. states and municipalities | 24,279 |  | 172 |  | 428 |  | 24,023 |  |  | 7,103 |  | 86 | 403 |  | 6,786 |
| Non-U.S. government debt securities | 22,588 |  | 20 |  | 568 |  | 22,040 |  |  | 20,360 |  | 14 | 678 |  | 19,696 |
| Corporate debt securities | 410 |  | - |  | 22 |  | 388 |  |  | 381 |  | - | 24 |  | 357 |
| Asset-backed securities: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Collateralized Ioan obligations | 5,506 |  | 3 |  | 72 |  | 5,437 |  |  | 5,916 |  | 1 | 125 |  | 5,792 |
| Other | 3,324 |  | 2 |  | 57 |  | 3,269 |  |  | 3,152 |  | 2 | 69 |  | 3,085 |
| Unallocated portfolio layer fair value basis adjustments ${ }^{\text {(a) }}$ | (865) |  | - |  | (865) |  | NA |  |  | NA |  | NA | NA |  | NA |
| Total available-for-sale securities | 209,876 |  | 826 |  | 7,440 |  | 203,262 | (e) |  | 216,188 |  | 890 | 11,221 |  | 205,857 |
| Held-to-maturity securities ${ }^{(b)}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mortgage-backed securities: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| U.S. GSEs and government agencies | 110,517 |  | 29 |  | 13,201 |  | 97,345 |  |  | 113,492 |  | 35 | 13,709 |  | 99,818 |
| U.S. Residential | 10,293 |  | 3 |  | 1,206 |  | 9,090 |  |  | 10,503 |  | 3 | 1,244 |  | 9,262 |
| Commercial | 10,712 |  | 7 |  | 741 |  | 9,978 |  |  | 10,361 |  | 10 | 734 |  | 9,637 |
| Total mortgage-backed securities | 131,522 |  | 39 |  | 15,148 |  | 116,413 |  |  | 134,356 |  | 48 | 15,687 |  | 118,717 |
| U.S. Treasury and government agencies | 202,655 |  | - |  | 16,825 |  | 185,830 |  |  | 207,463 |  | - | 18,363 |  | 189,100 |
| Obligations of U.S. states and municipalities | 11,617 |  | 44 |  | 758 |  | 10,903 |  |  | 19,747 |  | 53 | 1,080 |  | 18,720 |
| Asset-backed securities: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Collateralized Ioan obligations | 61,095 |  | 42 |  | 951 |  | 60,186 |  |  | 61,414 |  | 4 | 1,522 |  | 59,896 |
| Other | 2,052 |  | - |  | 84 |  | 1,968 |  |  | 2,325 |  | - | 110 |  | 2,215 |
| Total held-to-maturity securities | 408,941 |  | 125 |  | 33,766 |  | 375,300 |  |  | 425,305 |  | 105 | 36,762 |  | 388,648 |
| Total investment securities, net of allowance for credit losses | \$ 618,817 | \$ | 951 |  | 41,206 |  | 578,562 |  | \$ | 641,493 | \$ | 995 | \$47,983 | \$ | 594,505 |

(a) Represents the amount of portfolio layer method basis adjustments related to AFS securities hedged in a closed portfolio. Under U.S. GAAP portfolio layer method basis adjustments are not allocated to individual securities, however the amounts impact the unrealized gains or losses for the individual securities being hedged. Refer to Note 1 and Note 5 for additional information.
(b) The Firm purchased $\$ 520$ million and $\$ 4.1$ billion of HTM securities for the three and six months ended June 30, 2023, respectively, and $\$ 14.3$ billion and $\$ 27.5$ billion for the three and six months ended June 30, 2022, respectively.
(c) The amortized cost of investment securities is reported net of allowance for credit losses of $\$ 104$ million and $\$ 96$ million at June 30 , 2023 and December 31, 2022, respectively.
(d) Excludes $\$ 2.5$ billion of accrued interest receivable at both June 30, 2023 and December 31, 2022. The Firm did not reverse through interest income any accrued interest receivable for the three and six months ended June 30, 2023 and 2022. Refer to Note 10 of JPMorgan Chase's 2022 Form 10-K for further discussion of accounting policies for accrued interest receivable on investment securities.
(e) As of June 30, 2023, included $\$ 25.8$ billion of AFS securities associated with the First Republic acquisition. Refer to Note 28 for additional information.

## AFS securities impairment

The following tables present the fair value and gross unrealized losses by aging category for AFS securities at June 30, 2023 and December 31, 2022. The tables exclude U.S. Treasury and government agency securities and U.S. GSE and government agency MBS with unrealized losses of $\$ 6.9$ billion and $\$ 9.6$ billion, at June 30, 2023 and December 31, 2022, respectively; changes in the value of these securities are generally driven by changes in interest rates rather than changes in their credit profile given the explicit or implicit guarantees provided by the U.S. government.


[^146]HTM securities - credit risk Credit quality indicator
The primary credit quality indicator for HTM securities is the risk rating assigned to each security. At June 30, 2023 and December 31, 2022, all HTM securities were rated investment grade and were current and accruing, with approximately 99\% and 98\% rated at least AA+, respectively.

Allowance for credit losses on investment securities The allowance for credit losses on investment securities was $\$ 104$ million and $\$ 47$ million as of June 30, 2023 and 2022, respectively, which included a cumulative-effect adjustment to retained earnings related to the transfer of HTM securities to AFS for the six months ended June 30, 2023.

Refer to Note 10 of JPMorgan Chase's 2022 Form 10-K for further discussion of accounting policies for AFS and HTM securities.

Selected impacts of investment securities on the Consolidated statements of income

| (in millions) | Three months ended June 30, |  |  |  | Six months ended June 30 , |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 2023 |  | 2022 |  | 2023 |  | 2022 |
| Realized gains | \$ | 198 | \$ | 69 | \$ | 329 | \$ | 2 |
| Realized losses |  | $(1,098)$ |  | (222) |  | $(2,097)$ |  | (629) |
| Investment securities losses | \$ | (900) | \$ | (153) |  | $(1,768)$ | \$ | (547) |
| Provision for credit losses | \$ | 13 | \$ | 6 | \$ | 14 | \$ | 5 |

## Contractual maturities and yields

The following table presents the amortized cost and estimated fair value at June 30, 2023, of JPMorgan Chase's investment securities portfolio by contractual maturity.

| By remaining maturity June 30, 2023 (in millions) | Due in one year or less |  | Due after one year through five years |  | Due after five years through 10 years |  | Due after 10 years ${ }^{(\mathrm{c})}$ |  | Total |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Available-for-sale securities |  |  |  |  |  |  |  |  |  |  |  |
| Mortgage-backed securities |  |  |  |  |  |  |  |  |  |  |  |
| Amortized cost | \$ | 15 | \$ | 3,622 | \$ | 5,077 | \$ | 81,922 | \$ | 90,636 |  |
| Fair value |  | 14 |  | 3,488 |  | 5,057 |  | 76,809 |  | 85,368 | (d) |
| Average yield ${ }^{(\mathrm{a})}$ |  | 2.18 \% |  | 4.55 \% |  | 5.98 \% |  | 4.40 \% |  | 4.49 \% |  |
| U.S. Treasury and government agencies |  |  |  |  |  |  |  |  |  |  |  |
| Amortized cost | \$ | 7,471 | \$ | 36,773 | \$ | 13,276 | \$ | 6,478 | \$ | 63,998 |  |
| Fair value |  | 7,384 |  | 35,699 |  | 13,300 |  | 6,354 |  | 62,737 |  |
| Average yield ${ }^{(\mathrm{a})}$ |  | 0.35 \% |  | 4.56 \% |  | 5.97 \% |  | 6.52 \% |  | 4.56 \% |  |
| Obligations of U.S. states and municipalities |  |  |  |  |  |  |  |  |  |  |  |
| Amortized cost | \$ | 11 | \$ | 72 | \$ | 1,244 | \$ | 22,952 | \$ | 24,279 |  |
| Fair value |  | 11 |  | 70 |  | 1,243 |  | 22,699 |  | 24,023 | (d) |
| Average yield ${ }^{(\mathrm{a})}$ |  | 5.58 \% |  | 3.82 \% |  | 4.27 \% |  | 5.60 \% |  | 5.53 \% |  |
| Non-U.S. government debt securities |  |  |  |  |  |  |  |  |  |  |  |
| Amortized cost | \$ | 13,373 | \$ | 3,423 | \$ | 3,352 | \$ | 2,440 | \$ | 22,588 |  |
| Fair value |  | 13,360 |  | 3,321 |  | 2,929 |  | 2,430 |  | 22,040 |  |
| Average yield ${ }^{(\mathrm{a})}$ |  | 4.78 \% |  | 2.97 \% |  | 1.23 \% |  | 3.61 \% |  | 3.86 \% |  |
| Corporate debt securities |  |  |  |  |  |  |  |  |  |  |  |
| Amortized cost | \$ | 199 | \$ | 227 | \$ | 14 | \$ | - | \$ | 440 |  |
| Fair value |  | 151 |  | 224 |  | 13 |  | - |  | 388 |  |
| Average yield ${ }^{(a)}$ |  | 15.97 \% |  | 11.75 \% |  | 4.10 \% |  | - \% |  | 13.42 \% |  |
| Asset-backed securities |  |  |  |  |  |  |  |  |  |  |  |
| Amortized cost | \$ | - | \$ | 1,313 | \$ | 3,875 | \$ | 3,642 | \$ | 8,830 |  |
| Fair value |  | - |  | 1,291 |  | 3,836 |  | 3,579 |  | 8,706 | (d) |
| Average yield ${ }^{(\mathrm{a})}$ |  | - \% |  | 3.46 \% |  | 5.98 \% |  | 6.06 \% |  | 5.64 \% |  |
| Total available-for-sale securities |  |  |  |  |  |  |  |  |  |  |  |
| Amortized cost ${ }^{(\mathrm{b})}$ | \$ | 21,069 | \$ | 45,430 | \$ | 26,838 | \$ | 117,434 | \$ | 210,771 |  |
| Fair value |  | 20,920 |  | 44,093 |  | 26,378 |  | 111,871 |  | 203,262 | (d) |
| Average yield ${ }^{(a)}$ |  | 3.32 \% |  | 4.44 \% |  | 5.30 \% |  | 4.78 \% |  | 4.63 \% |  |
| Held-to-maturity securities |  |  |  |  |  |  |  |  |  |  |  |
| Mortgage-backed securities |  |  |  |  |  |  |  |  |  |  |  |
| Amortized cost | \$ | 99 | \$ | 3,835 | \$ | 10,482 | \$ | 117,142 | \$ | 131,558 |  |
| Fair value |  | 97 |  | 3,555 |  | 9,212 |  | 103,549 |  | 116,413 |  |
| Average yield ${ }^{(a)}$ |  | 6.21 \% |  | 2.75 \% |  | 2.53 \% |  | 2.99 \% |  | 2.95 \% |  |
| U.S. Treasury and government agencies |  |  |  |  |  |  |  |  |  |  |  |
| Amortized cost | \$ | 60,878 | \$ | 92,403 | \$ | 49,374 | \$ | - | \$ | 202,655 |  |
| Fair value |  | 59,517 |  | 85,053 |  | 41,260 |  | - |  | 185,830 |  |
| Average yield ${ }^{(\mathrm{a})}$ |  | 0.46 \% |  | 0.93 \% |  | 1.27 \% |  | - \% |  | 0.87 \% |  |
| Obligations of U.S. states and municipalities |  |  |  |  |  |  |  |  |  |  |  |
| Amortized cost | \$ | - | \$ | - | \$ | 640 | \$ | 11,015 | \$ | 11,655 |  |
| Fair value |  | - |  | - |  | 608 |  | 10,295 |  | 10,903 |  |
| Average yield ${ }^{(\mathrm{a})}$ |  | - \% |  | - \% |  | 4.39 \% |  | 4.04 \% |  | 4.06 \% |  |
| Asset-backed securities |  |  |  |  |  |  |  |  |  |  |  |
| Amortized cost | \$ | - | \$ | 74 | \$ | 21,388 | \$ | 41,685 | \$ | 63,147 |  |
| Fair value |  | - |  | 74 |  | 21,139 |  | 40,941 |  | 62,154 |  |
| Average yield ${ }^{(\mathrm{a})}$ |  | - \% |  | 6.15 \% |  | 5.87 \% |  | 6.00 \% |  | 5.96 \% |  |
| Total held-to-maturity securities |  |  |  |  |  |  |  |  |  |  |  |
| Amortized $\operatorname{cost}^{(\mathrm{b})}$ | \$ | 60,977 | \$ | 96,312 | \$ | 81,884 | \$ | 169,842 | \$ | 409,015 |  |
| Fair value |  | 59,614 |  | 88,682 |  | 72,219 |  | 154,785 |  | 375,300 |  |
| Average yield ${ }^{(\mathrm{a})}$ |  | 0.47 \% |  | 1.00 \% |  | 2.66 \% |  | 3.80 \% |  | 2.42 \% |  |

(a) Average yield is computed using the effective yield of each security owned at the end of the period, weighted based on the amortized cost of each security. The effective yield considers the contractual coupon, amortization of premiums and accretion of discounts, and the effect of related hedging derivatives, including closed portfolio hedges. Taxable-equivalent amounts are used where applicable. The effective yield excludes unscheduled principal prepayments; and accordingly, actual maturities of securities may differ from their contractual or expected maturities as certain securities may be prepaid. However, for certain callable debt securities, the average yield is calculated to the earliest call date.
(b) For purposes of this table, the amortized cost of available-for-sale securities excludes the allowance for credit losses of \$(30) million and the portfolio layer fair value hedge basis adjustments of $\$(865)$ million at June 30,2023 . The amortized cost of held-to-maturity securities also excludes the allowance for credit losses of \$(74) million at June 30, 2023.
(c) Substantially all of the Firm's U.S. residential MBS and collateralized mortgage obligations are due in 10 years or more, based on contractual maturity. The estimated weighted-average life, which reflects anticipated future prepayments, is approximately eight years for agency residential MBS, seven years for agency residential collateralized mortgage obligations, and six years for nonagency residential collateralized mortgage obligations.
(d) Includes AFS securities associated with the First Republic acquisition, primarily impacting due after 10 years. Refer to Note 28 for additional information.

## Note 11 - Securities financing activities

Refer to Note 11 of JPMorgan Chase's 2022 Form 10-K for a discussion of accounting policies relating to securities financing activities. Refer to Note 3 for further information regarding securities financing agreements for which the fair value option has been elected. Refer to Note 25 for further information regarding assets pledged and collateral received in securities financing agreements.
The table below summarizes the gross and net amounts of the Firm's securities financing agreements as of June 30, 2023 and December 31, 2022. When the Firm has obtained an appropriate legal opinion with respect to a master netting agreement with a counterparty and where other relevant netting criteria under U.S. GAAP are met, the Firm nets, on the Consolidated balance sheets, the balances outstanding under its securities financing agreements with the same counterparty. In addition, the Firm exchanges securities and/or cash collateral with its counterparty to reduce the economic exposure with the counterparty, but such collateral is not eligible for net Consolidated balance
sheet presentation. Where the Firm has obtained an appropriate legal opinion with respect to the counterparty master netting agreement, such collateral, along with securities financing balances that do not meet all these relevant netting criteria under U.S. GAAP, is presented in the table below as "Amounts not nettable on the Consolidated balance sheets," and reduces the "Net amounts" presented. Where a legal opinion has not been either sought or obtained, the securities financing balances are presented gross in the "Net amounts" below. In transactions where the Firm is acting as the lender in a securities-for-securities lending agreement and receives securities that can be pledged or sold as collateral, the Firm recognizes the securities received at fair value within other assets and the obligation to return those securities within accounts payable and other liabilities on the Consolidated balance sheets.

| (in millions) |  |  |  |  |  | 30,2023 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Gross amounts |  | Amounts netted on the Consolidated balance sheets |  | Amounts presented on the Consolidated balance sheets |  | Amounts not nettable on the Consolidated balance sheets ${ }^{(b)}$ |  | $\begin{aligned} & \text { Net } \\ & \text { amounts } \end{aligned}$ |  |
| Assets |  |  |  |  |  |  |  |  |  |  |
| Securities purchased under resale agreements | \$ | 561,426 | \$ | $(235,867)$ | \$ | 325,559 | \$ | $(319,986)$ | \$ | 5,573 |
| Securities borrowed |  | 205,579 |  | $(42,016)$ |  | 163,563 |  | $(119,543)$ |  | 44,020 |
| Liabilities |  |  |  |  |  |  |  |  |  |  |
| Securities sold under repurchase agreements | \$ | 496,866 | \$ | $(235,867)$ | \$ | 260,999 | \$ | $(226,664)$ | \$ | 34,335 |
| Securities loaned and other ${ }^{(a)}$ |  | 50,551 |  | $(42,016)$ |  | 8,535 |  | $(8,457)$ |  | 78 |
|  |  |  |  |  |  | 31, 2022 |  |  |  |  |
| (in millions) |  | mounts |  | netted on solidated e sheets |  | presented solidated sheets |  | t nettable solidated sheets ${ }^{(b)}$ |  | $\begin{aligned} & \text { it } \\ & \text { ints } \end{aligned}$ |
| Assets |  |  |  |  |  |  |  |  |  |  |
| Securities purchased under resale agreements | \$ | 597,912 | \$ | $(282,411)$ | \$ | 315,501 | \$ | $(304,120)$ | \$ | 11,381 |
| Securities borrowed |  | 228,279 |  | $(42,910)$ |  | 185,369 |  | $(131,578)$ |  | 53,791 |
| Liabilities |  |  |  |  |  |  |  |  |  |  |
| Securities sold under repurchase agreements | \$ | 480,793 | \$ | $(282,411)$ | \$ | 198,382 | \$ | $(167,427)$ | \$ | 30,955 |
| Securities loaned and other ${ }^{(\mathrm{a})}$ |  | 52,443 |  | $(42,910)$ |  | 9,533 |  | $(9,527)$ |  | 6 |

(a) Includes securities-for-securities lending agreements of $\$ 5.0$ billion and $\$ 7.0$ billion at June 30, 2023 and December 31, 2022, respectively, accounted for at fair value, where the Firm is acting as lender.
(b) In some cases, collateral exchanged with a counterparty exceeds the net asset or liability balance with that counterparty. In such cases, the amounts reported in this column are limited to the related net asset or liability with that counterparty.
(c) Includes securities financing agreements that provide collateral rights, but where an appropriate legal opinion with respect to the master netting agreement has not been either sought or obtained. At June 30, 2023 and December 31, 2022, included $\$ 4.5$ billion and $\$ 6.0$ billion, respectively, of securities purchased under resale agreements; $\$ 39.6$ billion and $\$ 49.0$ billion, respectively, of securities borrowed; $\$ 33.3$ billion and $\$ 29.1$ billion, respectively, of securities sold under repurchase agreements; and securities loaned and other which were not material at both June 30,2023 and December 31, 2022.

The tables below present as of June 30, 2023, and December 31, 2022 the types of financial assets pledged in securities financing agreements and the remaining contractual maturity of the securities financing agreements.


## Transfers not qualifying for sale accounting

At both June 30, 2023, and December 31, 2022, the Firm held $\$ 692$ million of financial assets for which the rights have been transferred to third parties; however, the transfers did not qualify as a sale in accordance with U.S. GAAP. These transfers have been recognized as collateralized financing transactions. The transferred assets are recorded in trading assets and loans, and the corresponding liabilities are recorded predominantly in short-term borrowings on the Consolidated balance sheets.

## Note 12 - Loans

## Loan accounting framework

The accounting for a loan depends on management's strategy for the loan. The Firm accounts for loans based on the following categories:

- Originated or purchased loans held-for-investment (i.e., "retained")
- Loans held-for-sale
- Loans at fair value

Refer to Note 12 of JPMorgan Chase's 2022 Form 10-K for a detailed discussion of loans, including accounting policies. Refer to Note 3 of this Form $10-\mathrm{Q}$ for further information on the Firm's elections of fair value accounting under the fair value option. Refer to Note 2 of this Form 10-Q for information on loans carried at fair value and classified as trading assets.

On January 1, 2023 the Firm adopted the Financial Instruments - Credit Losses: Troubled Debt Restructurings and Vintage Disclosures accounting guidance as discussed in Note 1. The adoption of this guidance eliminated the existing accounting and disclosure requirements for TDRs, and implemented additional disclosure requirements for FDMs. The disclosure requirements for FDMs are effective for periods beginning on or after January 1, 2023. Refer to Note 12 of JPMorgan Chase's 2022 Form 10-K for a detailed discussion on loan modifications prior to January 1, 2023, which were accounted for and reported as TDRs. This new guidance also requires disclosure of current period gross charge-offs by vintage origination year, effective for periods beginning on or after January 1, 2023.

## Loan portfolio

The Firm's loan portfolio, including loans of $\$ 149.8$ billion associated with the First Republic acquisition, is divided into three portfolio segments, which are the same segments used by the Firm to determine the allowance for loan losses: Consumer, excluding credit card; Credit card; and Wholesale. Within each portfolio segment the Firm monitors and assesses the credit risk in the following classes of loans, based on the risk characteristics of each loan class.

| Consumer, excluding credit card | Credit card | Wholesale ${ }^{(c)(d)}$ |
| :---: | :---: | :---: |
| - Residential real estate ${ }^{(\mathrm{a})}$ <br> - Auto and other ${ }^{(b)}$ | - Credit card loans | - Secured by real estate <br> - Commercial and industrial <br> - Other ${ }^{(\mathrm{e})}$ |

(a) Includes scored mortgage and home equity loans held in CCB and AWM, and scored mortgage loans held in CIB.
(b) Includes scored auto, business banking loans and overdrafts in BWM and other consumer unsecured loans in CIB.
(c) Includes loans held in CIB, CB, AWM, Corporate as well as risk-rated BWM and auto dealer loans held in CCB, for which the wholesale methodology is applied when determining the allowance for loan losses.
(d) The wholesale portfolio segment's classes align with loan classifications as defined by the bank regulatory agencies, based on the loan's collateral, purpose, and type of borrower.
(e) Includes loans to financial institutions, states and political subdivisions, SPEs, nonprofits, personal investment companies and trusts, as well as loans to individuals and individual entities (predominantly Global Private Bank clients within AWM and J.P. Morgan Wealth Management within CCB). Refer to Note 14 of JPMorgan Chase's 2022 Form 10-K for more information on SPEs.

The following tables summarize the Firm's loan balances by portfolio segment.

| June 30, 2023 <br> (in millions) | Consumer, excluding credit card |  |  | Credit card |  | Wholesale |  |  | Total ${ }^{\text {(b)(c) }}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Retained | \$ | 396,195 | (a) | \$ | 191,348 | \$ | 668,145 | (a) | \$ | 1,255,688 |
| Held-for-sale |  | 549 |  |  | - |  | 5,043 |  |  | 5,592 |
| At fair value |  | 11,460 | (a) |  | - |  | 27,329 |  |  | 38,789 |
| Total | \$ | 408,204 |  | \$ | 191,348 | \$ | 700,517 |  | \$ | 1,300,069 |
| December 31, 2022 (in millions) |  | excluding <br> card |  |  | dit card |  | olesale |  |  | Total ${ }^{(b)(c)}$ |
| Retained | \$ | 300,753 |  | \$ | 185,175 | \$ | 603,670 |  | \$ | 1,089,598 |
| Held-for-sale |  | 618 |  |  | - |  | 3,352 |  |  | 3,970 |
| At fair value |  | 10,004 |  |  | - |  | 32,075 |  |  | 42,079 |
| Total | \$ | 311,375 |  | \$ | 185,175 | \$ | 639,097 |  | \$ | 1,135,647 |

(a) Includes loans associated with the First Republic acquisition consisting of $\$ 91.9$ billion of retained loans and $\$ 1.9$ billion loans at fair value in consumer, excluding credit card and $\$ 56.0$ billion of retained loans in wholesale.
(b) Excludes $\$ 6.0$ billion and $\$ 5.2$ billion of accrued interest receivables as of June 30, 2023 and December 31, 2022, respectively. Accrued interest receivables written off was not material for the three and six months ended June 30, 2023 and 2022.
(c) Loans (other than those for which the fair value option has been elected) are presented net of unamortized discounts and premiums and net deferred loan fees or costs. These amounts were not material as of June 30, 2023, and December 31, 2022.

The following tables provide information about the carrying value of retained loans purchased, sold and reclassified to held-for-sale during the periods indicated. Loans that were reclassified to held-for-sale and sold in a subsequent period are excluded from the sales line of this table.

| Three months ended June 30, (in millions) | 2023 |  |  |  |  |  | 2022 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Consumer, excluding credit card | Credit card | Wholesale |  | Total |  | Consumer, excluding credit card | Credit card | Wholesale | Total |
| Purchases | \$ | 92,002 ${ }^{\text {(b)(c)(d) }}$ | \$ | \$ 58,398 | (b) | \$150,400 | \$ | $973^{\text {(c)(d) }}$ | \$ | \$ 228 | \$ 1,201 |
| Sales |  | 438 | - | 9,709 |  | 10,147 |  | 82 | - | 12,005 | 12,087 |
| Retained loans reclassified to held-for-sale ${ }^{(a)}$ |  | 81 | - | 771 |  | 852 |  | 66 | - | 415 | 481 |
|  | 2023 |  |  |  |  |  | 2022 |  |  |  |  |
| Six months ended June 30, 2022 (in millions) |  | Consumer, excluding credit card | Credit card | Wholesale |  | Total |  | Consumer, excluding credit card | Credit card | Wholesale | Total |
| Purchases | \$ | 92,081 ${ }^{\text {(b)(c)(d) }}$ | \$ | \$ 58,561 | (b) | \$150,642 | \$ | $1,092^{\text {(c)(d) }}$ | \$ | \$ 394 | \$ 1,486 |
| Sales |  | 438 | - | 18,880 |  | 19,318 |  | 129 | - | 21,712 | 21,841 |
| Retained loans reclassified to held-for-sale ${ }^{(a)}$ |  | 124 | - | 1,085 |  | 1,209 |  | 142 | - | 688 | 830 |

(a) Reclassifications of loans to held-for-sale are non-cash transactions.
(b) Includes loans acquired in the First Republic acquisition consisting of $\$ 91.9$ billion in Consumer, excluding credit card and $\$ 58.4$ billion in Wholesale.
(c) Includes purchases of residential real estate loans, including the Firm's voluntary repurchases of certain delinquent loans from loan pools as permitted by Government National Mortgage Association ("Ginnie Mae") guidelines for the three and six months ended June 30, 2023 and 2022. The Firm typically elects to repurchase these delinquent loans as it continues to service them and/or manage the foreclosure process in accordance with applicable requirements of Ginnie Mae, FHA, RHS, and/or VA.
(d) Excludes purchases of retained loans of $\$ 1.6$ billion and $\$ 6.0$ billion for the three months ended June 30, 2023 and 2022, and $\$ 2.3$ billion and $\$ 9.2$ billion for the six months ended June 30, 2023 and 2022, respectively, which are predominantly sourced through the correspondent origination channel and underwritten in accordance with the Firm's standards.

## Gains and losses on sales of loans

Net gains/(losses) on sales of loans and lending-related commitments (including adjustments to record loans and lendingrelated commitments held-for-sale at the lower of cost or fair value) recognized in noninterest revenue for the three and six months ended June 30, 2023, was $\$ 14$ million and $\$ 37$ million, respectively, of which $\$ 16$ million and $\$ 43$ million, respectively, related to loans. Net gains/(losses) on sales of loans and lending-related commitments for the three and six months ended June 30,2022 , was $\$(352)$ million and $\$(314)$ million, respectively, of which $\$(67)$ million and $\$(32)$ million, respectively, related to loans. In addition, the sale of loans may also result in write downs, recoveries or changes in the allowance recognized in the provision for credit losses.

## Consumer, excluding credit card loan portfolio

Consumer loans, excluding credit card loans, consist primarily of scored residential mortgages, home equity loans and lines of credit, auto and business banking loans, with a focus on serving the prime consumer credit market. The portfolio also includes home equity loans secured by junior liens, prime mortgage loans with an interest-only payment period and certain payment-option loans that may result in negative amortization.
The following table provides information about retained consumer loans, excluding credit card, by class.

|  |  | June 30, <br> 2023 | December 31, <br> (in millions) |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Residential real estate | $\$$ | $\mathbf{3 2 8 , 0 1 0}$ | (a) | $\$$ | 237,561 |
| Auto and other |  | $\mathbf{6 8 , 1 8 5}$ |  | 63,192 |  |
| Total retained loans | $\$$ | $\mathbf{3 9 6 , 1 9 5}$ | $\$$ | 300,753 |  |

(a) Included $\$ 91.9$ billion of Ioans associated with the First Republic acquisition.

Delinquency rates are the primary credit quality indicator for consumer loans. Refer to Note 12 of JPMorgan Chase's 2022 Form 10-K for further information on consumer credit quality indicators.

## Residential real estate

Delinquency is the primary credit quality indicator for retained residential real estate loans. The following tables provide information on delinquency and gross charge-offs for the six months ended June 30, 2023.

| (in millions, except ratios) | June 30, 2023 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Term loans by origination year ${ }^{(f)}$ |  |  |  |  |  |  |  |  |  |  |  | Revolving loans |  |  |  | Total |  |
|  | 2023 |  | 2022 |  | 2021 |  | 2020 |  | 2019 |  | $\begin{aligned} & \text { Prior to } \\ & 2019 \end{aligned}$ |  | Within the revolving period |  | Converted to term loans |  |  |  |
| Loan delinquency ${ }^{\text {(a)(b) }}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Current ${ }^{(c)}$ | \$ | 13,596 | \$ | 65,317 | \$ | 86,325 | \$ | 57,052 | \$ | 22,211 | \$ | 65,271 | \$ | 7,584 | \$ | 8,877 |  | 326,233 |
| 30-149 days past due |  | 3 |  | 19 |  | 44 |  | 29 |  | 41 |  | 710 |  | 39 |  | 216 |  | 1,101 |
| 150 or more days past due |  | - |  | 6 |  | 2 |  | 6 |  | 10 |  | 473 |  | 3 |  | 176 |  | 676 |
| Total retained loans | \$ | 13,599 | \$ | 65,342 | \$ | 86,371 | \$ | 57,087 | \$ | 22,262 | \$ | 66,454 | \$ | 7,626 | \$ | 9,269 |  | 328,010 |
| \% of $30+$ days past due to total retained loans ${ }^{(\mathrm{d})(\mathrm{e}}$ |  | 0.02 \% |  | 0.04 \% |  | 0.05 \% |  | 0.06 \% |  | 0.23 \% |  | 1.75 \% |  | 0.55 \% |  | 4.23 \% |  | 0.54 \% |
| Gross charge-offs | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | 52 | \$ | 14 | \$ | 4 | \$ | 70 |
| (in millions, except ratios) | December 31, 2022 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Term loans by origination year ${ }^{(f)}$ |  |  |  |  |  |  |  |  |  |  |  | Revolving loans |  |  |  | Total |  |
|  | 2022 |  |  | 2021 | 2020 |  | 2019 |  | 2018 |  | $\begin{aligned} & \text { Prior to } \\ & 2018 \end{aligned}$ |  | Within the revolving period |  | Converted to term loans |  |  |  |
| Loan delinquency ${ }^{(a)(b)}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Current | \$ | 39,934 | \$ | 66,072 | \$ | 43,315 | \$ | 15,397 | \$ | 6,339 | \$ | 49,632 | \$ | 5,589 | \$ | 9,685 | \$ | 235,963 |
| 30-149 days past due |  | 29 |  | 11 |  | 14 |  | 20 |  | 20 |  | 597 |  | 15 |  | 208 |  | 914 |
| 150 or more days past due |  | 1 |  | 1 |  | 6 |  | 10 |  | 7 |  | 480 |  | 4 |  | 175 |  | 684 |
| Total retained loans | \$ | 39,964 | \$ | 66,084 | \$ | 43,335 | \$ | 15,427 | \$ | 6,366 | \$ | 50,709 | \$ | 5,608 | \$ | 10,068 | \$ | 237,561 |
| \% of $30+$ days past due to total retained loans |  | 0.08 \% |  | 0.02 \% |  | 0.05 \% |  | 0.19 \% |  | 0.42 \% |  | 2.07 \% |  | 0.34 \% |  | 3.80 \% |  | 0.66 \% |

(a) Individual delinquency classifications include mortgage loans insured by U.S. government agencies which were not material at June 30, 2023 and December 31, 2022
(b) At June 30, 2023 and December 31, 2022, loans under payment deferral programs offered in response to the COVID-19 pandemic which are still within their deferral period and performing according to their modified terms are generally not considered delinquent.
(c) Included $\$ 5.6$ billion, $\$ 26.2$ billion, $\$ 22.0$ billion, $\$ 15.0$ billion, $\$ 7.5$ billion, and $\$ 12.9$ billion of term loans originated in 2023, 2022, 2021, 2020, 2019 and prior to 2019, respectively, and $\$ 2.5$ billion of revolving loans within the revolving period associated with the First Republic acquisition.
(d) Excludes mortgage loans that are 30 or more days past due insured by U.S. government agencies which were not material at June 30,2023 and December 31, 2022. These amounts have been excluded based upon the government guarantee.
(e) Included $\$ 158$ million of $30+$ days past due loans associated with the First Republic acquisition.
(f) Purchased loans are included in the year in which they were originated.

Approximately $37 \%$ of the total revolving loans are senior lien loans; the remaining balance are junior lien loans. The lien position the Firm holds is considered in the Firm's allowance for credit losses. Revolving loans that have been converted to term loans have higher delinquency rates than those that are still within the revolving period. That is primarily because the fully-amortizing payment that is generally required for those products is higher than the minimum payment options available for revolving loans within the revolving period.

Nonaccrual loans and other credit quality indicators
The following table provides information on nonaccrual and other credit quality indicators for retained residential real estate loans.

| (in millions, except weighted-average data) | June 30, 2023 |  |  | December 31, 2022 |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Nonaccrual loans ${ }^{(\mathrm{a})(\mathrm{b})(\mathrm{c})(\mathrm{d})(\mathrm{e})}$ | \$ | 3,641 |  | \$ | 3,745 |
| Current estimated LTV ratios ${ }^{(f)(\mathrm{g})(\mathrm{h})}$ |  |  |  |  |  |
| Greater than 125\% and refreshed FICO scores: |  |  |  |  |  |
| Equal to or greater than 660 | \$ | 68 |  | \$ | 2 |
| Less than 660 |  | 5 |  |  |  |
| 101\% to $125 \%$ and refreshed FICO scores: |  |  |  |  |  |
| Equal to or greater than 660 |  | 569 |  |  | 174 |
| Less than 660 |  | 11 |  |  | 6 |
| 80\% to 100\% and refreshed FICO scores: |  |  |  |  |  |
| Equal to or greater than 660 |  | 17,260 | (1) |  | 12,034 |
| Less than 660 |  | 254 |  |  | 184 |
| Less than 80\% and refreshed FICO scores: |  |  |  |  |  |
| Equal to or greater than 660 |  | 298,791 | (1) |  | 215,096 |
| Less than 660 |  | 9,526 | (I) |  | 8,659 |
| No FICO/LTV available |  | 1,526 |  |  | 1,406 |
| Total retained loans | \$ | 328,010 | (m) | \$ | 237,561 |
| Weighted average LTV ratio ${ }^{(f)(\text { (i) }}$ |  | 51 |  |  |  |
| Weighted average FICO ${ }^{(\mathrm{g})(\mathrm{i}}$ |  | 771 |  |  | 769 |
| Geographic region ${ }^{(j)(k)}$ |  |  |  |  |  |
| California | \$ | 128,038 | (n) | \$ | 73,112 |
| New York |  | 49,413 | (n) |  | 34,471 |
| Florida |  | 22,518 | ( $)$ |  | 18,870 |
| Texas |  | 15,448 |  |  | 14,968 |
| Massachusetts |  | 14,351 | (n) |  | 6,380 |
| Illinois |  | 11,052 |  |  | 11,296 |
| Colorado |  | 10,765 |  |  | 9,968 |
| Washington |  | 9,778 |  |  | 9,060 |
| New Jersey |  | 8,106 |  |  | 7,108 |
| Connecticut |  | 7,142 |  |  | 5,432 |
| All other |  | 51,399 |  |  | 46,896 |
| Total retained loans | \$ | 328,010 | (m) | \$ | 237,561 |

(a) Includes collateral-dependent residential real estate loans that are charged down to the fair value of the underlying collateral less costs to sell. The Firm reports, in accordance with regulatory guidance, residential real estate loans that have been discharged under Chapter 7 bankruptcy and not reaffirmed by the borrower ("Chapter 7 loans") as collateral-dependent nonaccrual loans, regardless of their delinquency status. At June 30, 2023, approximately $9 \%$ of Chapter 7 residential real estate loans were 30 days or more past due.
(b) Mortgage loans insured by U.S. government agencies excluded from nonaccrual loans were not material at June 30, 2023 and December $31,2022$.
(c) Generally, all consumer nonaccrual loans have an allowance. In accordance with regulatory guidance, certain nonaccrual loans that are considered collateral-dependent have been charged down to the lower of amortized cost or the fair value of their underlying collateral less costs to sell. If the value of the underlying collateral improves subsequent to charge down, the related allowance may be negative.
(d) Interest income on nonaccrual loans recognized on a cash basis was $\$ 44$ million and $\$ 45$ million and $\$ 89$ million and $\$ 90$ million for the three and six months ended June 30, 2023 and 2022, respectively.
(e) Generally excludes loans under payment deferral programs offered in response to the COVID-19 pandemic.
(f) Represents the aggregate unpaid principal balance of loans divided by the estimated current property value. Current property values are estimated, at a minimum, quarterly, based on home valuation models using nationally recognized home price index valuation estimates incorporating actual data to the extent available and forecasted data where actual data is not available. Current estimated combined LTV for junior lien home equity loans considers all available lien positions, as well as unused lines, related to the property.
(g) Refreshed FICO scores represent each borrower's most recent credit score, which is obtained by the Firm on at least a quarterly basis.
(h) Includes residential real estate loans, primarily held in LLCs in AWM that did not have a refreshed FICO score. These loans have been included in a FICO band based on management's estimation of the borrower's credit quality.
(i) Excludes loans with no FICO and/or LTV data available.
(j) The geographic regions presented in the table are ordered based on the magnitude of the corresponding loan balances at June 30, 2023.
(k) Prior-period amounts have been revised to conform with the current presentation.
(I) Included $\$ 4.3$ billion in equal to or greater than 660 FICO scores within $80 \%$ to $100 \%$ LTV ratio, and $\$ 85.3$ billion and $\$ 1.2$ billion in equal to or greater than 660 and less than 660 FICO scores, respectively, within less than $80 \%$ LTV ratio associated with the First Republic acquisition.
(m) Included $\$ 91.9$ billion of loans associated with the First Republic acquisition.
( $n$ ) Included $\$ 55.5$ billion, $\$ 15.2$ billion, $\$ 3.6$ billion and $\$ 8.0$ billion in California, New York, Florida and Massachusetts, respectively, associated with the First Republic acquisition.

## Loan modifications

The Firm grants certain modifications of residential real estate loans to borrowers experiencing financial difficulty, which effective January 1, 2023, are reported as FDMs. The Firm's proprietary modification programs as well as government programs, including U.S. GSE programs, that generally provide various modifications to borrowers experiencing financial difficulty including, but not limited to, interest rate reductions, term extensions, other-thaninsignificant payment delay and principal forgiveness that would otherwise have been required under the terms of the original agreement, are considered FDMs.
For the three and six months ended June 30, 2023, residential real estate FDMs were $\$ 35$ million and $\$ 75$ million, respectively. The financial effects of the FDMs, which were largely in the form of term extensions and interest rate reductions, included extending the weightedaverage life of the loans by 15 years and 18 years, and reducing the weighted-average contractual interest rate from $6.90 \%$ to $4.21 \%$ and $6.75 \%$ to $4.01 \%$ for the three and six months ended June 30, 2023, respectively. There were no additional commitments to lend to borrowers experiencing financial difficulty whose loans have been modified as FDMs. In addition to FDMs, the Firm also had $\$ 33$ million and $\$ 48$ million of loans subject to a trial modification, and $\$ 3$ million and $\$ 5$ million of Chapter 7 loans for the three and six months ended June 30, 2023, respectively. The changes to the TDR accounting guidance eliminated the TDR reasonably expected and concession assessment criteria. Accordingly, trial modifications and Chapter 7 loans were considered TDRs, but not FDMs. For periods ending prior to January 1, 2023, modifications of residential real estate loans where the Firm granted concessions to borrowers who were experiencing financial difficulty were generally accounted for and reported as TDRs. For the three and six months ended June 30, 2022, new TDRs were $\$ 115$ million and $\$ 233$ million, respectively. There were no additional commitments to lend to borrowers whose residential real estate loans have been modified in TDRs. Refer to Note 12 of JPMorgan Chase's 2022 Form 10-K for further information on TDRs.

## Nature and extent of modifications

The following table provides information about how residential real estate loans were modified in TDRs during the period presented.

|  | Three months <br> ended June 30, | Six months ended <br> June 30, |
| :--- | :---: | :---: |
| Number of loans approved for a <br> trial modification | 1,165 | 2022 |
| Number of loans permanently <br> modified | 1,289 | 2,691 |
| Concession granted: |  |  |
| (a) | 2,831 |  |
| Interest rate reduction | $45 \%$ | $56 \%$ |
| Term or payment extension <br> Principal and/or interest <br> deferred | 54 | 67 |
| Principal forgiveness <br> Other ${ }^{(b)}$ | 10 | 12 |

(a) Represents concessions granted in permanent modifications as a percentage of the number of loans permanently modified. The sum of the percentages exceeds 100\% because predominantly all of the modifications include more than one type of concession. Concessions offered on trial modifications are generally consistent with those granted on permanent modifications.
(b) Includes variable interest rate to fixed interest rate modifications and payment delays that meet the definition of a TDR.

## Financial effects of modifications and redefaults

The following table provides information about the financial effects of the various concessions granted in modifications of residential real estate loans and about redefaults of certain loans modified in TDRs for the period presented.

| (in millions, except weightedaverage data) | Three months ended June 30, |  | Six months ended June 30 , |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 2022 |  | 2022 |
| Weighted-average interest rate of loans with interest rate reductions - before TDR |  | 4.76 \% |  | 4.55 \% |
| Weighted-average interest rate of loans with interest rate reductions - after TDR |  | 3.36 |  | 3.31 |
| Weighted-average remaining contractual term (in years) of loans with term or payment extensions - before TDR |  | 22 |  | 23 |
| Weighted-average remaining contractual term (in years) of loans with term or payment extensions - after TDR |  | 38 |  | 39 |
| Charge-offs recognized upon permanent modification | \$ | 1 | \$ | 1 |
| Principal deferred |  | 4 |  | 11 |
| Principal forgiven |  | - |  | 1 |
| Balance of loans that redefaulted within one year of permanent modification ${ }^{(a)}$ | \$ | 27 | \$ | 70 |

(a) Represents loans permanently modified in TDRs that experienced a payment default in the period presented, and for which the payment default occurred within one year of the modification. The dollar amount presented represents the balance of such loans at the end of the reporting period in which such loans defaulted.

## Active and suspended foreclosure

At June 30, 2023 and December 31, 2022, the Firm had residential real estate loans, excluding those insured by U.S. government agencies, with a carrying value of $\$ 566$ million and $\$ 565$ million, respectively, that were not included in REO, but were in the process of active or suspended foreclosure.

Auto and other
Delinquency is the primary credit quality indicator for retained auto and other loans. The following tables provide information on delinquency and gross charge-offs for the six months ended June 30, 2023.

| (in millions, except ratios) | June 30, 2023 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Term loans by origination year |  |  |  |  |  |  |  |  | Revolving loans |  |  |  | Total |  |
|  | 2023 | 2022 | 2021 | 2020 |  | 2019 |  | $\begin{gathered} \text { Prior to } \\ 2019 \\ \hline \end{gathered}$ |  | Within the revolving period |  | Converted to term loans |  |  |  |
| Loan delinquency |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Current | \$ 17,763 | \$ 18,062 | \$ 16,287 | \$ | 8,801 | \$ | 2,765 | \$ | 1,041 | \$ | 2,544 | \$ | 113 | \$ | 7,376 |
| 30-119 days past due | 121 | 234 | 216 |  | 79 |  | 48 |  | 28 |  | 14 |  | 15 |  | 755 |
| 120 or more days past due | - | 1 | 25 |  | 13 |  | - |  | 1 |  | 2 |  | 12 |  | 54 |
| Total retained loans | \$ 17,884 | \$ 18,297 | \$ 16,528 | \$ | 8,893 | \$ | 2,813 | \$ | 1,070 | \$ | 2,560 | \$ | 140 | \$ | ,185 |
| \% of 30+ days past due to total retained loans ${ }^{(\mathrm{a})}$ | 0.68 \% | 1.28 \% | 1.26 \% |  | 0.83 \% |  | 1.71 \% |  | 2.71 \% |  | 0.63 \% |  | 19.29 \% |  | 1.11 \% |
| Gross charge-offs | \$ 106 | \$ 168 | \$ 82 | \$ | 28 | \$ | 16 | \$ | 30 | \$ | - | \$ | 1 | \$ | 431 |
| (in millions, except ratios) | December 31, 2022 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Term loans by origination year |  |  |  |  |  |  |  |  | Revolving loans |  |  |  | Total |  |
|  | 2022 | 2021 | 2020 | 2019 |  |  | 2018 | $\begin{gathered} \text { Prior to } \\ 2018 \end{gathered}$ |  | Within the revolving period |  | Converted to term Ioans |  |  |  |
| Loan delinquency |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Current | \$ 22,187 | \$ 20,212 | \$ 11,401 | \$ | 3,991 | \$ | 1,467 | \$ | 578 | \$ | 2,342 | \$ | 118 | \$ | 2,296 |
| 30-119 days past due | 263 | 308 | 100 |  | 68 |  | 33 |  | 17 |  | 12 |  | 10 |  | 811 |
| 120 or more days past due | - | 53 | 24 |  | - |  | - |  | 1 |  | 2 |  | 5 |  | 85 |
| Total retained loans | \$ 22,450 | \$ 20,573 | \$ 11,525 | \$ | 4,059 | \$ | 1,500 | \$ | 596 | \$ | 2,356 | \$ | 133 | \$ | 3,192 |
| $\%$ of $30+$ days past due to total retained loans ${ }^{(a)}$ | 1.17 \% | 1.15 \% | 0.83 \% |  | 1.68 \% |  | 2.20 \% |  | 3.02 \% |  | 0.59 \% |  | 11.28 \% |  | 1.18 \% |

(a) At June 30, 2023 and December 31, 2022, auto and other loans excluded $\$ 50$ million and $\$ 153$ million, respectively, of PPP loans guaranteed by the SBA that are 30 or more days past due. These amounts have been excluded based upon the SBA guarantee.

## Nonaccrual and other credit quality indicators

The following table provides information on nonaccrual and other credit quality indicators for retained auto and other consumer loans.

| (in millions) | Total Auto and other |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | June 30, 2023 |  | December$31,2022$ |  |
| Nonaccrual loans ${ }^{(\mathrm{a})(\mathrm{b})(\mathrm{c})}$ | \$ | 143 | \$ | 129 |
| Geographic region ${ }^{(d)}$ |  |  |  |  |
| California | \$ | 10,353 | \$ | 9,689 |
| Texas |  | 8,070 |  | 7,216 |
| Florida |  | 5,344 |  | 4,847 |
| New York |  | 4,634 |  | 4,345 |
| Illinois |  | 3,062 |  | 2,839 |
| New Jersey |  | 2,462 |  | 2,219 |
| Pennsylvania |  | 1,873 |  | 1,822 |
| Georgia |  | 1,858 |  | 1,708 |
| Arizona |  | 1,700 |  | 1,551 |
| Ohio |  | 1,672 |  | 1,603 |
| All other |  | 27,157 |  | 25,353 |
| Total retained loans | \$ | 68,185 | \$ | 63,192 |

(a) At June 30, 2023 and December 31, 2022, nonaccrual loans excluded $\$ 39$ million and $\$ 101$ million, respectively, of PPP loans 90 or more days past due and guaranteed by the SBA, of which $\$ 38$ million and $\$ 76$ million, respectively, were no longer accruing interest based on the guidelines set by the SBA. Typically the principal balance of the loans is insured and interest is guaranteed at a specified reimbursement rate subject to meeting the guidelines set by the SBA. There were no loans that were not guaranteed by the SBA that are 90 or more days past due and still accruing interest at June 30, 2023 and December 31, 2022.
(b) Generally, all consumer nonaccrual loans have an allowance. In accordance with regulatory guidance, certain nonaccrual loans that are considered collateral-dependent have been charged down to the lower of amortized cost or the fair value of their underlying collateral less costs to sell. If the value of the underlying collateral improves subsequent to charge down, the related allowance may be negative.
(c) Interest income on nonaccrual loans recognized on a cash basis was not material for the three and six months ended June 30, 2023 and 2022.
(d) The geographic regions presented in this table are ordered based on the magnitude of the corresponding loan balances at June 30, 2023.

## Loan modifications

The Firm grants certain modifications of auto and other loans to borrowers experiencing financial difficulty, which effective January 1, 2023, are reported as FDMs. For the three and six months ended June 30, 2023 and 2022, auto and other FDMs were not material and there were no additional commitments to lend to borrowers modified as FDMs.
For the three and six months ended June 30, 2022, auto and other TDRs were not material.

## Credit card loan portfolio

The credit card portfolio segment includes credit card loans originated and purchased by the Firm. Delinquency rates are the primary credit quality indicator for credit card loans.
Refer to Note 12 of JPMorgan Chase's 2022 Form 10-K for further information on the credit card loan portfolio, including credit quality indicators.
The following tables provide information on delinquency and gross charge-offs for the six months ended June 30, 2023.

| (in millions, except ratios) | June 30, 2023 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Within the revolving period |  | Converted to term Ioans |  | Total |  |
| Loan delinquency |  |  |  |  |  |  |
| Current and less than 30 days past due and still accruing | \$ | 187,340 | \$ | 755 | \$ | 188,095 |
| 30-89 days past due and still accruing |  | 1,580 |  | 68 |  | 1,648 |
| 90 or more days past due and still accruing |  | 1,570 |  | 35 |  | 1,605 |
| Total retained loans | \$ | 190,490 | \$ | 858 | \$ | 191,348 |
| Loan delinquency ratios |  |  |  |  |  |  |
| \% of $30+$ days past due to total retained loans |  | 1.65 \% |  | 12.00 \% |  | 1.70 \% |
| \% of 90+ days past due to total retained loans |  | 0.82 |  | 4.08 |  | 0.84 |
| Gross charge-offs | \$ | 2,357 | \$ | 75 | \$ | 2,432 |
|  |  |  |  | 31, 202 |  |  |
| (in millions, except ratios) |  | ithin the Iving period |  | d to term ans |  | Total |
| Loan delinquency |  |  |  |  |  |  |
| Current and less than 30 days past due and still accruing | \$ | 181,793 | \$ | 696 | \$ | 182,489 |
| 30-89 days past due and still accruing |  | 1,356 |  | 64 |  | 1,420 |
| 90 or more days past due and still accruing |  | 1,230 |  | 36 |  | 1,266 |
| Total retained loans | \$ | 184,379 | \$ | 796 | \$ | 185,175 |
| Loan delinquency ratios |  |  |  |  |  |  |
| \% of 30+ days past due to total retained loans |  | 1.40 \% |  | 12.56 \% |  | 1.45 \% |
| \% of 90+ days past due to total retained loans |  | 0.67 |  | 4.52 |  | 0.68 |

Other credit quality indicators
The following table provides information on other credit quality indicators for retained credit card loans.

(a) The geographic regions presented in the table are ordered based on the magnitude of the corresponding loan balances at June 30, 2023.

## Loan modifications

The Firm grants certain modifications of credit card loans to borrowers experiencing financial difficulty, which effective January 1,2023 , are reported as FDMs. These modifications involve placing the customer on a fixed payment plan, generally for 60 months, and typically include reducing the interest rate on the credit card under long-term programs. If the cardholder does not comply with the modified payment terms, then the credit card loan continues to age and will ultimately be charged-off in accordance with the Firm's standard charge-off policy. In most cases, the Firm does not reinstate the borrower's line of credit.

The following tables provide information on credit card loan modifications considered FDMs.

| Three months ended June 30, 2023 <br> (in millions) | Amortized <br> cost basis | \% of loan modifications to total <br> retained credit card loans | Financial effect of loan modification |
| :--- | :--- | :--- | :--- | :--- | :--- |

Loan modification

|  |  |  | Term extension with a reduction in the <br> weighted average contractual interest rate |
| :--- | :--- | :--- | :--- |
| Term extension and interest rate reduction ${ }^{(\mathrm{a})(\mathrm{b})}$ | $\mathbf{\$}$ | $\mathbf{3 2 6}$ | $\mathbf{0 . 1 7} \%$ |
| Total | $\mathbf{\$}$ | $\mathbf{3 2 6}$ |  |

(a) Term extension includes credit card loans whose terms have been modified under long-term programs by placing the customer on a fixed payment plan.
(b) The interest rates represent weighted average at enrollment.

For both the three and six months ended June 30, 2023, the Firm also had $\$ 26$ million of loans subject to trial modifications. The changes to the TDR accounting guidance eliminated the TDR reasonably expected and concession assessment criteria. Accordingly, trial modifications are not considered FDMs.

The following table provides information on the payment status of FDMs during the three and six months ended June 30, 2023.

|  | Amortized cost basis |  |  |
| :--- | ---: | ---: | ---: |
| (in millions) | Three months <br> ended June 30, | Six months ended <br> June 30, |  |
| ( | 2023 |  | 2023 |
| Current and less than 30 days <br> past due and still accruing <br> 30-89 days past due and still | $\$$ | $\mathbf{1 2 8}$ | $\$$ |
| accruing <br> 90 or more days past due and <br> still accruing | $\mathbf{3 2}$ | $\mathbf{2 6 4}$ |  |
| Total | $\mathbf{\$}$ | $\mathbf{1 8 1}$ | $\mathbf{\$}$ |

There were $\$ 6$ million FDMs that re-defaulted during both the three and six months ended June 30, 2023 which were a combination of term extension and interest rate reduction. For credit card loans modified as FDMs, payment default is deemed to have occurred when the borrower misses two consecutive contractual payments. Defaulted modified credit card loans remain in the modification program and continue to be charged off in accordance with the Firm's standard charge-off policy.
For periods ending prior to January 1, 2023, modifications of credit card loans where the Firm granted concessions to borrowers who were experiencing financial difficulty were generally accounted for and reported as TDRs. Refer to Note 12 of JPMorgan Chase's 2022 Form 10-K for further information on TDRs.

## Financial effects of modifications and redefaults

The following table provides information about the financial effects of the concessions granted on credit card loans modified in TDRs and redefaults. New enrollments were less than $1 \%$ of total retained credit card loans.

| (in millions, except | Three months ended June 30, |  | Six months ended June 30, |  |
| :---: | :---: | :---: | :---: | :---: |
| weighted-average data) |  | 2022 |  | 2022 |
| Balance of new TDRs ${ }^{(\mathrm{a})}$ | \$ | 81 | \$ | 163 |
| Weighted-average interest rate of loans - before TDR |  | 18.94 \% |  | 18.47 \% |
| Weighted-average interest rate of Ioans - after TDR |  | 4.62 |  | 4.75 |
| Balance of loans that redefaulted within one year of modification ${ }^{(b)}$ | \$ | 8 | \$ | 17 |

(a) Represents the outstanding balance prior to modification.
(b) Represents loans modified in TDRs that experienced a payment default in the period presented, and for which the payment default occurred within one year of the modification. The amount presented represents the balance of such loans as of the end of the quarter in which they defaulted.

## Wholesale Ioan portfolio

Wholesale loans include loans made to a variety of clients, ranging from large corporate and institutional clients, to small businesses and high-net-worth individuals. The primary credit quality indicator for wholesale loans is the internal risk rating assigned to each loan. Refer to Note 12 of JPMorgan Chase's 2022 Form 10-K for further information on these risk ratings.

Internal risk rating is the primary credit quality indicator for retained wholesale loans. The following tables provide information on internal risk rating and gross charge-offs for the six months ended June 30, 2023.

| (in millions, except ratios) | Secured by real estate |  |  |  | Commercial and industrial |  |  |  | Other ${ }^{(\mathrm{b})}$ |  |  |  | Total retained loans |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\begin{aligned} & \text { Jun 30, } \\ & 2023 \end{aligned}$ |  | $\begin{gathered} \text { Dec 31, } \\ 2022 \end{gathered}$ |  | $\begin{aligned} & \text { Jun } 30, \\ & 2023 \end{aligned}$ |  | $\begin{gathered} \text { Dec 31, } \\ 2022 \end{gathered}$ |  | $\begin{aligned} & \text { Jun } 30, \\ & 2023 \end{aligned}$ |  | $\begin{gathered} \text { Dec 31, } \\ 2022 \end{gathered}$ |  | $\begin{aligned} & \text { Jun } 30, \\ & 2023 \end{aligned}$ |  | $\begin{gathered} \text { Dec 31, } \\ 2022 \end{gathered}$ |
| Loans by risk ratings |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Investment-grade | \$ | 120,652 | \$ | 99,552 | \$ | 74,505 | \$ | 76,275 | \$ | 256,821 | \$ | 249,585 | \$ | 451,978 | \$ | 425,412 |
| Noninvestment-grade: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Noncriticized |  | 36,387 |  | 23,272 |  | 84,133 |  | 81,393 |  | 77,360 |  | 57,888 |  | 197,880 |  | 162,553 |
| Criticized performing |  | 4,314 |  | 3,662 |  | 9,980 |  | 8,974 |  | 1,400 |  | 1,106 |  | 15,694 |  | 13,742 |
| Criticized nonaccrual |  | 518 |  | 246 |  | 1,437 |  | 1,018 |  | 638 |  | 699 |  | 2,593 |  | 1,963 |
| Total noninvestment-grade |  | 41,219 |  | 27,180 |  | 95,550 |  | 91,385 |  | 79,398 |  | 59,693 |  | 216,167 |  | 178,258 |
| Total retained loans ${ }^{(a)}$ | \$ | 161,871 | \$ | 126,732 | \$ | 170,055 | \$ | 167,660 | \$ | 336,219 | \$ | 309,278 | \$ | 668,145 | \$ | 603,670 |
| \% of investment-grade to total retained loans |  | 74.54 \% |  | 78.55 \% |  | 43.81 \% |  | 45.49 \% |  | 76.39 \% |  | 80.70 \% |  | 67.65 \% |  | 70.47 \% |
| \% of total criticized to total retained loans |  | 2.99 |  | 3.08 |  | 6.71 |  | 5.96 |  | 0.61 |  | 0.58 |  | 2.74 |  | 2.60 |
| \% of criticized nonaccrual to total retained loans |  | 0.32 |  | 0.19 |  | 0.85 |  | 0.61 |  | 0.19 |  | 0.23 |  | 0.39 |  | 0.33 |

(a) As of June 30, 2023 included $\$ 33.9$ billion of Secured by real estate loans, $\$ 3.9$ billion of Commercial and industrial loans, and $\$ 18.2$ billion of Other loans associated with the First Republic acquisition.
(b) Includes loans to financial institutions, states and political subdivisions, SPEs, nonprofits, personal investment companies and trusts, as well as loans to individuals and individual entities (predominantly Global Private Bank clients within AWM and J.P. Morgan Wealth Management within CCB). Refer to Note 14 of JPMorgan Chase's 2022 Form 10-K for more information on SPEs.

| (in millions) | Secured by real estate <br> June 30, 2023 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Term loans by origination year |  |  |  |  |  |  |  |  |  |  |  | Revolving loans |  |  |  | Total |  |
|  | 2023 |  | 2022 |  | 2021 |  | 2020 |  | 2019 |  | Prior to 2019 |  | Within the revolving period |  | Converted to term loans |  |  |  |
| Loans by risk ratings |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Investment-grade | \$ | 6,381 | \$ | 29,986 | \$ | 26,336 | \$ | 17,251 | \$ | 16,256 | \$ | 23,159 | \$ | 1,283 | \$ | - | \$ | 120,652 |
| Noninvestment-grade |  | 2,606 |  | 11,527 |  | 8,058 |  | 4,225 |  | 4,270 |  | 9,251 |  | 1,280 |  | 2 |  | 41,219 |
| Total retained loans ${ }^{(a)}$ | \$ | 8,987 | \$ | 41,513 | \$ | 34,394 | \$ | 21,476 | \$ | 20,526 | \$ | 32,410 | \$ | 2,563 | \$ | 2 | \$ | 161,871 |
| Gross charge-offs | \$ | - | \$ | 25 | \$ | 21 | \$ | - | \$ | - | \$ | 47 | \$ | - | \$ | - | \$ | 93 |
|  | Secured by real estate December 31, 2022 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Term loans by origination year |  |  |  |  |  |  |  |  |  |  |  | Revolving loans |  |  |  | Total |  |
| (in millions) | 2022 |  | 2021 |  | 2020 |  | 2019 |  | 2018 |  | Prior to 2018 |  | Within the revolving period |  | Converted to term loans |  |  |  |
| Loans by risk ratings |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Investment-grade | \$ | 24,134 | \$ | 22,407 | \$ | 14,773 | \$ | 14,666 | \$ | 5,277 | \$ | 17,289 | \$ | 1,006 | \$ | - | \$ | 99,552 |
| Noninvestment-grade |  | 6,072 |  | 5,602 |  | 3,032 |  | 3,498 |  | 2,395 |  | 5,659 |  | 920 |  | 2 |  | 27,180 |
| Total retained loans | \$ | 30,206 | \$ | 28,009 | \$ | 17,805 | \$ | 18,164 | \$ | 7,672 | \$ | 22,948 | \$ | 1,926 | \$ | 2 | \$ | 126,732 |

(a) As of June 30,2023 included $\$ 3.0$ billion, $\$ 11.0$ billion, $\$ 6.3$ billion, $\$ 4.4$ billion, $\$ 3.0$ billion, and $\$ 5.4$ billion of retained loans originated in 2023 , 2022, 2021, 2020, 2019 and prior to 2019, respectively, and $\$ 799$ million of revolving loans within the revolving period associated with the First Republic acquisition.

| (in millions) | Commercial and industrial <br> June 30, 2023 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Term loans by origination year |  |  |  |  |  |  |  |  |  |  |  | Revolving loans |  |  |  | Total |  |
|  | 2023 |  | 2022 |  | 2021 |  | 2020 |  | 2019 |  | Prior to 2019 |  | Within the revolving period |  | Converted to term loans |  |  |  |
| Loans by risk ratings |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Investment-grade | \$ | 10,777 | \$ | 12,726 | \$ | 6,324 | \$ | 2,510 | \$ | 1,314 | \$ | 1,268 | \$ | 39,585 | \$ | 1 | \$ | 74,505 |
| Noninvestment-grade |  | 10,510 |  | 19,667 |  | 11,130 |  | 2,827 |  | 1,828 |  | 1,445 |  | 48,051 |  | 92 |  | 95,550 |
| Total retained loans ${ }^{(a)}$ | \$ | 21,287 | \$ | 32,393 | \$ | 17,454 | \$ | 5,337 | \$ | 3,142 | \$ | 2,713 | \$ | 87,636 | \$ | 93 | \$ | 170,055 |
| Gross charge-offs | \$ | - | \$ | 6 | \$ | 20 | \$ | 1 | \$ | 2 | \$ | 6 | \$ | 149 | \$ | 4 | \$ | 188 |
|  | Commercial and industrial December 31, 2022 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Term loans by origination year |  |  |  |  |  |  |  |  |  |  |  | Revolving loans |  |  |  | Total |  |
| (in millions) | 2022 |  |  | 2021 | 2020 |  | 2019 |  | 2018 |  | Prior to 2018 |  | Within the revolving period |  | Converted to term loans |  |  |  |
| Loans by risk ratings |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Investment-grade | \$ | 21,072 | \$ | 8,338 | \$ | 3,045 | \$ | 1,995 | \$ | 748 | \$ | 989 | \$ | 40,087 | \$ | 1 | \$ | 76,275 |
| Noninvestment-grade |  | 24,088 |  | 12,444 |  | 3,459 |  | 2,506 |  | 525 |  | 1,014 |  | 47,267 |  | 82 |  | 91,385 |
| Total retained loans | \$ | 45,160 | \$ | 20,782 | \$ | 6,504 | \$ | 4,501 | \$ | 1,273 | \$ | 2,003 | \$ | 87,354 | \$ | 83 | \$ | 167,660 |

(a) As of June 30, 2023 included $\$ 231$ million, $\$ 764$ million, $\$ 444$ million, $\$ 346$ million, $\$ 92$ million, and $\$ 270$ million of retained loans originated in 2023, 2022, 2021, 2020, 2019 and prior to 2019, respectively, and $\$ 1.7$ billion of revolving loans within the revolving period associated with the First Republic acquisition.

(a) Includes loans to financial institutions, states and political subdivisions, SPEs, nonprofits, personal investment companies and trusts, as well as loans to individuals and individual entities (predominantly Global Private Bank clients within AWM and J.P. Morgan Wealth Management within CCB). Refer to Note 14 of JPMorgan Chase's 2022 Form 10-K for more information on SPEs.
(b) As of June 30,2023 included $\$ 128$ million, $\$ 615$ million, $\$ 708$ million, $\$ 877$ million, $\$ 168$ million, and $\$ 1.3$ billion of retained loans originated in 2023, 2022, 2021, 2020, 2019 and prior to 2019, respectively, $\$ 14.3$ billion of revolving loans within the revolving period, and $\$ 55$ million converted to term loans associated with the First Republic acquisition.

The following table presents additional information on retained loans secured by real estate, which consists of loans secured wholly or substantially by a lien or liens on real property at origination.

| (in millions, except ratios) | Multifamily |  |  |  | Other commercial |  |  |  | Total retained loans secured by real estate |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{array}{r} \text { Jun 30, } \\ 2023 \end{array}$ |  | $\begin{array}{r} \text { Dec 31, } \\ 2022 \end{array}$ |  | $\begin{array}{r} \text { Jun 30, } \\ 2023 \end{array}$ |  | $\begin{array}{r} \text { Dec 31, } \\ 2022 \end{array}$ |  | $\begin{array}{r} \text { Jun 30, } \\ 2023 \end{array}$ |  | $\begin{array}{r} \text { Dec 31, } \\ 2022 \end{array}$ |  |  |
| Retained loans secured by real estate | \$ | 100,732 | \$ | 79,139 | \$ | 61,139 | \$ | 47,593 | \$ | 161,871 | (a) | \$ | 126,732 |
| Criticized |  | 2,141 |  | 1,916 |  | 2,691 |  | 1,992 |  | 4,832 |  |  | 3,908 |
| \% of criticized to total retained loans secured by real estate |  | 2.13 \% |  | 2.42 \% |  | 4.40 \% |  | 4.19 \% |  | 2.99 \% |  |  | 3.08 \% |
| Criticized nonaccrual | \$ | 56 | \$ | 51 | \$ | 462 | \$ | 195 | \$ | 518 |  | \$ | 246 |
| \% of criticized nonaccrual loans to total retained loans secured by real estate |  | 0.06 \% |  | 0.06 \% |  | 0.76 \% |  | 0.41 \% |  | 0.32 \% |  |  | 0.19 \% |

(a) Included $\$ 21.0$ billion and $\$ 13.0$ billion of Multifamily and Other commercial Ioans associated with the First Republic acquisition.

Geographic distribution and delinquency
The following table provides information on the geographic distribution and delinquency for retained wholesale loans.

| (in millions) | Secured by real estate |  |  |  | Commercial and industrial |  |  |  | Other |  |  |  | Total retained loans |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { Jun 30, } \\ 2023 \end{gathered}$ |  | $\begin{gathered} \text { Dec 31, } \\ 2022 \end{gathered}$ |  | $\begin{gathered} \text { Jun } 30, \\ 2023 \end{gathered}$ |  | $\begin{gathered} \text { Dec 31, } \\ 2022 \end{gathered}$ |  | $\begin{gathered} \text { Jun } 30, \\ 2023 \end{gathered}$ |  | $\begin{gathered} \text { Dec 31, } \\ 2022 \\ \hline \end{gathered}$ |  | $\begin{gathered} \text { Jun } 30, \\ 2023 \end{gathered}$ |  | $\begin{gathered} \text { Dec 31, } \\ 2022 \end{gathered}$ |  |
| Loans by geographic distribution ${ }^{(a)(b)}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total U.S. | \$ | 158,936 | \$ | 123,740 | \$ | 129,316 | \$ | 125,324 | \$ | 257,319 | \$ | 230,525 | \$ | 545,571 | \$ | 479,589 |
| Total non-U.S. |  | 2,935 |  | 2,992 |  | 40,739 |  | 42,336 |  | 78,900 |  | 78,753 |  | 122,574 |  | 124,081 |
| Total retained loans | \$ | 161,871 | \$ | 126,732 | \$ | 170,055 | \$ | 167,660 | \$ | 336,219 | \$ | 309,278 | \$ | 668,145 | \$ | 603,670 |
| Loan delinquency |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Current and less than 30 days past due and still accruing | \$ | 161,138 | \$ | 126,083 | \$ | 167,082 | \$ | 165,415 | \$ | 334,237 | \$ | 307,511 | \$ | 662,457 | \$ | 599,009 |
| 30-89 days past due and still accruing |  | 215 |  | 402 |  | 1,317 |  | 1,127 |  | 1,232 |  | 1,015 |  | 2,764 |  | 2,544 |
| 90 or more days past due and still accruing ${ }^{(c)}$ |  | - |  | 1 |  | 219 |  | 100 |  | 112 |  | 53 |  | 331 |  | 154 |
| Criticized nonaccrual |  | 518 |  | 246 |  | 1,437 |  | 1,018 |  | 638 |  | 699 |  | 2,593 |  | 1,963 |
| Total retained loans | \$ | 161,871 | \$ | 126,732 | \$ | 170,055 | \$ | 167,660 | \$ | 336,219 | \$ | 309,278 | \$ | 668,145 | \$ | 603,670 |

(a) The U.S. and non-U.S. distribution is determined based predominantly on the domicile of the borrower.
(b) Borrowers associated with the First Republic acquisition are predominantly domiciled in the U.S.
(c) Represents loans that are considered well-collateralized and therefore still accruing interest.

## Nonaccrual Ioans

The following table provides information on retained wholesale nonaccrual loans.

| (in millions) | Secured by real estate |  |  |  | Commercial and industrial |  |  |  | Other |  |  |  | Total retained loans |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { Jun } 30, \\ 2023 \\ \hline \end{gathered}$ |  | $\begin{gathered} \text { Dec 31, } \\ 2022 \\ \hline \end{gathered}$ |  | $\begin{aligned} & \text { Jun 30, } \\ & 2023 \end{aligned}$ |  | $\begin{gathered} \text { Dec 31, } \\ 2022 \\ \hline \end{gathered}$ |  | $\begin{aligned} & \text { Jun 30, } \\ & 2023 \end{aligned}$ |  | $\begin{gathered} \text { Dec 31, } \\ 2022 \\ \hline \end{gathered}$ |  | $\begin{gathered} \text { Jun } 30, \\ 2023 \end{gathered}$ |  | $\begin{gathered} \text { Dec 31, } \\ 2022 \\ \hline \end{gathered}$ |  |
| Nonaccrual loans |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| With an allowance | \$ | 281 | \$ | 172 | \$ | 1,035 | \$ | 686 | \$ | 340 | \$ | 487 | \$ | 1,656 | \$ | 1,345 |
| Without an allowance ${ }^{(\mathrm{a})}$ |  | 237 |  | 74 |  | 402 |  | 332 |  | 298 |  | 212 |  | 937 |  | 618 |
| Total nonaccrual loans ${ }^{(b)}$ | \$ | 518 | \$ | 246 | \$ | 1,437 | \$ | 1,018 | \$ | 638 | \$ | 699 | \$ | 2,593 | \$ | 1,963 |

(a) When the discounted cash flows or collateral value equals or exceeds the amortized cost of the loan, the loan does not require an allowance. This typically occurs when the loans have been partially charged off and/or there have been interest payments received and applied to the loan balance.
(b) Interest income on nonaccrual loans recognized on a cash basis was not material for the three and six months ended June 30, 2023 and 2022.

## Loan modifications

The Firm grants certain modifications of wholesale loans to borrowers experiencing financial difficulty, which effective January 1, 2023, are reported as FDMs. The following tables provide information about Commercial and industrial and Other Ioan modifications considered FDMs.

| (in millions) | Commercial and industrial |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Three months ended June 30, 2023 |  |  |  | Six months ended June 30, 2023 |  |  |  |
|  |  | rtized basis | \% of loan modifications to total retained Commercial and industrial loans | Financial effect of loan modification |  | tized <br> basis | \% of loan modifications to total retained Commercial and industrial loans | Financial effect of loan modification |
| Loan modification |  |  |  |  |  |  |  |  |
| Single modifications |  |  |  |  |  |  |  |  |
| Term extension | \$ | 306 | 0.18 \% | Extended loans by a weightedaverage of 8 months | \$ | 423 | 0.25 \% | Extended loans by a weightedaverage of 10 months |
| Other-than-insignificant payment delay |  | 5 | - \% | Provided payment deferrals with delayed amounts primarily reamortized over the remaining tenor |  | 5 | - \% | Provided payment deferrals with delayed amounts primarily reamortized over the remaining tenor |
| Multiple modifications |  |  |  |  |  |  |  |  |
| Interest Rate Reduction and Term Extension | \$ | 1 | - \% | Reduced weighted-average contractual interest by - 191 bps and extended loans by a weighted-average of 17 months | \$ | 1 | - \% | Reduced weighted-average contractual interest by -191 bps and extended loans by a weighted-average of 17 months |
| Term extension and principal forgiveness |  | - | - \% |  |  | 40 | 0.02 \% | Extended loans by a weightedaverage of 64 months and reduced amortized cost basis of the loans by $\$ 23 \mathrm{~mm}$ |
| Total | \$ | 312 |  |  | \$ | 469 |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  | Three months end | d June 30, 2023 |  |  | Six months end | June 30, 2023 |
| (in millions) |  | $\begin{aligned} & \text { rtized } \\ & \text { basis } \end{aligned}$ | \% of loan modifications to total retained Other loans | Financial effect of loan modification |  | $\begin{aligned} & \text { rtized } \\ & \text { basis } \end{aligned}$ | \% of loan modifications to total retained Other loans | Financial effect of loan modification |
| Loan modification |  |  |  |  |  |  |  |  |
| Single modifications |  |  |  |  |  |  |  |  |
| Interest rate reduction | \$ | 11 | - \% | Reduced weighted-average contractual interest by 654 bps | \$ | 11 | - \% | Reduced weighted-average contractual interest by 654 bps |
| Term extension |  | 38 | 0.01 \% | Extended loans by a weightedaverage of 3 months |  | 54 | 0.02 \% | Extended loans by a weightedaverage of 6 months |
| Multiple modifications |  |  |  |  |  |  |  |  |
| Payment Delay and Term Extension | \$ | 235 | 0.07 \% | Provided payment deferrals with delayed amounts primarily recaptured at the end of the deferral period and extended loans by a weighted-average of 144 months | \$ | 235 | 0.07 \% | Provided payment deferrals with delayed amounts primarily recaptured at the end of the deferral period and extended loans by a weighted-average of 144 months |
| Total | \$ | 284 |  |  | \$ | 300 |  |  |

The following tables provide information on the payment status of Commercial and industrial and Other FDMs during the three and six months ended June 30, 2023.

| (in millions) | Amortized cost basis |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Commercial and industrial |  |  |  | Other |  |  |  |
|  | Three months ended June 30, 2023 |  | Six months ended June 30, 2023 |  | Three months ended June 30, 2023 |  | Six months ended June 30, 2023 |  |
| Current and less than 30 days past due and still accruing | \$ | 242 | \$ | 331 | \$ | - | \$ | - |
| 30-89 days past due and still accruing |  | - |  | - |  | - |  | - |
| 90 or more days past due and still accruing |  | 3 |  | 3 |  | - |  | - |
| Criticized nonaccrual |  | 67 |  | 135 |  | 284 |  | 300 |
| Total | \$ | 312 | \$ | 469 | \$ | 284 | \$ | 300 |

The following table provides information on Commercial and industrial FDMs that re-defaulted during the three and six months ended June 30, 2023. There were no Other FDM redefaults during the three and six months ended June 30, 2023.

| Amortized cost basis |  |  |
| :--- | :--- | :---: |
| (in millions) | Three months ended <br> June 30, 2023 | Six months ended <br> June 30, 2023 |
| Loan modification |  |  |
| Term extension | $\mathbf{3}$ | $\mathbf{7}$ |
| Total $^{\text {(a) }}$ | $\mathbf{3}$ | $\mathbf{7}$ |

(a) Represents FDMs that were 30 days or more past due

Additional commitments to lend to borrowers experiencing financial difficulty whose Commercial and industrial loans have been modified as FDMs were $\$ 438$ million and $\$ 1.3$ billion for the three and six months ended June 30, 2023.

There were no additional commitments to lend to borrowers experiencing financial difficulties whose Other loans have been modified as FDMs for the three and six months ended June 30, 2023.
For the three and six months ended June 30, 2023, Secured by real estate FDMs were $\$ 77$ million and $\$ 85$ million respectively. The financial effects of FDMs were largely term extensions which extended the loans by a weighted-average of nine months. There were no re-defaults during the three months ended June 30, 2023 and $\$ 1$ million in modified term extensions that re-defaulted during the six months ended June 30, 2023. There were no additional commitments to lend to borrowers experiencing financial difficulty whose loans have been modified as FDMs for the three and six months ended June 30, 2023.
Prior to January 1, 2023, certain Ioan modifications were considered TDRs.
For the three and six months ended June 30, 2022, new TDRs were $\$ 60$ million and $\$ 479$ million, respectively. New TDRs for the three and six months ended June 30, 2022 reflected extended maturity dates and covenant waivers primarily in the Commercial and Industrial loan class. For the three and six months ended June 30, 2022, the impact of these modifications were not material to the Firm.

As a result of the elimination of the requirement to assess whether a modification is reasonably expected or involves a concession, the population of loans considered FDMs is greater than those previously considered TDRs.

## Note 13 - Allowance for credit losses

The Firm's allowance for credit losses represents management's estimate of expected credit losses over the remaining expected life of the Firm's financial assets measured at amortized cost and certain off-balance sheet lending-related commitments.
On January 1, 2023 the Firm adopted the Financial Instruments - Credit Losses: Troubled Debt Restructurings accounting guidance as described in Note 1.
The adoption of this guidance eliminated the requirement to measure the allowance for TDRs using a DCF methodology and allowed the option of a non-DCF portfoliobased approach for modified loans to borrowers experiencing financial difficulty. If a DCF methodology is still applied for these modified loans, the discount rate must be the post-modification effective interest rate, instead of the pre-modification effective interest rate.
The Firm elected to change from an asset-specific allowance approach to its non-DCF, portfolio-based allowance approach for modified loans to troubled borrowers for all portfolios except collateral-dependent loans and nonaccrual risk-rated loans, for which the asset-specific allowance approach will continue to apply.
This guidance was adopted under the modified retrospective method which resulted in a net decrease to the allowance for credit losses of $\$ 587$ million and an increase to retained earnings of $\$ 446$ million, after-tax predominantly driven by residential real estate and credit card.

Refer to Note 13 of JPMorgan Chase's 2022 Form 10-K for a detailed discussion of the allowance for credit losses and the related accounting policies.

## Allowance for credit losses and related information

The table below summarizes information about the allowances for credit losses and includes a breakdown of loans and lending-related commitments by impairment methodology. Refer to Note 10 of JPMorgan Chase's 2022 Form 10-K and Note 10 of this Form $10-\mathrm{Q}$ for further information on the allowance for credit losses on investment securities.

| Six months ended June 30, (in millions) | 2023 |  |  |  |  |  |  |  | 2022 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Consumer, excluding credit card |  | Credit card |  | Wholesale |  | Total |  | Consumer, excluding credit card |  | Credit card |  | Wholesale |  | Total |  |
| Allowance for loan losses |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Beginning balance at January 1, | \$ | 2,040 | \$ | 11,200 | \$ | 6,486 | \$ | 19,726 | \$ | 1,765 | \$ | 10,250 | \$ | 4,371 | \$ | 16,386 |
| Cumulative effect of a change in accounting principle ${ }^{(a)}$ |  | (489) |  | (100) |  | 2 |  | (587) |  | NA |  | NA |  | NA |  | NA |
| Gross charge-offs |  | 501 |  | 2,432 |  | 294 |  | 3,227 |  | 384 |  | 1,505 |  | 123 |  | 2,012 |
| Gross recoveries collected |  | (247) |  | (386) |  | (46) |  | (679) |  | (311) |  | (419) |  | (43) |  | (773) |
| Net charge-offs/(recoveries) |  | 254 |  | 2,046 |  | 248 |  | 2,548 |  | 73 |  | 1,086 |  | 80 |  | 1,239 |
| Provision for loan losses |  | 751 |  | 2,546 |  | 2,067 |  | 5,364 |  | 237 |  | 1,236 |  | 1,125 |  | 2,598 |
| Other |  | - |  | - |  | 25 |  | 25 |  | - |  | - |  | 5 |  | 5 |
| Ending balance at June 30, | \$ | 2,048 | \$ | 11,600 | \$ | 8,332 | \$ | 21,980 | \$ | 1,929 | \$ | 10,400 | \$ | 5,421 | \$ | 17,750 |
| Allowance for lending-related commitments |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Beginning balance at January 1, | \$ | 76 | \$ | - | \$ | 2,306 | \$ | 2,382 | \$ | 113 | \$ | - | \$ | 2,148 | \$ | 2,261 |
| Provision for lending-related commitments |  | 52 |  | - |  | (253) |  | (201) |  | (2) |  | - |  | (37) |  | (39) |
| Other |  | 1 |  | - |  | 4 |  | 5 |  | (1) |  | - |  | 1 |  | - |
| Ending balance at June 30, | \$ | 129 | \$ | - | \$ | 2,057 | \$ | 2,186 | \$ | 110 | \$ | - | \$ | 2,112 | \$ | 2,222 |
| Total allowance for investment securities |  |  |  |  |  |  |  | 104 |  | NA |  | NA |  | NA |  | 47 |
| Total allowance for credit losses ${ }^{(b)(c)}$ | \$ | 2,177 | \$ | 11,600 | \$ | 10,389 | \$ | 24,270 | \$ | 2,039 | \$ | 10,400 | \$ | 7,533 | \$ | 20,019 |
| Allowance for loan losses by impairment methodology |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Asset-specific ${ }^{(d)}$ | \$ | (971) | \$ | - | \$ | 478 | \$ | (493) | \$ | (676) | \$ | 227 | \$ | 332 | \$ | (117) |
| Portfolio-based |  | 3,019 |  | 11,600 |  | 7,854 |  | 22,473 |  | 2,605 |  | 10,173 |  | 5,089 |  | 17,867 |
| Total allowance for loan losses | \$ | 2,048 | \$ | 11,600 | \$ | 8,332 | \$ | 21,980 | \$ | 1,929 | \$ | 10,400 | \$ | 5,421 | \$ | 17,750 |
| Loans by impairment methodology |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Asset-specific ${ }^{\text {(d) }}$ | \$ | 3,439 | \$ | - | \$ | 2,587 | \$ | 6,026 | \$ | 12,683 | \$ | 827 | \$ | 2,408 | \$ | 15,918 |
| Portfolio-based |  | 392,756 |  | 191,348 |  | 665,558 |  | 1,249,662 |  | 289,948 |  | 164,667 |  | 581,857 |  | ,036,472 |
| Total retained loans | \$ | 396,195 | \$ | 191,348 | \$ | 668,145 |  | 1,255,688 | \$ | 302,631 | \$ | 165,494 | \$ | 584,265 |  | ,052,390 |
| Collateral-dependent loans |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Net charge-offs | \$ | 5 | \$ | - | \$ | 77 | \$ | 82 | \$ | (15) | \$ | - | \$ | 8 | \$ | (7) |
| Loans measured at fair value of collateral less cost to sell |  | 3,388 |  | - |  | 762 |  | 4,150 |  | 3,935 |  | - |  | 607 |  | 4,542 |
| Allowance for lending-related commitments by impairment methodology |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Asset-specific | \$ | - | \$ | - | \$ | 65 | \$ | 65 | \$ | - | \$ | - | \$ | 78 | \$ | 78 |
| Portfolio-based |  | 129 |  | - |  | 1,992 |  | 2,121 |  | 110 |  | - |  | 2,034 |  | 2,144 |
| Total allowance for lending-related commitments ${ }^{(\mathrm{e})}$ | \$ | 129 | \$ | - | \$ | 2,057 | \$ | 2,186 | \$ | 110 | \$ | - | \$ | 2,112 | \$ | 2,222 |
| Lending-related commitments by impairment methodology |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Asset-specific | \$ | - | \$ | - | \$ | 332 | \$ | 332 | \$ | - | \$ | - | \$ | 397 | \$ | 397 |
| Portfolio-based ${ }^{(f)}$ |  | 32,428 |  | - |  | 521,408 |  | 553,836 |  | 26,809 |  | - |  | 458,038 |  | 484,847 |
| Total lending-related commitments | \$ | 32,428 | \$ | - | \$ | 521,740 | \$ | 554,168 | \$ | 26,809 | \$ | - | \$ | 458,435 | \$ | 485,244 |

(a) Represents the impact to the allowance for loan losses upon the adoption of the Financial Instruments - Credit Losses: Troubled Debt Restructurings accounting guidance.
(b) At June 30, 2023, in addition to the allowance for credit losses in the table above, the Firm also had an allowance for credit losses of $\$ 18$ million associated with certain accounts receivable in CIB.
(c) As of June 30, 2023 included $\$ 1.2$ billion allowance for credit losses associated with the First Republic acquisition.
(d) Includes collateral-dependent loans, including those for which foreclosure is deemed probable, and nonaccrual risk-rated loans for all periods presented. Prior periods also include non collateral-dependent TDRs or reasonably expected TDRs and modified PCD loans.
(e) The allowance for lending-related commitments is reported in accounts payable and other liabilities on the Consolidated balance sheets.
(f) At June 30, 2023 and 2022, lending-related commitments excluded $\$ 18.4$ billion and $\$ 13.7$ billion, respectively, for the consumer, excluding credit card portfolio segment; $\$ 881.5$ billion and $\$ 774.0$ billion, respectively, for the credit card portfolio segment; and $\$ 19.3$ billion and $\$ 29.1$ billion, respectively, for the wholesale portfolio segment, which were not subject to the allowance for lending-related commitments. Prior period amount for wholesale lendingrelated commitments, including the amount not subject to allowance, has been revised to conform with the current presentation.

Discussion of changes in the allowance
The allowance for credit losses as of June 30, 2023 was $\$ 24.3$ billion, reflecting a net addition of $\$ 2.7$ billion from December 31, 2022.

The net addition to the allowance for credit losses included \$1.5 billion, consisting of:

- $\$ 819$ million in wholesale, predominantly driven by net downgrade activity, updates to certain assumptions related to office real estate in CB in the second quarter of 2023, and the impact of the additional weight placed on the adverse scenarios in the first quarter of 2023, and
- $\$ 649$ million in consumer, predominantly driven by Card Services, reflecting loan growth, the net effect of changes in the Firm's macroeconomic outlook, including the impact from the weighted average U.S. unemployment rate peaking in the third quarter of 2024, and the additional weight placed on the adverse scenarios in the first quarter of 2023, partially offset by reduced borrower uncertainty.
The net addition also included $\$ 1.2$ billion to establish the allowance for the First Republic loans and lending-related commitments in the second quarter of 2023.

The Firm has maintained the additional weight placed on the relative adverse scenario in the first quarter of 2023, reflecting an increased probability of a moderate recession due to tightening financial conditions.

The allowance for credit losses also reflected a reduction of $\$ 587$ million as a result of the adoption of changes to the TDR accounting guidance on January 1, 2023. Refer to Note 1 for further information.

The Firm's allowance for credit losses is estimated using a weighted average of five internally developed macroeconomic scenarios. The adverse scenarios incorporate more punitive macroeconomic factors than the central case assumptions provided in the table below, resulting in a weighted average U.S. unemployment rate peaking at $5.8 \%$ in the third quarter of 2024 , and a $1.5 \%$ lower U.S. real GDP exiting the fourth quarter of 2024.

The Firm's central case assumptions reflected U.S. unemployment rates and U.S. real GDP as follows:

|  | Assumptions at June 30, 2023 |  |  |
| :---: | :---: | :---: | :---: |
|  | 4Q23 | 2Q24 | 4Q24 |
| U.S. unemployment rate ${ }^{(\mathrm{a})}$ | 4.2 \% | 4.9 \% | 5.0 \% |
| YoY growth in U.S. real GDP ${ }^{(b)}$ | 0.5 \% | - \% | 1.0 \% |
|  | Assumptions at December 31, 2022 |  |  |
|  | 2Q23 | 4Q23 | 2Q24 |
| U.S. unemployment rate ${ }^{(\mathrm{a})}$ | 3.8 \% | 4.3 \% | 5.0 \% |
| YoY growth in U.S. real GDP ${ }^{(\text {b })}$ | 1.5 \% | 0.4 \% | - \% |

(a) Reflects quarterly average of forecasted U.S. unemployment rate.
(b) The year over year growth in U.S. real GDP in the forecast horizon of the central scenario is calculated as the percentage change in U.S. real GDP levels from the prior year.

Subsequent changes to this forecast and related estimates will be reflected in the provision for credit losses in future periods.
Refer to Note 13 and Note 10 of JPMorgan Chase's 2022 Form 10-K for a description of the policies, methodologies and judgments used to determine the Firm's allowance for credit losses on loans, lending-related commitments, and investment securities.

Refer to Consumer Credit Portfolio on pages 65-69, Wholesale Credit Portfolio on pages 70-79 and Note 12 for additional information on the consumer and wholesale credit portfolios.

Refer to Critical Accounting Estimates Used by the Firm on pages 91-93 for further information on the allowance for credit losses and related management judgments.

## Note 14 - Variable interest entities

Refer to Note 1 and Note 14 of JPMorgan Chase's 2022 Form 10-K for a further description of the Firm's accounting policies and involvement with VIEs.

The following table summarizes the most significant types of Firm-sponsored VIEs by business segment. The Firm considers a "Firm-sponsored" VIE to include any entity where: (1) JPMorgan Chase is the primary beneficiary of the structure; (2) the VIE is used by JPMorgan Chase to securitize Firm assets; (3) the VIE issues financial instruments with the JPMorgan Chase name; or (4) the entity is a JPMorgan Chase-administered asset-backed commercial paper conduit.

| Line of Business | Transaction Type | Activity | Form 10-Q page references |
| :--- | :--- | :--- | :--- |
| CCB | Credit card securitization trusts | Securitization of originated credit card receivables <br> Servicing and securitization of both originated and <br> purchased residential mortgages | 165 |
|  | Mortgage securitization trusts | Securitization of both originated and purchased <br> residential and commercial mortgages, and other <br> consumer loans | $165-167$ |

The Firm also invests in and provides financing and other services to VIEs sponsored by third parties. Refer to pages 168-169 of this Note for more information on consolidated VIE assets and liabilities as well as the VIEs sponsored by third parties.

## Significant Firm-sponsored VIEs

Credit card securitizations
As a result of the Firm's continuing involvement, the Firm is considered to be the primary beneficiary of its Firmsponsored credit card securitization trust, the Chase Issuance Trust.

Firm-sponsored mortgage and other securitization trusts The Firm securitizes (or has securitized) originated and purchased residential mortgages, commercial mortgages and other consumer loans primarily in its CCB and CIB businesses. Depending on the particular transaction, as well as the respective business involved, the Firm may act as the servicer of the Ioans and/or retain certain beneficial interests in the securitization trusts.

The following tables present the total unpaid principal amount of assets held in Firm-sponsored private-label securitization entities, including those in which the Firm has continuing involvement, and those that are consolidated by the Firm. Continuing involvement includes servicing the loans, holding senior interests or subordinated interests (including amounts required to be held pursuant to credit
risk retention rules), recourse or guarantee arrangements, and derivative contracts. In certain instances, the Firm's only continuing involvement is servicing the loans. The Firm's maximum loss exposure from retained and purchased interests is the carrying value of these interests.

|  | Principal amount outstanding |  |  | JPMorgan Chase interest in securitized assets in nonconsolidated VIEs ${ }^{(\mathrm{c})(\mathrm{d})(\mathrm{e})}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| June 30, 2023 (in millions) | Total assets held by securitization VIEs | Assets held in consolidated securitization VIEs | Assets held in nonconsolidated securitization VIEs with continuing involvement | Trading assets | Investment securities | Other financial assets | Total interests held by JPMorgan Chase |

Securitization-related ${ }^{(\mathrm{a})}$


Securitization-related ${ }^{(a)}$
Residential mortgage:

| Prime/Alt-A and option ARMs | \$ | 55,362 | \$ | 754 | \$ | 37,058 | \$ | 744 | \$ | 1,918 | \$ | - | \$ | 2,662 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Subprime |  | 9,709 |  | - |  | 1,743 |  | 10 |  | - |  | - |  | 10 |
| Commercial and other ${ }^{(b)}$ |  | 164,915 |  | - |  | 127,037 |  | 888 |  | 5,373 |  | 670 |  | 6,931 |
| Total | \$ | 229,986 | \$ | 754 | \$ | 165,838 | \$ | 1,642 | \$ | 7,291 | \$ | 670 | \$ | 9,603 |

(a) Excludes U.S. GSEs and government agency securitizations and re-securitizations, which are not Firm-sponsored.
(b) Consists of securities backed by commercial real estate loans and non-mortgage-related consumer receivables.
(c) Excludes the following: retained servicing; securities retained from loan sales and securitization activity related to U.S. GSEs and government agencies; interest rate and foreign exchange derivatives primarily used to manage interest rate and foreign exchange risks of securitization entities; senior securities of $\$ 104$ million and $\$ 134$ million at June 30, 2023 and December 31, 2022, respectively, and subordinated securities which were $\$ 92$ million and $\$ 34$ million at June 30, 2023 and December 31, 2022, respectively, which the Firm purchased in connection with CIB's secondary market-making activities.
(d) Includes interests held in re-securitization transactions.
(e) As of both June 30, 2023 and December 31, 2022, 84\% of the Firm's retained securitization interests, which are predominantly carried at fair value and include amounts required to be held pursuant to credit risk retention rules, were risk-rated " A " or better, on an S\&P-equivalent basis. The retained interests in prime residential mortgages consisted of $\$ 2.7$ billion and $\$ 2.6$ billion of investment-grade retained interests at June 30,2023 and December 31, 2022, respectively, and noninvestment-grade retained interests were not material at both June 30, 2023 and December 31, 2022. The retained interests in commercial and other securitization trusts consisted of $\$ 5.9$ billion and $\$ 5.8$ billion of investment-grade retained interests at June 30, 2023 and December 31, 2022 respectively, and $\$ 1.1$ billion of noninvestment-grade retained interests at both June 30, 2023 and December 31, 2022, respectively.

## Residential mortgage

The Firm securitizes residential mortgage loans originated by CCB, as well as residential mortgage loans purchased from third parties by either CCB or CIB.

Commercial mortgages and other consumer securitizations CIB originates and securitizes commercial mortgage loans, and engages in underwriting and trading activities involving the securities issued by securitization trusts.

## Re-securitizations

The following table presents the principal amount of securities transferred to re-securitization VIEs.

|  | Three months ended <br> June 30, |  |  | Six months ended <br> June 30, |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| (in millions) | 2023 | 2022 |  | 2023 | 2022 |

Transfers of securities to VIEs
U.S. GSEs and
$\begin{array}{lllllll}\text { government agencies } & \$ 6,261 & \text { \$ } & 7,373 & \mathbf{8} & \mathbf{9 , 6 6 7} & \$ 13,449\end{array}$
The Firm did not transfer any private label securities to resecuritization VIEs during the three and six months ended June 30, 2023 and 2022, respectively and retained interests in any such Firm-sponsored VIEs as of June 30, 2023 and December 31, 2022 were not material.

The following table presents information on the Firm's interests in nonconsolidated re-securitization VIEs.

|  |  | Nonconsolidated <br> re-securitization VIEs |  |  |
| :--- | ---: | ---: | ---: | ---: |
|  | June 30, <br> (in millions) |  |  | December 31, <br> 2023 |
| U.S. GSEs and government agencies <br> Interest in VIEs | $\$$ |  |  |  |

As of June 30, 2023, and December 31, 2022, the Firm did not consolidate any U.S. GSE and government agency resecuritization VIEs or any Firm-sponsored private-label resecuritization VIEs.

## Multi-seller conduits

In the normal course of business, JPMorgan Chase makes markets in and invests in commercial paper issued by the Firm-administered multi-seller conduits. The Firm held $\$ 12.4$ billion and $\$ 13.8$ billion of the commercial paper issued by the Firm-administered multi-seller conduits at June 30, 2023, and December 31, 2022, respectively, which have been eliminated in consolidation. The Firm's investments reflect the Firm's funding needs and capacity and were not driven by market illiquidity. Other than the amounts required to be held pursuant to credit risk retention rules, the Firm is not obligated under any agreement to purchase the commercial paper issued by the Firm-administered multi-seller conduits.
Deal-specific liquidity facilities, program-wide liquidity and credit enhancement provided by the Firm have been eliminated in consolidation. The Firm or the Firmadministered multi-seller conduits provide lending-related commitments to certain clients of the Firm-administered multi-seller conduits. The unfunded commitments were $\$ 11.3$ billion and $\$ 10.6$ billion at June 30, 2023, and December 31, 2022, respectively, and are reported as offbalance sheet lending-related commitments in other unfunded commitments to extend credit. Refer to Note 24 for more information on off-balance sheet lending-related commitments.

## Municipal bond vehicles

Municipal bond vehicles or tender option bond ("TOB") trusts allow institutions to finance their municipal bond investments at short-term rates. TOB transactions are known as customer TOB trusts and non-customer TOB trusts. Customer TOB trusts are sponsored by a third party. The Firm serves as sponsor for all non-customer TOB transactions.

Consolidated VIE assets and liabilities
The following table presents information on assets and liabilities related to VIEs consolidated by the Firm as of June 30, 2023 and December 31, 2022.

(a) Includes residential mortgage securitizations.
(b) Primarily includes purchased supply chain finance receivables and purchased auto loan securitizations in CIB.
(c) Includes assets classified as cash and other assets on the Consolidated balance sheets.
(d) The assets of the consolidated VIEs included in the program types above are used to settle the liabilities of those entities. The assets and liabilities include third-party assets and liabilities of consolidated VIEs and exclude intercompany balances that eliminate in consolidation.
(e) The interest-bearing beneficial interest liabilities issued by consolidated VIEs are classified in the line item on the Consolidated balance sheets titled, "Beneficial interests issued by consolidated VIEs". The holders of these beneficial interests generally do not have recourse to the general credit of JPMorgan Chase. Included in beneficial interests in VIE assets are long-term beneficial interests of $\$ 1.1$ billion and $\$ 2.1$ billion at June 30, 2023, and December 31, 2022, respectively.
(f) Includes liabilities classified as accounts payable and other liabilities on the Consolidated balance sheets.

## VIEs sponsored by third parties

The Firm enters into transactions with VIEs structured by other parties. These include, for example, acting as a derivative counterparty, liquidity provider, investor, underwriter, placement agent, remarketing agent, trustee or custodian. These transactions are conducted at arm'slength, and individual credit decisions are based on the analysis of the specific VIE, taking into consideration the quality of the underlying assets. Where the Firm does not have the power to direct the activities of the VIE that most significantly impact the VIE's economic performance, or a variable interest that could potentially be significant, the Firm generally does not consolidate the VIE, but it records and reports these positions on its Consolidated balance sheets in the same manner it would record and report positions in respect of any other third-party transaction.

## Tax credit vehicles

The Firm holds investments in unconsolidated tax credit vehicles, which are limited partnerships and similar entities that own and operate affordable housing, energy, and other projects. These entities are primarily considered VIEs. A third party is typically the general partner or managing
member and has control over the significant activities of the tax credit vehicles, and accordingly the Firm does not consolidate tax credit vehicles. The Firm generally invests in these partnerships as a limited partner and earns a return primarily through the receipt of tax credits allocated to the projects. The maximum loss exposure, represented by equity investments and funding commitments, was \$32.4 billion and $\$ 30.2$ billion at June 30, 2023, and December 31, 2022, of which $\$ 12.6$ billion and $\$ 10.6$ billion was unfunded at June 30, 2023, and December 31, 2022, respectively. The Firm assesses each project and to reduce the risk of loss, may withhold varying amounts of its capital investment until the project qualifies for tax credits. Refer to Note 25 of JPMorgan Chase’s 2022 Form 10-K for further information on affordable housing tax credits and Note 24 of this Form 10-Q for more information on offbalance sheet lending-related commitments.

## Customer municipal bond vehicles (TOB trusts)

The Firm may provide various services to customer TOB trusts, including remarketing agent, liquidity or tender option provider. In certain customer TOB transactions, the Firm, as liquidity provider, has entered into a reimbursement agreement with the Residual holder.

In those transactions, upon the termination of the vehicle, the Firm has recourse to the third-party Residual holders for any shortfall. The Firm does not have any intent to protect Residual holders from potential losses on any of the underlying municipal bonds. The Firm does not consolidate customer TOB trusts, since the Firm does not have the
power to make decisions that significantly impact the economic performance of the municipal bond vehicle. The Firm's maximum exposure as a liquidity provider to customer TOB trusts at June 30, 2023 and December 31, 2022 was $\$ 5.9$ billion and $\$ 5.8$ billion, respectively. The fair value of assets held by such VIEs at both June 30, 2023 and December 31, 2022 was $\$ 8.2$ billion.

## Loan securitizations

The Firm has securitized and sold a variety of loans, including residential mortgages, credit card receivables, commercial mortgages and other consumer loans.

## Securitization activity

The following table provides information related to the Firm's securitization activities for the three and six months ended June 30, 2023 and 2022, related to assets held in Firm-sponsored securitization entities that were not consolidated by the Firm, and where sale accounting was achieved at the time of the securitization.

| (in millions) | Three months ended June 30, |  |  |  |  |  |  |  | Six months ended June 30, |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  |  |  | 2022 |  |  |  | 2023 |  |  |  | 2022 |  |  |  |
|  | Residential mortgage ${ }^{(\mathrm{d})}$ |  | Commercial and other ${ }^{(\mathrm{e})}$ |  | Residential mortgage |  | Commercial and other ${ }^{(\mathrm{e})}$ |  | Residential mortgage |  | Commercial and other ${ }^{\text {(e) }}$ |  | Residential mortgage ${ }^{\text {d }}$ |  | Commercial and other ${ }^{(\mathrm{e})}$ |  |
| Principal securitized | \$ | 2,216 | \$ | 376 | \$ | 3,028 | \$ | 3,950 | \$ | 3,289 | \$ | 376 | \$ | 9,523 | \$ | 7,058 |
| All cash flows during the period: ${ }^{\text {(a) }}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Proceeds received from Ioan sales as financial instruments ${ }^{(b)(c)}$ | \$ | 2,123 | \$ | 380 | \$ | 2,754 | \$ | 3,869 | \$ | 3,153 | \$ | 380 | \$ | 9,129 | \$ | 6,975 |
| Servicing fees collected |  | 6 |  | 1 |  | 20 |  | - |  | 12 |  | 1 |  | 44 |  | - |
| Cash flows received on interests |  | 86 |  | 91 |  | 127 |  | 54 |  | 160 |  | 178 |  | 282 |  | 125 |

(a) Excludes re-securitization transactions.
(b) Predominantly includes Level 2 assets.
(c) The carrying value of the loans accounted for at fair value approximated the proceeds received upon loan sale.
(d) Represents prime mortgages. Excludes loan securitization activity related to U.S. GSEs and government agencies.
(e) Includes commercial mortgage and other consumer loans.

Loans and excess MSRs sold to U.S. government-sponsored enterprises and loans in securitization transactions pursuant to Ginnie Mae guidelines
In addition to the amounts reported in the securitization activity tables above, the Firm, in the normal course of business, sells originated and purchased mortgage loans and certain originated excess MSRs on a nonrecourse basis, predominantly to U.S. GSEs. These loans and excess MSRs are sold primarily for the purpose of securitization by the U.S. GSEs, who provide certain guarantee provisions (e.g., credit enhancement of the Ioans). The Firm also sells loans into securitization transactions pursuant to Ginnie Mae guidelines; these loans are typically insured or guaranteed by another U.S. government agency. The Firm does not consolidate the securitization vehicles underlying these transactions as it is not the primary beneficiary. For a limited number of loan sales, the Firm is obligated to share a portion of the credit risk associated with the sold loans with the purchaser. Refer to Note 24 of this Form 10-Q for additional information about the Firm's loan sales- and securitization-related indemnifications and Note 15 for additional information about the impact of the Firm's sale of certain excess MSRs.

The following table summarizes the activities related to loans sold to the U.S. GSEs, and loans in securitization transactions pursuant to Ginnie Mae guidelines.

| (in millions) | Three months ended June 30, |  |  |  | Six months ended June 30, |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  | 2022 |  | 2023 |  | 2022 |  |
| Carrying value of loans sold | \$ | 6,323 | \$ | 10,721 | \$ | 9,021 | \$ | 34,389 |
| Proceeds received from loan sales as cash |  | 33 |  | 4 |  | 40 |  | 13 |
| Proceeds from loan sales as securities ${ }^{(a)(b)}$ |  | 6,220 |  | 10,551 |  | 8,882 |  | 33,809 |
| Total proceeds received from loan sales ${ }^{\text {(c) }}$ | \$ | 6,253 | \$ | 10,555 | \$ | 8,922 | \$ | 33,822 |
| Gains/(losses) on loan sales ${ }^{\text {(d)(e) }}$ | \$ | - | \$ | - | \$ | - | \$ | - |

(a) Includes securities from U.S. GSEs and Ginnie Mae that are generally sold shortly after receipt or retained as part of the Firm's investment securities portfolio.
(b) Included in level 2 assets.
(c) Excludes the value of MSRs retained upon the sale of loans.
(d) Gains/(losses) on loan sales include the value of MSRs.
(e) The carrying value of the loans accounted for at fair value approximated the proceeds received upon loan sale.

## Options to repurchase delinquent loans

In addition to the Firm's obligation to repurchase certain loans due to material breaches of representations and warranties as discussed in Note 24, the Firm also has the option to repurchase delinquent loans that it services for Ginnie Mae loan pools, as well as for other U.S. government
agencies under certain arrangements. The Firm typically elects to repurchase delinquent loans from Ginnie Mae loan pools as it continues to service them and/or manage the foreclosure process in accordance with the applicable requirements, and such loans continue to be insured or guaranteed. When the Firm's repurchase option becomes exercisable, such loans must be reported on the Consolidated balance sheets as a loan with a corresponding liability. Refer to Note 12 for additional information.
The following table presents loans the Firm repurchased or had an option to repurchase, real estate owned, and foreclosed government-guaranteed residential mortgage Ioans recognized on the Firm's Consolidated balance sheets as of June 30, 2023 and December 31, 2022. Substantially all of these loans and real estate are insured or guaranteed by U.S. government agencies.

|  | June 30, <br> (in millions) | December 31, <br> 2023 |  |
| :--- | ---: | ---: | ---: |
| Loans repurchased or option to <br> repurchase ${ }^{(\mathrm{a})}$ | $\$$ | $\mathbf{7 5 2}$ | $\$$ |
| Real estate owned | $\mathbf{9}$ | 839 |  |
| Foreclosed government-guaranteed <br> residential mortgage loans |  |  |  |

(a) Predominantly all of these amounts relate to loans that have been repurchased from Ginnie Mae loan pools.
(b) Relates to voluntary repurchases of loans, which are included in accrued interest and accounts receivable.

## Loan delinquencies and liquidation losses

The table below includes information about components of and delinquencies related to nonconsolidated securitized financial assets held in Firm-sponsored private-label securitization entities, in which the Firm has continuing involvement as of June 30, 2023, and December 31, 2022.

| (in millions) | Securitized assets |  |  |  | 90 days past due |  |  |  | Net liquidation losses/(recoveries) |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Three months ended June 30, | Six months ended June 30, |  |  |  |
|  | June 30, 2023 |  | December 31,2022 |  |  |  |  |  | $\begin{array}{r} \text { June 30, } \\ 2023 \\ \hline \end{array}$ |  | $\begin{array}{r} \text { December 31, } \\ 2022 \end{array}$ |  | 2023 |  | 2022 |  | 2023 |  | 2022 |  |
| Securitized loans |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Residential mortgage: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Prime / Alt-A \& option ARMs | \$ | 38,439 | \$ | 37,058 | \$ | 482 | \$ | 511 | \$ | 3 | \$ | (21) | \$ | 10 | \$ | (27) |
| Subprime |  | 1,353 |  | 1,743 |  | 141 |  | 212 |  | 2 |  | (3) |  | 4 |  | (3) |
| Commercial and other |  | 127,826 |  | 127,037 |  | 1,231 |  | 948 |  | - |  | 5 |  | 19 |  | 11 |
| Total loans securitized | \$ | 167,618 | \$ | 165,838 | \$ | 1,854 | \$ | 1,671 | \$ | 5 | \$ | (19) | \$ | 33 | \$ | (19) |

## Note 15 - Goodwill and Mortgage servicing rights

Refer to Note 15 of JPMorgan Chase's 2022 Form 10-K for a discussion of the accounting policies related to goodwill and mortgage servicing rights.

## Goodwill

The following table presents goodwill attributed to the reportable business segments and Corporate.

|  |  | June 30, <br> (in millions) | December 31, <br> De23 | $\mathbf{2 0 2 2}$ |
| :--- | ---: | ---: | ---: | ---: |
| Consumer \& Community Banking | $\$$ | $\mathbf{3 2 , 1 1 6}$ | $\$$ | 32,121 |
| Corporate \& Investment Bank |  | $\mathbf{8 , 2 5 3}$ | 8,008 |  |
| Commercial Banking | $\mathbf{2 , 9 8 5}$ | 2,985 |  |  |
| Asset \& Wealth Management | $\mathbf{8 , 3 4 4}$ | 7,902 |  |  |
| Corporate | $\mathbf{6 8 2}$ | 646 |  |  |
| Total goodwill | $\mathbf{5 2 , 3 8 0}$ | $\$$ | 51,662 |  |

The following table presents changes in the carrying amount of goodwill.

| (in millions) | Three months ended June 30, |  | Six months ended June 30, |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2023 | 2022 | 2023 | 2022 |
| Balance at beginning of period | \$ 52,144 | \$ 50,298 | \$ 51,662 | \$ 50,315 |
| Changes during the period from: |  |  |  |  |
| Business combinations ${ }^{(a)}$ | 236 | 470 | 687 | 470 |
| Other ${ }^{(b)}$ | - | (71) | 31 | (88) |
| Balance at June 30, | \$ 52,380 | \$ 50,697 | \$ 52,380 | \$ 50,697 |

(a) For the three and six months ended June 30, 2023, represents estimated goodwill associated with the acquisition of Aumni Inc. in CIB in the second quarter, and the acquisition of the remaining $51 \%$ interest in CIFM in AWM in the first quarter. For the three and six months ended June 30, 2022, represents estimated goodwill associated with the acquisitions of Frosch Travel Group, LLC in CCB and Volkswagen Payments S.A. in CIB.
(b) Predominantly foreign currency adjustments.

## Goodwill impairment testing

Goodwill is tested for impairment during the fourth quarter of each fiscal year, or more often if events or circumstances, such as adverse changes in the business climate, indicate that there may be an impairment. Refer to Note 15 of JPMorgan Chase's 2022 Form 10-K for a further discussion of the Firm's goodwill impairment testing.

Unanticipated declines in business performance, increases in credit losses, increases in capital requirements, as well as deterioration in economic or market conditions, adverse regulatory or legislative changes or increases in the estimated market cost of equity, could cause the estimated fair values of the Firm's reporting units to decline in the future, which could result in a material impairment charge to earnings in a future period related to some portion of the associated goodwill.

As of June 30, 2023, the Firm reviewed current economic conditions, estimated market cost of equity, as well as actual business results and projections of business performance. Based on such reviews, the Firm has concluded that goodwill was not impaired as of June 30, 2023, or December 31, 2022, nor was goodwill written off due to impairment during the six months ended June 30, 2023 or 2022.

## Mortgage servicing rights

MSRs represent the fair value of expected future cash flows for performing servicing activities for others. The fair value considers estimated future servicing fees and ancillary revenue, offset by estimated costs to service the loans, and generally declines over time as net servicing cash flows are received, effectively amortizing the MSR asset against contractual servicing and ancillary fee income. MSRs are either purchased from third parties or recognized upon sale or securitization of mortgage loans if servicing is retained. Refer to Notes 2 and 15 of JPMorgan Chase's 2022 Form 10-K for a further description of the MSR asset, interest rate risk management, and the valuation of MSRs.
The following table summarizes MSR activity for the three and six months ended June 30, 2023 and 2022.

| (in millions, except where otherwise noted) | As of or for the three months ended June 30, |  |  |  | As of or for the six months ended June 30, |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  |  | 2022 | 2023 |  | 2022 |  |
| Fair value at beginning of period | \$ | 7,755 | \$ | 7,294 | \$ | 7,973 | \$ | 5,494 |
| MSR activity: |  |  |  |  |  |  |  |  |
| Originations of MSRs |  | 78 |  | 181 |  | 110 |  | 596 |
| Purchase of MSRs ${ }^{(a)}$ |  | 468 |  | 160 |  | 467 |  | 875 |
| Disposition of MSRs ${ }^{(b)}$ |  | (92) |  | (614) |  | (90) |  | (671) |
| Net additions/(dispositions) |  | 454 |  | (273) |  | 487 |  | 800 |
| Changes due to collection/realization of expected cash flows |  | (255) |  | (236) |  | (495) |  | (468) |
| Changes in valuation due to inputs and assumptions: |  |  |  |  |  |  |  |  |
| Changes due to market interest rates and other ${ }^{(c)}$ |  | 283 |  | 653 |  | 261 |  | 1,547 |
| Changes in valuation due to other inputs and assumptions: |  |  |  |  |  |  |  |  |
| Projected cash flows (e.g., cost to service) |  | 2 |  | - |  | 2 |  | - |
| Discount rates |  | - |  | - |  | - |  | - |
| Prepayment model changes and other ${ }^{(d)}$ |  | (10) |  | 1 |  | 1 |  | 66 |
| Total changes in valuation due to other inputs and assumptions |  | (8) |  | 1 |  | 3 |  | 66 |
| Total changes in valuation due to inputs and assumptions |  | 275 |  | 654 |  | 264 |  | 1,613 |
| Fair value at June 30, | \$ | 8,229 | \$ | 7,439 | \$ | 8,229 | \$ | 7,439 |
| Changes in unrealized gains/(losses) included in income related to MSRs held at June 30, | \$ | 275 | \$ | 654 | \$ | 264 | \$ | 1,613 |
| Contractual service fees, late fees and other ancillary fees included in income |  | 388 |  | 395 |  | 776 |  | 765 |
| Third-party mortgage loans serviced at June 30, (in billions) |  | 605 |  | 576 |  | 605 |  | 576 |
| Servicer advances, net of an allowance for uncollectible amounts, at June $30{ }^{\text {(e) }}$ |  | 595 |  | 1,166 |  | 595 |  | 1,166 |

(a) Includes purchase price adjustments associated with MSRs purchased in the prior quarter, primarily as a result of loans that prepaid within 90 days of settlement, allowing the Firm to recover the purchase price.
(b) Includes excess MSRs transferred to agency-sponsored trusts in exchange for stripped mortgage-backed securities ("SMBS"). In each transaction, a portion of the SMBS was acquired by third parties at the transaction date; the Firm acquired the remaining balance of those SMBS as trading securities.
(c) Represents both the impact of changes in estimated future prepayments due to changes in market interest rates, and the difference between actual and expected prepayments.
(d) Represents changes in prepayments other than those attributable to changes in market interest rates.
(e) Represents amounts the Firm pays as the servicer (e.g., scheduled principal and interest, taxes and insurance), which will generally be reimbursed within a short period of time after the advance from future cash flows from the trust or the underlying loans. The Firm's credit risk associated with these servicer advances is minimal because reimbursement of the advances is typically senior to all cash payments to investors. In addition, the Firm maintains the right to stop payment to investors if the collateral is insufficient to cover the advance. However, certain of these servicer advances may not be recoverable if they were not made in accordance with applicable rules and agreements.

The following table presents the components of mortgage fees and related income (including the impact of MSR risk management activities) for the three and six months ended June 30, 2023 and 2022.

| (in millions) | Three months ended June 30, |  |  |  | Six months ended June 30, |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  | 2022 |  | 2023 |  | 2022 |  |
| CCB mortgage fees and related income |  |  |  |  |  |  |  |  |
| Production revenue | \$ | 102 | \$ | 150 | \$ | 177 | \$ | 361 |
| Net mortgage servicing revenue: |  |  |  |  |  |  |  |  |
| Operating revenue: |  |  |  |  |  |  |  |  |
| Loan servicing revenue |  | 402 |  | 435 |  | 802 |  | 803 |
| Changes in MSR asset fair value due to collection/realization of expected cash flows |  | (255) |  | (236) |  | (495) |  | (468) |
| Total operating revenue |  | 147 |  | 199 |  | 307 |  | 335 |
| Risk management: |  |  |  |  |  |  |  |  |
| Changes in MSR asset fair value due to market interest rates and other ${ }^{(\mathrm{a})}$ |  | 283 |  | 653 |  | 261 |  | 1,547 |
| Other changes in MSR asset fair value due to other inputs and assumptions in model ${ }^{(b)}$ |  | (8) |  | 1 |  | 3 |  | 66 |
| Changes in derivative fair value and other |  | (250) |  | (626) |  | (251) |  | $(1,476)$ |
| Total risk management |  | 25 |  | 28 |  | 13 |  | 137 |
| Total net mortgage servicing revenue |  | 172 |  | 227 |  | 320 |  | 472 |
| Total CCB mortgage fees and related income |  | 274 |  | 377 |  | 497 |  | 833 |
| All other |  | 4 |  | 1 |  | 2 |  | 5 |
| Mortgage fees and related income | \$ | 278 | \$ | 378 | \$ | 499 | \$ | 838 |

(a) Represents both the impact of changes in estimated future prepayments due to changes in market interest rates, and the difference between actual and expected prepayments.
(b) Represents the aggregate impact of changes in model inputs and assumptions such as projected cash flows (e.g., cost to service), discount rates and changes in prepayments other than those attributable to changes in market interest rates (e.g., changes in prepayments due to changes in home prices).

Changes in fair value based on variations in assumptions generally cannot be easily extrapolated, because the relationship of the change in the assumptions to the change in fair value are often highly interrelated and may not be linear. In the following table, the effect that a change in a particular assumption may have on the fair value is calculated without changing any other assumption. In reality, changes in one factor may result in changes in another, which would either magnify or counteract the impact of the initial change.

The table below outlines the key economic assumptions used to determine the fair value of the Firm's MSRs at June 30, 2023, and December 31, 2022, and outlines hypothetical sensitivities of those fair values to immediate adverse changes in those assumptions, as defined below.

| (in millions, except rates) | $\begin{array}{r} \text { Jun 30, } \\ 2023 \end{array}$ | $\begin{array}{r} \text { Dec } 31, \\ 2022 \end{array}$ |
| :---: | :---: | :---: |
| Weighted-average prepayment speed assumption (constant prepayment rate) | 6.27 \% | 6.12 \% |
| Impact on fair value of 10\% adverse change | \$ (186) | \$ (183) |
| Impact on fair value of 20\% adverse change | (361) | (356) |
| Weighted-average option adjusted spread ${ }^{(\mathrm{a})}$ | 5.77 \% | 5.77 \% |
| Impact on fair value of a 100 basis point adverse change | \$(348) | \$ (341) |
| Impact on fair value of a 200 basis point adverse change | (668) | (655) |

(a) Includes the impact of operational risk and regulatory capital.

## Note 16 - Deposits

Refer to Note 17 of JPMorgan Chase's 2022 Form 10-K for further information on deposits.

As of June 30, 2023 and December 31, 2022, noninterestbearing and interest-bearing deposits were as follows.

| (in millions) |  | June 30, 2023 | December 31, 2022 |  |
| :---: | :---: | :---: | :---: | :---: |
| U.S. offices |  |  |  |  |
| Noninterest-bearing (included $\$ 47,870$ and $\$ 26,363$ at fair value) ${ }^{\text {(a) }}$ | \$ | 656,778 | \$ | 644,902 |
| Interest-bearing (included \$572 and $\$ 586$ at fair value) ${ }^{(a)}$ |  | 1,311,893 |  | 1,276,346 |
| Total deposits in U.S. offices |  | 1,968,671 |  | 1,921,248 |
| Non-U.S. offices |  |  |  |  |
| Noninterest-bearing (included $\$ 1,331$ and $\$ 1,398$ at fair value) ${ }^{(\mathrm{a})}$ |  | 24,268 |  | 27,005 |
| Interest-bearing (included \$1,795 and $\$ 273$ at fair value) ${ }^{(\mathrm{a})}$ |  | 406,023 |  | 391,926 |
| Total deposits in non-U.S. offices |  | 430,291 |  | 418,931 |
| Total deposits | \$ | 2,398,962 | \$ | 2,340,179 |

(a) Includes structured notes classified as deposits for which the fair value option has been elected. Refer to Note 3 for further discussion.

As of June 30, 2023 and December 31, 2022, time deposits in denominations that met or exceeded the insured limit were as follows.

|  |  | June 30, <br> 2023 | December 31, <br> (in millions) | $\$$ |
| :--- | ---: | ---: | ---: | ---: |
| U8,725 | $\$$ | 64,622 |  |  |
| Non-U.S. offices ${ }^{(\mathrm{a})}$ |  | $\mathbf{8 5 , 9 3 7}$ |  | $\mathbf{7 7 , 9 0 7}$ |
| Total | $\$$ | $\mathbf{1 8 4 , 6 6 2}$ | $\$$ | 142,529 |

(a) Represents all time deposits in non-U.S. offices as these deposits typically exceed the insured limit.

As of June 30, 2023, the remaining maturities of interestbearing time deposits in each of the 12-month periods ending June 30 were as follows.

| June 30, <br> (in millions) | U.S. |  |  |  | Non-U.S. | Total |
| :--- | ---: | ---: | ---: | :---: | :---: | :---: |
| 2024 | 145,737 | 83,015 | 228,752 |  |  |  |
| 2025 | 1,213 | 194 | 1,407 |  |  |  |
| 2026 | 309 | 71 | 380 |  |  |  |
| 2027 | 160 | 25 | 185 |  |  |  |
| 2028 | 95 | 1,087 | 1,182 |  |  |  |
| After 5 years | 533 | 214 | 747 |  |  |  |
| Total | $\$ 148,047$ | $\$ 84,606$ | $\$ 232,653$ |  |  |  |

## Note 17 - Leases

Refer to Note 18 of JPMorgan Chase's 2022 Form 10-K for a further discussion on leases.
Firm as lessee
At June 30, 2023, JPMorgan Chase and its subsidiaries were obligated under a number of noncancellable leases, predominantly operating leases for premises and equipment used primarily for business purposes.
Operating lease liabilities and right-of-use ("ROU") assets are recognized at the lease commencement date based on the present value of the future minimum lease payments over the lease term.

The carrying values of the Firm's operating leases were as follows:

|  |  | June 30, <br> 2023 | December 31,   <br> (in millions)  2022 |  |
| :--- | ---: | ---: | ---: | ---: |
| Right-of-use assets | $\$$ | $\mathbf{8 , 3 9 9}$ | (a) | $\$$ |
| Lease liabilities |  | $\mathbf{8 , 7 5 6}$ | (a) |  |

(a) Includes $\$ 756$ million of right-of-use assets and corresponding lease liabilities, associated with the First Republic acquisition.

The Firm's net rental expense was $\$ 448$ million and $\$ 484$ million for the three months ended June 30, 2023 and 2022 and $\$ 935$ million and $\$ 976$ million for the six months ended June 30, 2023 and 2022, respectively.

Firm as lessor
The Firm's lease financings are predominantly auto operating leases, and are included in other assets on the Firm's Consolidated balance sheets.

The following table presents the Firm's operating lease income, included within other income, and the related depreciation expense, included within technology, communications and equipment expense, on the Consolidated statements of income:

|  | Three months ended <br> June 30, |  | Six months ended <br> June 30, |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| (in millions) | $\mathbf{2 0 2 3}$ | 2022 | $\mathbf{2 0 2 3}$ | 2022 |  |  |  |
| Operating lease income | $\mathbf{\$}$ | $\mathbf{7 1 6}$ | $\$$ | $\mathbf{9 4 5}$ | $\mathbf{\$}$ | $\mathbf{1 , 4 7 1}$ | $\$$ |
| Depreciation expense |  | $\mathbf{4 5 7}$ |  | 668 |  | $\mathbf{8 7 6}$ | 1,993 |

## Note 18 - Long-term debt

JPMorgan Chase issues long-term debt denominated in various currencies, predominantly U.S. dollars, with both fixed and variable interest rates. Included in senior and subordinated debt below are various equity-linked or other indexed instruments, which the Firm has elected to measure at fair value; changes in fair value are recorded in principal transactions revenue in the Consolidated statements of income, except for unrealized gains/(losses) due to DVA which are recorded in OCI. The following table is a summary of long-term debt carrying values (including unamortized premiums and discounts, issuance costs, valuation adjustments and fair value adjustments, where applicable) by remaining contractual maturity as of June 30, 2023.

| By remaining maturity (in millions, except rates) |  | June 30, 2023 |  |  |  |  |  |  |  |  | $\begin{gathered} \hline \text { December 31, } \\ 2022 \end{gathered}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Under 1 year |  | 1-5 years |  | After 5 years |  | Total |  | Total |  |  |
| Parent company |  |  |  |  |  |  |  |  |  |  |  |  |
| Senior debt: | Fixed rate | \$ | 6,709 | \$ | 84,418 | \$ | 96,845 | \$ | 187,972 |  | \$ | 194,515 |
|  | Variable rate |  | 367 |  | 7,226 |  | 2,200 |  | 9,793 |  |  | 11,565 |
|  | Interest rates ${ }^{(f)}$ |  | 2.29 \% |  | 2.82 \% |  | 3.53 \% |  | 3.15 \% |  |  | 3.06 \% |
| Subordinated debt: | Fixed rate | \$ | - | \$ | 8,815 | \$ | 8,877 | \$ | 17,692 |  | \$ | 19,693 |
|  | Variable rate |  | - |  | - |  | - |  | - |  |  | - |
|  | Interest rates ${ }^{(f)}$ |  | - \% |  | 4.54 \% |  | 4.69 \% |  | 4.62 \% |  |  | 4.50 \% |
|  | Subtotal | \$ | 7,076 | \$ | 100,459 | \$ | 107,922 | \$ | 215,457 |  | \$ | 225,773 |
| Subsidiaries |  |  |  |  |  |  |  |  |  |  |  |  |
| Federal Home Loan Banks advances: | Fixed rate | \$ | 7,443 | \$ | 17,609 | \$ | 42 | \$ | 25,094 | (g) | \$ | 93 |
|  | Variable rate |  | 7,000 |  | 4,000 |  | - |  | 11,000 |  |  | 11,000 |
|  | Interest rates ${ }^{(f)}$ |  | 4.64 \% |  | 4.29 \% |  | 6.07 \% |  | 4.43 \% |  |  | 4.32 \% |
| Purchase Money Note ${ }^{(a)}$ : | Fixed rate | \$ | - | \$ | 48,883 | \$ | - | \$ | 48,883 |  |  | NA |
|  | Interest rates ${ }^{(f)}$ |  | - \% |  | 3.40 \% |  | - \% |  | 3.40 \% |  |  | NA |
| Senior debt: | Fixed rate | \$ | 3,000 | \$ | 7,333 | \$ | 6,395 | \$ | 16,728 |  | \$ | 15,383 |
|  | Variable rate |  | 17,426 |  | 21,968 |  | 5,451 |  | 44,845 |  |  | 41,506 |
|  | Interest rates ${ }^{(f)}$ |  | 3.95 \% |  | 4.98\% |  | 1.52 \% |  | 1.88 \% |  |  | 2.02 \% |
| Subordinated debt: | Fixed rate | \$ | - | \$ | 258 | \$ | - | \$ | 258 |  | \$ | 262 |
|  | Variable rate |  | - |  | - |  | - |  | - |  |  | - |
|  | Interest rates ${ }^{(f)}$ |  | - \% |  | 8.25 \% |  | - \% |  | 8.25 \% |  |  | 8.25 \% |
|  | Subtotal | \$ | 34,869 | \$ | 100,051 | \$ | 11,888 | \$ | 146,808 |  | \$ | 68,244 |
| Junior subordinated debt: | Fixed rate | \$ | - | \$ | - | \$ | 540 | \$ | 540 |  | \$ | 550 |
|  | Variable rate |  | - |  | 357 |  | 916 |  | 1,273 |  |  | 1,298 |
|  | Interest rates ${ }^{(f)}$ |  | - \% |  | 5.86 \% |  | 7.17 \% |  | 6.91 \% |  |  | 6.33 \% |
|  | Subtotal | \$ | - | \$ | 357 | \$ | 1,456 | \$ | 1,813 |  | \$ | 1,848 |
| Total long-term debt ${ }^{(\mathrm{b})(\mathrm{c})(\mathrm{d})}$ |  | \$ | 41,945 | \$ | 200,867 | \$ | 121,266 | \$ | 364,078 | (h)(i) | \$ | 295,865 |
| Long-term beneficial interests: | Fixed rate | \$ | - | \$ | 999 | \$ | - | \$ | 999 |  | \$ | 1,999 |
|  | Variable rate |  | - |  | - |  | 132 |  | 132 |  |  | 143 |
|  | Interest rates ${ }^{(f)}$ |  | - \% |  | 3.97 \% |  | 3.59 \% |  | 3.93 \% |  |  | 2.81 \% |
| ```Total long-term beneficial``` interests ${ }^{(\mathrm{e})}$ |  | \$ | - | \$ | 999 | \$ | 132 | \$ | 1,131 |  | \$ | 2,142 |

(a) As of June 30, 2023, reflects the Purchase Money Note associated with the First Republic acquisition. Refer to Note 28 for additional information.
(b) Included long-term debt of $\$ 87.7$ billion and $\$ 13.8$ billion secured by assets totaling $\$ 221.2$ billion and $\$ 208.3$ billion at June 30, 2023 and December 31, 2022, respectively. The amount of long-term debt secured by assets does not include amounts related to hybrid instruments.
(c) Included $\$ 78.6$ billion and $\$ 72.3$ billion of long-term debt accounted for at fair value at June 30, 2023 and December 31, 2022, respectively.
(d) Included $\$ 11.2$ billion and $\$ 10.3$ billion of outstanding zero-coupon notes at June 30, 2023 and December 31, 2022, respectively. The aggregate principal amount of these notes at their respective maturities is $\$ 45.7$ billion and $\$ 45.3$ billion, respectively. The aggregate principal amount reflects the contractual principal payment at maturity, which may exceed the contractual principal payment at the Firm's next call date, if applicable.
(e) Included on the Consolidated balance sheets in beneficial interests issued by consolidated VIEs. Also included amounts accounted for at fair value which were not material at June 30, 2023 and December 31, 2022. Excluded short-term commercial paper and other short-term beneficial interests of $\$ 18.5$ billion and $\$ 10.5$ billion at June 30, 2023 and December 31, 2022, respectively.
(f) The interest rates shown are the weighted average of contractual rates in effect at June 30, 2023 and December 31, 2022, respectively, including non-U.S. dollar fixed- and variable-rate issuances, which excludes the effects of the associated derivative instruments used in hedge accounting relationships, if applicable. The interest rates shown exclude structured notes accounted for at fair value.
(g) As of June 30, 2023, included $\$ 25.0$ billion of FHLB advances associated with the First Republic acquisition. Refer to Note 28 for additional information.
(h) As of June 30, 2023, long-term debt in the aggregate of $\$ 191.7$ billion was redeemable at the option of JPMorgan Chase, in whole or in part, prior to maturity, based on the terms specified in the respective instruments.
(i) The aggregate carrying values of debt that matures in each of the 12-month periods ending June 30, 2024, 2025, 2026, 2027 and 2028 is $\$ 41.9$ billion, $\$ 58.5$ billion, $\$ 38.0$ billion, $\$ 29.2$ billion and $\$ 75.2$ billion, respectively.

The weighted-average contractual interest rates for total long-term debt excluding structured notes accounted for at fair value were $3.45 \%$ and $3.26 \%$ as of June 30, 2023 and December 31, 2022, respectively. In order to modify exposure to interest rate and currency exchange rate movements, JPMorgan Chase utilizes derivative instruments, primarily interest rate and cross-currency interest rate swaps, in conjunction with some of its debt issuances. The use of these instruments modifies the Firm's interest expense on the associated debt. The modified weighted-average interest rates for total long-term debt, including the effects of related derivative instruments, were $5.02 \%$ and $4.89 \%$ as of June 30, 2023 and December 31, 2022, respectively.

JPMorgan Chase \& Co. has guaranteed certain long-term debt of its subsidiaries, including structured notes. These guarantees rank pari passu with the Firm's other unsecured and unsubordinated indebtedness. The amount of such guaranteed long-term debt and structured notes was \$34.5 billion and $\$ 28.2$ billion at June 30, 2023 and December 31, 2022, respectively.

The Firm's unsecured debt does not contain requirements that would call for an acceleration of payments, maturities or changes in the structure of the existing debt, provide any limitations on future borrowings or require additional collateral, based on unfavorable changes in the Firm's credit ratings, financial ratios, earnings or stock price.

## Note 19 - Preferred stock

Refer to Note 21 of JPMorgan Chase's 2022 Form 10-K for a further discussion on preferred stock.
The following is a summary of JPMorgan Chase's non-cumulative preferred stock outstanding as of June 30, 2023 and December 31, 2022, and the quarterly dividend declarations for the three and six months ended June 30, 2023 and 2022.

|  | Shares ${ }^{(a)}$ |  | Carrying value (in millions) |  |  |  | Issue date | Contractual rate in effect at June 30, 2023 | Earliest redemption date ${ }^{(b)}$ | Floating annualized rate ${ }^{(c)}$ | Dividend declared per share |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { June 30, } \\ 2023 \end{gathered}$ | December$\text { 31, } 2022$ | $\begin{gathered} \text { June 30, } \\ 2023 \end{gathered}$ |  | December$\text { 31, } 2022$ |  |  |  |  |  | Three months ended June 30, |  |  | Six months ended June 30, |  |  |
|  |  |  |  |  |  | 2023 |  |  |  |  | 2022 | 2023 | 2022 |  |
| Fixed-rate: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Series DD | 169,625 | 169,625 | \$ | 1,696 |  |  | \$ | 1,696 | 9/21/2018 | 5.750 \% | 12/1/2023 | NA | \$ | 143.75 | \$ 143.75 | \$287.50 | \$287.50 |  |
| Series EE | 185,000 | 185,000 |  | 1,850 |  | 1,850 | 1/24/2019 | 6.000 | 3/1/2024 | NA |  | 150.00 | 150.00 | 300.00 | 300.00 |  |
| Series GG | 90,000 | 90,000 |  | 900 |  | 900 | 11/7/2019 | 4.750 | 12/1/2024 | NA |  | 118.75 | 118.75 | 237.50 | 237.50 |  |
| Series JJ | 150,000 | 150,000 |  | 1,500 |  | 1,500 | 3/17/2021 | 4.550 | 6/1/2026 | NA |  | 113.75 | 113.75 | 227.50 | 227.50 |  |
| Series LL | 185,000 | 185,000 |  | 1,850 |  | 1,850 | 5/20/2021 | 4.625 | 6/1/2026 | NA |  | 115.63 | 115.63 | 231.26 | 231.26 |  |
| Series MM | 200,000 | 200,000 |  | 2,000 |  | 2,000 | 7/29/2021 | 4.200 | 9/1/2026 | NA |  | 105.00 | 105.00 | 210.00 | 210.00 |  |
| Fixed-to-floating-rate: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Series I | - | - | \$ | - | \$ | - | 4/23/2008 | -\% | 4/30/2018 | SOFR + $3.47 \%$ | \$ | - | \$ 119.03 | \$- | \$211.16 |  |
| Series Q | 150,000 | 150,000 |  | 1,500 |  | 1,500 | 4/23/2013 | LIBOR + 3.25 | 5/1/2023 | SOFR + 3.25 |  | 218.48 | 128.75 | 347.23 | 257.50 | (d) |
| Series R | 150,000 | 150,000 |  | 1,500 |  | 1,500 | 7/29/2013 | 6.000 | 8/1/2023 | SOFR + 3.30 |  | 150.00 | 150.00 | 300.00 | 300.00 |  |
| Series S | 200,000 | 200,000 |  | 2,000 |  | 2,000 | 1/22/2014 | 6.750 | 2/1/2024 | SOFR + 3.78 |  | 168.75 | 168.75 | 337.50 | 337.50 |  |
| Series U | 100,000 | 100,000 |  | 1,000 |  | 1,000 | 3/10/2014 | 6.125 | 4/30/2024 | SOFR + 3.33 |  | 153.13 | 153.13 | 306.25 | 306.25 |  |
| Series V | - | - |  | - |  | - | 6/9/2014 | - | 7/1/2019 | SOFR + 3.32 |  | - | 108.36 | - | 194.76 |  |
| Series X | 160,000 | 160,000 |  | 1,600 |  | 1,600 | 9/23/2014 | 6.100 | 10/1/2024 | SOFR + 3.33 |  | 152.50 | 152.50 | 305.00 | 305.00 |  |
| Series Z | - | - |  | - |  | - | 4/21/2015 | - | 5/1/2020 | SOFR + 3.80 |  | - | - | - | - |  |
| Series CC | 125,750 | 125,750 |  | 1,258 |  | 1,258 | 10/20/2017 | LIBOR + 2.58 | 11/1/2022 | SOFR + 2.58 |  | 201.36 | 115.63 | 384.15 | 231.25 | (e) |
| Series FF | 225,000 | 225,000 |  | 2,250 |  | 2,250 | 7/31/2019 | 5.000 | 8/1/2024 | SOFR + 3.38 |  | 125.00 | 125.00 | 250.00 | 250.00 |  |
| Series HH | 300,000 | 300,000 |  | 3,000 |  | 3,000 | 1/23/2020 | 4.600 | 2/1/2025 | SOFR + 3.125 |  | 115.00 | 115.00 | 230.00 | 230.00 |  |
| Series II | 150,000 | 150,000 |  | 1,500 |  | 1,500 | 2/24/2020 | 4.000 | 4/1/2025 | SOFR + 2.745 |  | 100.00 | 100.00 | 200.00 | 200.00 |  |
| Series KK | 200,000 | 200,000 |  | 2,000 |  | 2,000 | 5/12/2021 | 3.650 | 6/1/2026 | CMT + 2.85 |  | 91.25 | 91.25 | 182.50 | 182.50 |  |
| Total preferred stock | 2,740,375 | 2,740,375 | \$ | 27,404 | \$ | 27,404 |  |  |  |  |  |  |  |  |  |  |

(a) Represented by depositary shares.
(b) Fixed-to-floating rate notes convert to a floating rate at the earliest redemption date.
(c) On March 1, 2023, the Firm announced that, after June 30, 2023, CME Term SOFR will be the replacement reference rate for certain outstanding securities issued by the Firm that used U.S. dollar LIBOR as the reference rate, including fixed-to-floating rate preferred stock. References in the table to "SOFR" mean a floating annualized rate equal to three-month term SOFR (plus a spread adjustment of $0.26 \%$ per annum) plus the spreads noted. The reference to "CMT" means a floating annualized rate equal to the five-year Constant Maturity Treasury ("CMT") rate plus the spread noted.
(d) The dividend rate for Series Q preferred stock became floating and payable quarterly starting on May 1, 2023; prior to which the dividend rate was fixed at $5.15 \%$ or $\$ 257.50$ per share payable semiannually. The dividend rate for each quarterly dividend period commencing August 1,2023 will be three-month term SOFR (plus a spread adjustment of $0.26 \%$ per annum) plus the spread of $3.25 \%$.
(e) The dividend rate for Series CC preferred stock became floating and payable quarterly starting on November 1, 2022; prior to which the dividend rate was fixed at $4.625 \%$ or $\$ 231.25$ per share payable semiannually. The dividend rate for each quarterly dividend period commencing August 1,2023 will be three-month term SOFR (plus a spread adjustment of $0.26 \%$ per annum) plus the spread of $2.58 \%$.
Each series of preferred stock has a liquidation value and redemption price per share of $\$ 10,000$, plus accrued but unpaid dividends. The aggregate liquidation value was $\$ 27.8$ billion at June 30, 2023.

## Redemptions

On October 31, 2022, the Firm redeemed all $\$ 2.9$ billion of its fixed to floating rate non-cumulative perpetual preferred stock, Series I.

On October 3, 2022, the Firm redeemed all $\$ 2.5$ billion of its fixed-to-floating rate non-cumulative preferred stock, Series V.
On February 1, 2022, the Firm redeemed all $\$ 2.0$ billion of its fixed-to-floating rate non-cumulative preferred stock, Series $Z$.

## Note 20 - Earnings per share

Refer to Note 23 of JPMorgan Chase's 2022 Form 10-K for a discussion of the computation of basic and diluted earnings per share ("EPS"). The following table presents the calculation of basic and diluted EPS for the three and six months ended June 30, 2023 and 2022.

| (in millions, except per share amounts) | Three months endedJune 30 , |  |  |  | Six months endedJune 30 , |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 2023 |  | 2022 |  | 2023 |  | 2022 |
| Basic earnings per share |  |  |  |  |  |  |  |  |
| Net income | \$ | 14,472 | \$ | 8,649 | \$ | 27,094 | \$ | 16,931 |
| Less: Preferred stock dividends |  | 373 |  | 410 |  | 729 |  | 807 |
| Net income applicable to common equity |  | 14,099 |  | 8,239 |  | 26,365 |  | 16,124 |
| Less: Dividends and undistributed earnings allocated to participating securities |  | 88 |  | 44 |  | 161 |  | 85 |
| Net income applicable to common stockholders | \$ | 14,011 | \$ | 8,195 | \$ | 26,204 |  | 16,039 |
| Total weightedaverage basic shares outstanding |  | 2,943.8 |  | 2,962.2 |  | 2,956.1 |  | 2,969.6 |
| Net income per share | \$ | 4.76 | \$ | 2.77 | \$ | 8.86 | \$ | 5.40 |
| Diluted earnings per share |  |  |  |  |  |  |  |  |
| Net income applicable to common stockholders | \$ | 14,011 | \$ | 8,195 | \$ | 26,204 | \$ | 16,039 |
| Total weightedaverage basic shares outstanding |  | 2,943.8 |  | 2,962.2 |  | 2,956.1 |  | 2,969.6 |
| Add: Dilutive impact of unvested PSUs, nondividendearning RSUs and SARs |  | 4.5 |  | 4.1 |  | 4.4 |  | 4.1 |
| Total weightedaverage diluted shares outstanding |  | 2,948.3 |  | 2,966.3 |  | 2,960.5 |  | 2,973.7 |
| Net income per share | \$ | 4.75 | \$ | 2.76 | \$ | 8.85 | \$ | 5.39 |

## Note 21 - Accumulated other comprehensive income/(Ioss)

AOCI includes the after-tax change in unrealized gains and losses on investment securities, foreign currency translation adjustments (including the impact of related derivatives), fair value changes of excluded components on fair value hedges, cash flow hedging activities, net gain/(loss) related to the Firm's defined benefit pension and OPEB plans, and fair value option-elected liabilities arising from changes in the Firm's own credit risk (DVA).

| As of or for the three months ended June 30, 2023 <br> (in millions) | Unrealized gains/(losses) on investment securities | Translation adjustments, net of hedges | Fair value hedges |  | Cash flow hedges | Defined benefit pension and OPEB plans | DVA on fair value option elected liabilities |  | Accumulated other comprehensive income/(loss) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Balance at April 1, 2023 | \$ $(6,912)$ | \$ $(1,348)$ | \$ | (54) | \$(4,858) | \$ $(1,506)$ | \$ | 260 | \$ $(14,418)$ |
| Net change | 757 | 70 |  | 11 | (497) | (6) |  | (207) | 128 |
| Balance at June 30, 2023 | \$ (6,155) ${ }^{(a)}$ | \$ (1,278) | \$ | (43) | \$(5,355) | \$ $(1,512)$ | \$ | 53 | \$ (14,290) |
| As of or for the three months ended June 30, 2022 <br> (in millions) | Unrealized gains/(losses) on investment securities | Translation adjustments, net of hedges | Fair value hedges |  | Cash flow hedges | Defined benefit pension and OPEB plans | DVA on fair value option elected liabilities |  | Accumulated other comprehensive income/(loss) |
| Balance at April 1, 2022 | \$ $(4,813)$ | \$ (996) | \$ | (21) | \$ $(3,087)$ | \$ (143) | \$ | (507) | \$ $(9,567)$ |
| Net change | $(4,031)$ | (679) |  | 51 | $(1,348)$ | 20 |  | 1,185 | $(4,802)$ |
| Balance at June 30, 2022 | \$ $(8,844)^{(a)}$ | \$ $(1,675)$ | \$ | 30 | \$ $(4,435)$ | \$ (123) | \$ | 678 | \$ $(14,369)$ |
| As of or for the six months ended June 30, 2023 (in millions) | Unrealized gains/(losses) on investment securities | Translation adjustments, net of hedges | Fair value hedges |  | Cash flow hedges | Defined benefit pension and OPEB plans | DVA on fair value option elected liabilities |  | Accumulated other comprehensive income/(loss) |
| Balance at January 1, 2023 | \$ $(9,124)$ | \$ $(1,545)$ | \$ | (33) | \$ 5,656$)$ | \$ $(1,451)$ | \$ | 468 | \$ $(17,341)$ |
| Net change | 2,969 | 267 |  | (10) | 301 | (61) |  | (415) | 3,051 |
| Balance at June 30, 2023 | \$ $(6,155)^{(a)}$ | \$ $(1,278)$ | \$ | (43) | \$(5,355) | \$ $(1,512)$ | \$ | 53 | \$ (14,290) |
| As of or for the six months ended June 30, 2022 <br> (in millions) | Unrealized gains/(losses) on investment securities | Translation adjustments, net of hedges | Fair value hedges |  | Cash flow hedges | Defined benefit pension and OPEB plans | DVA on fair value option elected liabilities |  | Accumulated other comprehensive income/(loss) |
| Balance at January 1, 2022 | \$ 2,640 | \$ (934) | \$ | (131) | \$ (296) | \$ (210) | \$ | $(1,153)$ | \$ (84) |
| Net change | $(11,484)$ | (741) |  | 161 | $(4,139)$ | 87 |  | 1,831 | $(14,285)$ |
| Balance at June 30, 2022 | \$ $(8,844)^{(a)}$ | \$ (1,675) | \$ | 30 | \$ $(4,435)$ | \$ (123) | \$ | 678 | \$ $(14,369)$ |

(a) As of June 30, 2023 includes after-tax net unamortized unrealized gains/(losses) of \$(29) million related to HTM securities that have been transferred to AFS as permitted by the new hedge accounting guidance adopted on January 1, 2023. As of June 30, 2023 and 2022 includes after-tax net unamortized unrealized gains/(losses) of $\$(1.1)$ billion and $\$(1.4)$ billion, related to AFS securities that have been transferred to HTM, respectively. Refer to Note 10 of this Form 10-Q, and Note 10 of JPMorgan Chase's 2022 Form 10-K for further information.

The following table presents the pre-tax and after-tax changes in the components of OCI.

| Three months ended June 30, (in millions) | 2023 |  |  |  |  |  | 2022 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Pre-tax |  | Tax effect |  | After-tax |  | Pre-tax |  | Tax effect |  | After-tax |  |
| Unrealized gains/(losses) on investment securities: |  |  |  |  |  |  |  |  |  |  |  |  |
| Net unrealized gains/(losses) arising during the period | \$ | 95 | \$ | (21) | \$ | 74 | \$ | $(5,456)$ | \$ | 1,308 |  | $(4,148)$ |
| Reclassification adjustment for realized (gains)/losses included in net income ${ }^{(a)}$ |  | 900 |  | (217) |  | 683 |  | 153 |  | (36) |  | 117 |
| Net change |  | 995 |  | (238) |  | 757 |  | $(5,303)$ |  | 1,272 |  | $(4,031)$ |
| Translation adjustments ${ }^{(b)}$ : |  |  |  |  |  |  |  |  |  |  |  |  |
| Translation |  | 126 |  | 10 |  | 136 |  | $(3,550)$ |  | 193 |  | $(3,357)$ |
| Hedges |  | (88) |  | 22 |  | (66) |  | 3,524 |  | (846) |  | 2,678 |
| Net change |  | 38 |  | 32 |  | 70 |  | (26) |  | (653) |  | (679) |
| Fair value hedges, net change ${ }^{(c)}$ : |  | 15 |  | (4) |  | 11 |  | 67 |  | (16) |  | 51 |
| Cash flow hedges: |  |  |  |  |  |  |  |  |  |  |  |  |
| Net unrealized gains/(losses) arising during the period |  | $(1,119)$ |  | 268 |  | (851) |  | $(1,750)$ |  | 420 |  | $(1,330)$ |
| Reclassification adjustment for realized (gains)/losses included in net income ${ }^{(\mathrm{d})}$ |  | 465 |  | (111) |  | 354 |  | (24) |  | 6 |  | (18) |
| Net change |  | (654) |  | 157 |  | (497) |  | $(1,774)$ |  | 426 |  | $(1,348)$ |
| Defined benefit pension and OPEB plans, net change: |  | (8) |  | 2 |  | (6) |  | 33 |  | (13) |  | 20 |
| DVA on fair value option elected liabilities, net change: |  | (273) |  | 66 |  | (207) |  | 1,558 |  | (373) |  | 1,185 |
| Total other comprehensive income/(loss) | \$ | 113 | \$ | 15 | \$ | 128 | \$ | $(5,445)$ | \$ | 643 | \$ | $(4,802)$ |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 23 |  |  |  |  |  | 022 |  |  |
| Six months ended June 30, (in millions) |  | Pre-tax |  | effect |  | er-tax |  | Pre-tax |  | effect |  | After-tax |
| Unrealized gains/(losses) on investment securities: |  |  |  |  |  |  |  |  |  |  |  |  |
| Net unrealized gains/(losses) arising during the period | \$ | 2,137 | \$ | (511) | \$ | 1,626 | \$ | $(15,658)$ | \$ | 3,758 |  | $(11,900)$ |
| Reclassification adjustment for realized (gains)/losses included in net income ${ }^{(a)}$ |  | 1,768 |  | (425) |  | 1,343 |  | 547 |  | (131) |  | 416 |
| Net change |  | 3,905 |  | (936) |  | 2,969 |  | $(15,111)$ |  | 3,627 |  | $(11,484)$ |
| Translation adjustments ${ }^{(b)}$ : |  |  |  |  |  |  |  |  |  |  |  |  |
| Translation |  | 1,099 |  | (31) |  | 1,068 |  | $(3,891)$ |  | 217 |  | $(3,674)$ |
| Hedges |  | $(1,051)$ |  | 250 |  | (801) |  | 3,862 |  | (929) |  | 2,933 |
| Net change |  | 48 |  | 219 |  | 267 |  | (29) |  | (712) |  | (741) |
| Fair value hedges, net change ${ }^{(c)}$ : |  | (13) |  | 3 |  | (10) |  | 212 |  | (51) |  | 161 |
| Cash flow hedges: |  |  |  |  |  |  |  |  |  |  |  |  |
| Net unrealized gains/(losses) arising during the period |  | (552) |  | 132 |  | (420) |  | $(5,186)$ |  | 1,245 |  | $(3,941)$ |
| Reclassification adjustment for realized (gains)/losses included in net income ${ }^{(\mathrm{d})}$ |  | 948 |  | (227) |  | 721 |  | (261) |  | 63 |  | (198) |
| Net change |  | 396 |  | (95) |  | 301 |  | $(5,447)$ |  | 1,308 |  | $(4,139)$ |
| Defined benefit pension and OPEB plans, net change: |  | (79) |  | 18 |  | (61) |  | 123 |  | (36) |  | 87 |
| DVA on fair value option elected liabilities, net change: |  | (547) |  | 132 |  | (415) |  | 2,417 |  | (586) |  | 1,831 |
| Total other comprehensive loss | \$ | 3,710 | \$ | (659) | \$ | 3,051 | \$ | $(17,835)$ | \$ | 3,550 |  | $(14,285)$ |

(a) The pre-tax amount is reported in Investment securities gains/(losses) in the Consolidated statements of income.
(b) Reclassifications of pre-tax realized gains/(losses) on translation adjustments and related hedges are reported in other income/expense in the Consolidated statements of income. During the six months ended June 30, 2023, the Firm reclassified a net pre-tax loss of \$(5) million to other revenue related to the acquisition of CIFM of which $\$(41)$ million related to the net investment hedge loss. The amounts were not material for the three months ended June 30, 2023 and for the three and six months ended June 30, 2022.
(c) Represents changes in fair value of cross-currency swaps attributable to changes in cross-currency basis spreads, which are excluded from the assessment of hedge effectiveness and recorded in other comprehensive income. The initial cost of cross-currency basis spreads is recognized in earnings as part of the accrual of interest on the cross currency swaps.
(d) The pre-tax amounts are primarily recorded in noninterest revenue, net interest income and compensation expense in the Consolidated statements of income.

## Note 22 - Restricted cash and other restricted assets

Refer to Note 26 of JPMorgan Chase's 2022 Form 10-K for a detailed discussion of the Firm's restricted cash and other restricted assets.
Certain of the Firm's cash and other assets are restricted as to withdrawal or usage. These restrictions are imposed by various regulatory authorities based on the particular activities of the Firm's subsidiaries.
The Firm is also subject to rules and regulations established by other U.S. and non-U.S. regulators. As part of its compliance with the respective regulatory requirements, the Firm's broker-dealer activities are subject to certain restrictions on cash and other assets.

The following table presents the components of the Firm's restricted cash:

| (in billions) | June 30, <br> $\mathbf{2 0 2 3}$ | December 31, <br> 2022 |  |  |
| :--- | ---: | ---: | ---: | ---: |
| Segregated for the benefit of <br> securities and cleared derivative <br> customers | $\$$ | $\mathbf{1 7 . 0}$ | $\$$ | 18.7 |
| Cash reserves at non-U.S. central <br> banks and held for other general <br> purposes |  | 8.6 |  |  |
| Total restricted cash ${ }^{(\mathrm{a})}$ | $\mathbf{8}$ | $\mathbf{2 5 . 6}$ | $\$$ | 26.8 |

(a) Comprises $\$ 24.3$ billion and $\$ 25.4$ billion in deposits with banks, and $\$ 1.3$ billion and $\$ 1.4$ billion in cash and due from banks on the Consolidated balance sheet as of June 30, 2023 and December 31, 2022, respectively.
Also, as of June 30, 2023 and December 31, 2022, the Firm had the following other restricted assets:

- Cash and securities pledged with clearing organizations for the benefit of customers of $\$ 36.9$ billion and $\$ 42.4$ billion, respectively.
- Securities with a fair value of $\$ 23.4$ billion and $\$ 31.7$ billion, respectively, were also restricted in relation to customer activity.


## Note 23 - Regulatory capital

Refer to Note 27 of JPMorgan Chase’s 2022 Form 10-K for a detailed discussion on regulatory capital.
The Federal Reserve establishes capital requirements, including well-capitalized requirements, for the consolidated financial holding company. The Office of the Comptroller of the Currency ("OCC") establishes similar minimum capital requirements and standards for the Firm's principal IDI subsidiary, JPMorgan Chase Bank, N.A. Under the risk-based capital and leverage-based guidelines of the Federal Reserve, JPMorgan Chase is required to maintain minimum ratios for CET1 capital, Tier 1 capital, Total capital, Tier 1 leverage and the SLR. Failure to meet these minimum requirements could cause the Federal Reserve to take action. IDI subsidiaries are also subject to these capital requirements established by their respective primary regulators.
The following table presents the risk-based regulatory capital ratio requirements and well-capitalized ratios to which the Firm and its IDI subsidiaries were subject as of June 30, 2023 and December 31, 2022.

|  | Standardized <br> capital ratio <br> requirements | Advanced <br> capital ratio <br> requirements | Well-capitalized <br> ratios |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\mathrm{BHC}^{(\mathrm{a})(\mathrm{b})}$ | $\mathrm{IDI}^{(\mathrm{c})}$ | $\mathrm{BHC}^{(\mathrm{a})(\mathrm{b})}$ | $\mathrm{IDI}^{(\mathrm{c})}$ | $\mathrm{BHC}^{(\mathrm{d})}$ | $\mathrm{IDI}^{(\mathrm{e})}$ |
| Risk-based capital ratios <br> CET1 <br> capital | $12.5 \%$ | $7.0 \%$ | $11.0 \%$ | $7.0 \%$ | NA | $6.5 \%$ |
| Tier 1 <br> capital | 14.0 | 8.5 | 12.5 | 8.5 | $6.0 \%$ | 8.0 |
| Total <br> capital | 16.0 | 10.5 | 14.5 | 10.5 | 10.0 | 10.0 |

Note: The table above is as defined by the regulations issued by the Federal Reserve, OCC and FDIC and to which the Firm and its IDI subsidiaries are subject.
(a) Represents the regulatory capital ratio requirements applicable to the Firm. The CET1, Tier 1 and Total capital ratio requirements each include a respective minimum requirement plus a GSIB surcharge of 4.0\% as calculated under Method 2; plus a 4.0\% SCB for Basel III Standardized ratios and a fixed 2.5\% capital conservation buffer for Basel III Advanced ratios. The countercyclical buffer is currently set to $0 \%$ by the federal banking agencies.
(b) For the period ended December 31, 2022, the CET1, Tier 1, and Total capital ratio requirements under Basel III Standardized applicable to the Firm were $12.0 \%, 13.5 \%$ and $15.5 \%$, respectively; the Basel III Advanced CET1, Tier 1, and Total capital ratio requirements applicable to the Firm were $10.5 \%, 12.0 \%$, and $14.0 \%$, respectively.
(c) Represents requirements for JPMorgan Chase's IDI subsidiaries. The CET1, Tier 1 and Total capital ratio requirements include a fixed capital conservation buffer requirement of $2.5 \%$ that is applicable to the IDI subsidiaries. The IDI subsidiaries are not subject to the GSIB surcharge.
(d) Represents requirements for bank holding companies pursuant to regulations issued by the Federal Reserve.
(e) Represents requirements for IDI subsidiaries pursuant to regulations issued under the FDIC Improvement Act.

The following table presents the leverage-based regulatory capital ratio requirements and well-capitalized ratios to which the Firm and its IDI subsidiaries were subject as of June 30, 2023 and December 31, 2022.

|  | Capital ratio <br> requirements |  | Well-capitalized <br> ratios |  |
| :--- | :--- | :--- | :--- | :--- |
|  | BHC |  | IDI | BHC $^{(\mathrm{b})}$ |$\quad$ IDI |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Leverage-based capital ratios |  |  |  |  |
| Tier 1 leverage | $4.0 \%$ | $4.0 \%$ | NA | $5.0 \%$ |
| SLR | 5.0 | 6.0 | NA | 6.0 |

Note: The table above is as defined by the regulations issued by the Federal Reserve, OCC and FDIC and to which the Firm and its IDI subsidiaries are subject.
(a) Represents minimum SLR requirement of $3.0 \%$, as well as supplementary leverage buffer requirements of $2.0 \%$ and $3.0 \%$ for BHC and IDI subsidiaries, respectively.
(b) The Federal Reserve's regulations do not establish well-capitalized thresholds for these measures for BHCs.

## CECL regulatory capital transition

Beginning January 1, 2022, the $\$ 2.9$ billion CECL capital benefit, provided by the Federal Reserve in response to the COVID-19 pandemic, is being phased out at $25 \%$ per year over a three-year period. As of June 30, 2023, the Firm's CET1 capital reflected the remaining $\$ 1.4$ billion benefit associated with the CECL capital transition provisions.
Additionally, effective January 1, 2023, the Firm phased out $50 \%$ of the other CECL capital transition provisions which impacted Tier 2 capital, adjusted average assets, total leverage exposure and RWA, as applicable.
Refer to Note 27 of JPMorgan Chase's 2022 Form 10-K for further information on CECL capital transition provisions.

The following tables present risk-based capital metrics under both the Basel III Standardized and Basel III Advanced approaches and leverage-based capital metrics for JPMorgan Chase and JPMorgan Chase Bank, N.A. As of June 30, 2023 and December 31, 2022, JPMorgan Chase and JPMorgan Chase Bank, N.A. were well-capitalized and met all capital requirements to which each was subject.

| June 30, 2023 <br> (in millions, except ratios) | Basel III Standardized |  |  |  | Basel III Advanced |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | JPMorgan Chase \& Co. |  | JPMorgan Chase Bank, N.A. |  | JPMorgan Chase \& Co. |  | JPMorgan Chase Bank, N.A. |  |
| Risk-based capital metrics: ${ }^{(a)}$ |  |  |  |  |  |  |  |  |
| CET1 capital | \$ | 235,827 | \$ | 279,233 | \$ | 235,827 | \$ | 279,233 |
| Tier 1 capital |  | 262,585 |  | 279,236 |  | 262,585 |  | 279,236 |
| Total capital |  | 295,281 |  | 298,582 |  | 281,953 |  | 285,500 |
| Risk-weighted assets |  | 1,706,927 |  | 1,642,804 |  | 1,694,714 |  | 1,541,700 |
| CET1 capital ratio |  | 13.8 \% |  | 17.0 \% |  | 13.9 \% |  | 18.1 \% |
| Tier 1 capital ratio |  | 15.4 |  | 17.0 |  | 15.5 |  | 18.1 |
| Total capital ratio |  | 17.3 |  | 18.2 |  | 16.6 |  | 18.5 |
| December 31, 2022 <br> (in millions, except ratios) | Basel III Standardized |  |  |  | Basel III Advanced |  |  |  |
|  |  | JPMorgan Chase \& Co. |  | JPMorgan Chase Bank, N.A. |  | JPMorgan Chase \& Co. |  | JPMorgan se Bank, N.A. |
| Risk-based capital metrics: ${ }^{(a)}$ |  |  |  |  |  |  |  |  |
| CET1 capital | \$ | 218,934 | \$ | 269,668 | \$ | 218,934 | \$ | 269,668 |
| Tier 1 capital |  | 245,631 |  | 269,672 |  | 245,631 |  | 269,672 |
| Total capital |  | 277,769 |  | 288,433 |  | 264,583 |  | 275,255 |
| Risk-weighted assets |  | 1,653,538 |  | 1,597,072 |  | 1,609,773 |  | 1,475,602 |
| CET1 capital ratio |  | 13.2 \% |  | 16.9 \% |  | 13.6 \% |  | 18.3 \% |
| Tier 1 capital ratio |  | 14.9 |  | 16.9 |  | 15.3 |  | 18.3 |
| Total capital ratio |  | 16.8 |  | 18.1 |  | 16.4 |  | 18.7 |

(a) The capital metrics reflect the CECL capital transition provisions.
(b) Includes the impacts of certain assets associated with the First Republic acquisition to which the Standardized approach has been applied as permitted by the transition provisions in the U.S. capital rules.

| Three months ended (in millions, except ratios) | June 30, 2023 |  |  |  | December 31, 2022 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | JPMorgan Chase \& Co. |  | JPMorgan Chase Bank, N.A. |  | JPMorgan Chase \& Co. |  | JPMorgan Chase Bank, N.A. |  |
| Leverage-based capital metrics: ${ }^{(a)}$ |  |  |  |  |  |  |  |  |
| Adjusted average assets ${ }^{(b)}$ | \$ | 3,796,579 | \$ | 3,308,478 | \$ | 3,703,873 | \$ | 3,249,912 |
| Tier 1 leverage ratio |  | 6.9 \% |  | 8.4 \% |  | 6.6 \% |  | 8.3 \% |
| Total leverage exposure | \$ | 4,492,761 | \$ | 3,993,500 | \$ | 4,367,092 | \$ | 3,925,502 |
| SLR |  | 5.8 \% |  | 7.0 \% |  | 5.6 \% |  | 6.9 \% |

(a) The capital metrics reflect the CECL capital transition provisions.
(b) Adjusted average assets, for purposes of calculating the leverage ratios, includes quarterly average assets adjusted for on-balance sheet assets that are subject to deduction from Tier 1 capital, predominantly goodwill, inclusive of estimated equity method goodwill, and other intangible assets.

## Note 24 - Off-balance sheet lending-related financial instruments, guarantees, and other commitments

JPMorgan Chase provides lending-related financial instruments (e.g., commitments and guarantees) to address the financing needs of its customers and clients. The contractual amount of these financial instruments represents the maximum possible credit risk to the Firm should the customer or client draw upon the commitment or the Firm be required to fulfill its obligation under the guarantee, and should the customer or client subsequently fail to perform according to the terms of the contract. Most of these commitments and guarantees have historically been refinanced, extended, cancelled, or expired without being drawn or a default occurring. As a result, the total contractual amount of these instruments is not, in the Firm's view, representative of its expected future credit exposure or funding requirements. Refer to Note 28 of JPMorgan Chase's 2022 Form 10-K for a further discussion of lending-related commitments and guarantees, and the Firm's related accounting policies.
To provide for expected credit losses in wholesale and certain consumer lending-related commitments, an allowance for credit losses on lending-related commitments is maintained. Refer to Note 13 for further information regarding the allowance for credit losses on lending-related commitments.

The following table summarizes the contractual amounts and carrying values of off-balance sheet lending-related financial instruments, guarantees and other commitments at June 30, 2023, and December 31, 2022. The amounts in the table below for credit card, home equity and certain scored business banking lending-related commitments represent the total available credit for these products. The Firm has not experienced, and does not anticipate, that all available lines of credit for these products will be utilized at the same time. The Firm can reduce or cancel credit card and certain scored business banking lines of credit by providing the borrower notice or, in some cases as permitted by law, without notice. In addition, the Firm typically closes credit card lines when the borrower is 60 days or more past due. The Firm may reduce or close HELOCs when there are significant decreases in the value of the underlying property, or when there has been a demonstrable decline in the creditworthiness of the borrower.

Off-balance sheet lending-related financial instruments, guarantees and other commitments

|  | Contractual amount |  |  |  |  |  | Carrying value ${ }^{(\mathrm{i})}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | June 30, 2023 |  |  |  |  | $\begin{array}{r} \hline \text { Dec 31, } \\ 2022 \end{array}$ | $\begin{array}{r} \text { Jun 30, } \\ 2023 \end{array}$ | $\begin{array}{r} \text { Dec 31, } \\ 2022 \end{array}$ |
|  |  | Expires after | Expires after |  |  |  |  |  |
|  |  | 1 year | 3 years | Expires |  |  |  |  |
| By remaining maturity | Expires in 1 | through | through | after 5 |  |  |  |  |
| (in millions) | year or less | 3 years | 5 years | years | Total | Total |  |  |

Lending-related
Consumer, excluding credit card:


Other guarantees and commitments
Securities lending indemnification agreements and guarantees ${ }^{(\mathrm{e})}$

Derivatives qualifying as guarantees Unsettled resale and securities borrowed agreements
Unsettled repurchase and securities loaned agreements
Loan sale and securitization-related indemnifications:

| Mortgage repurchase liability | NA | NA | NA | NA | NA | NA | $\mathbf{7 6}$ | 76 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Loans sold with recourse | NA | NA | NA | NA | $\mathbf{7 6 8}$ | 820 | 27 | 28 |
| Exchange \& clearing house guarantees <br> and commitments ${ }^{(1)}$ | $\mathbf{1 4 0 , 1 0 2}$ | - | - | - | $\mathbf{1 4 0 , 1 0 2}$ | 191,068 | - | - |
| Other guarantees and commitments ${ }^{(8)}$ | $\mathbf{6 , 5 6 9}$ | $\mathbf{8 4 8}$ | $\mathbf{1 6 6}$ | $\mathbf{3 , 5 7 4}$ | $\mathbf{1 1 , 1 5 7}$ | $\mathbf{8 , 6 3 4}$ | $\mathbf{4 3}$ | $\mathbf{5 3}$ |

(a) Includes certain commitments to purchase loans from correspondents.
(b) Also includes commercial card lending-related commitments primarily in CB and CIB.
(c) Predominantly all consumer and wholesale lending-related commitments are in the U.S.
(d) As of June 30, 2023, and December 31, 2022, reflected the contractual amount net of risk participations totaling $\$ 87$ million and $\$ 71$ million, respectively, for other unfunded commitments to extend credit; $\$ 8.0$ billion and $\$ 8.2$ billion, respectively, for standby letters of credit and other financial guarantees; $\$ 425$ million and $\$ 512$ million, respectively, for other letters of credit. In regulatory filings with the Federal Reserve these commitments are shown gross of risk participations.
(e) As of June 30, 2023, and December 31, 2022, collateral held by the Firm in support of securities lending indemnification agreements was $\$ 312.6$ billion and $\$ 298.5$ billion, respectively. Securities lending collateral primarily consists of cash, G7 government securities, and securities issued by U.S. GSEs and government agencies.
(f) As of June 30, 2023, and December 31, 2022, includes guarantees to the Fixed Income Clearing Corporation under the sponsored member repo program and commitments and guarantees associated with the Firm's membership in certain clearing houses.
(g) As of June 30, 2023, and December 31, 2022, primarily includes unfunded commitments related to certain tax-oriented equity investments, unfunded commitments to purchase secondary market loans, and other equity investment commitments.
(h) As of June 30, 2023 and December 31, 2022 includes net markdowns on held-for-sale positions related to unfunded commitments in the bridge financing portfolio.
(i) For lending-related products, the carrying value includes the allowance for lending-related commitments and the guarantee liability; for derivative-related products, and lending-related commitments for which the fair value option was elected, the carrying value represents the fair value.
(j) As of June 30, 2023, includes fair value adjustments associated with the First Republic acquisition for residential real estate lending-related commitments totaling $\$ 576$ million, for auto and other lending-related commitments totaling $\$ 236$ million and for other unfunded commitments to extend credit totaling $\$ 1.6$ billion. Refer to Note 28 for additional information.

Other unfunded commitments to extend credit Other unfunded commitments to extend credit generally consist of commitments for working capital and general corporate purposes, extensions of credit to support commercial paper facilities and bond financings in the event that those obligations cannot be remarketed to new investors, as well as committed liquidity facilities to clearing organizations. The Firm also issues commitments under multipurpose facilities which could be drawn upon in several forms, including the issuance of a standby letter of credit.

Standby letters of credit and other financial guarantees Standby letters of credit and other financial guarantees are conditional lending commitments issued by the Firm to guarantee the performance of a client or customer to a third party under certain arrangements, such as commercial paper facilities, bond financings, acquisition financings, trade financings and similar transactions.

The following table summarizes the contractual amount and carrying value of standby letters of credit and other financial guarantees and other letters of credit arrangements as of June 30, 2023, and December 31, 2022.
Standby letters of credit, other financial guarantees and other letters of credit

| (in millions) | June 30, 2023 |  |  |  | December 31, 2022 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Standby letters of credit and other financial guarantees |  | Other letters of credit |  | Standby letters of credit and other financial guarantees |  | Other letters of credit |  |
| Investment-grade ${ }^{\text {(2) }}$ | \$ | 19,574 | \$ | 2,385 | \$ | 19,205 | \$ | 3,040 |
| Noninvestment-grade ${ }^{(\mathrm{a})}$ |  | 8,832 |  | 976 |  | 8,234 |  | 1,094 |
| Total contractual amount | \$ | 28,406 | \$ | 3,361 | \$ | 27,439 | \$ | 4,134 |
| Allowance for lending-related commitments | \$ | 146 | \$ | 23 | \$ | 82 | \$ | 6 |
| Guarantee liability |  | 371 |  | - |  | 326 |  | - |
| Total carrying value | \$ | 517 | \$ | 23 | \$ | 408 | \$ | 6 |
| Commitments with collateral | \$ | 16,414 | \$ | 549 | \$ | 15,296 | \$ | 795 |

(a) The ratings scale is based on the Firm's internal risk ratings. Refer to Note 12 for further information on internal risk ratings.

## Derivatives qualifying as guarantees

The Firm transacts in certain derivative contracts that have the characteristics of a guarantee under U.S. GAAP. Refer to Note 28 of JPMorgan Chase's 2022 Form 10-K for further information on these derivatives.
The following table summarizes the derivatives qualifying as guarantees as of June 30, 2023, and December 31, 2022.

| (in millions) | June 30, <br> $\mathbf{2 0 2 3}$ | December 31, <br> 2022 |  |
| :--- | ---: | ---: | ---: |
| Notional amounts | $\mathbf{5 6 , 9 0 0}$ | $\$$ | 59,180 |
| Derivative guarantees <br> Stable value contracts with <br> contractually limited exposure | $\mathbf{3 1 , 7 1 5}$ | 31,820 |  |
| Maximum exposure of stable value <br> contracts with contractually |  |  |  |
| $\quad$ limited exposure | $\mathbf{1 , 4 4 2}$ | 2,063 |  |
| Fair value <br> Derivative payables | $\mathbf{1 8 1}$ | 649 |  |

In addition to derivative contracts that meet the characteristics of a guarantee, the Firm is both a purchaser and seller of credit protection in the credit derivatives market. Refer to Note 5 for a further discussion of credit derivatives.

## Merchant charge-backs

Under the rules of payment networks, in its role as a merchant acquirer, the Firm's Merchant Services business in CIB Payments, retains a contingent liability for disputed processed credit and debit card transactions that result in a charge-back to the merchant. If a dispute is resolved in the cardholder's favor, the Firm will (through the cardholder's issuing bank) credit or refund the amount to the cardholder and will charge back the transaction to the merchant. If the Firm is unable to collect the amount from the merchant, the Firm will bear the loss for the amount credited or refunded to the cardholder. The Firm mitigates this risk by withholding future settlements, retaining cash reserve accounts or obtaining other collateral. In addition, the Firm recognizes a valuation allowance that covers the payment or performance risk related to charge-backs.

Loan sales and securitization-related indemnifications In connection with the Firm's mortgage loan sale and securitization activities with GSEs the Firm has made representations and warranties that the loans sold meet certain requirements, and that may require the Firm to repurchase mortgage loans and/or indemnify the loan purchaser if such representations and warranties are breached by the Firm.
The liability related to repurchase demands associated with private label securitizations is separately evaluated by the Firm in establishing its litigation reserves. Refer to Note 26 of this Form 10-Q and Note 30 of JPMorgan Chase's 2022 Form $10-\mathrm{K}$ for additional information regarding litigation.
Sponsored member repo program
The Firm acts as a sponsoring member to clear eligible overnight and term resale and repurchase agreements through the Government Securities Division of the Fixed Income Clearing Corporation ("FICC") on behalf of clients that become sponsored members under the FICC's rules. The Firm also guarantees to the FICC the prompt and full payment and performance of its sponsored member clients' respective obligations under the FICC's rules. The Firm minimizes its liability under these guarantees by obtaining a security interest in the cash or high-quality securities collateral that the clients place with the clearing house therefore the Firm expects the risk of loss to be remote. The Firm's maximum possible exposure, without taking into consideration the associated collateral, is included in the Exchange \& clearing house guarantees and commitments line on page 185. Refer to Note 11 of JPMorgan Chase's 2022 Form 10-K for additional information on credit risk mitigation practices on resale agreements and the types of collateral pledged under repurchase agreements.

Guarantees of subsidiaries
The Parent Company has guaranteed certain long-term debt and structured notes of its subsidiaries, including JPMorgan Chase Financial Company LLC ("JPMFC"), a 100\%-owned finance subsidiary. All securities issued by JPMFC are fully and unconditionally guaranteed by the Parent Company and no other subsidiary of the Parent Company guarantees these securities. These guarantees, which rank pari passu with the Firm's unsecured and unsubordinated indebtedness, are not included in the table on page 185 of this Note. Refer to Note 20 of JPMorgan Chase's 2022 Form 10-K for additional information.

## Note 25 - Pledged assets and collateral

Refer to Note 29 of JPMorgan Chase's 2022 Form 10-K for a discussion of the Firm's pledged assets and collateral.

## Pledged assets

The Firm pledges financial assets that it owns to maintain potential borrowing capacity at discount windows with Federal Reserve banks, various other central banks and FHLBs. Additionally, the Firm pledges assets for other purposes, including to collateralize repurchase and other securities financing agreements, to cover short sales and to collateralize derivative contracts and deposits. Certain of these pledged assets may be sold or repledged or otherwise used by the secured parties and are parenthetically identified on the Consolidated balance sheets as assets pledged.
The following table presents the Firm's pledged assets.

| (in billions) |  | $\begin{array}{r} \text { June } 30, \\ 2023 \end{array}$ | $\begin{array}{r} \text { December 31, } \\ 2022 \\ \hline \end{array}$ |  |
| :---: | :---: | :---: | :---: | :---: |
| Assets that may be sold or repledged or otherwise used by secured parties | \$ | 161.3 | \$ | 110.8 |
| Assets that may not be sold or repledged or otherwise used by secured parties ${ }^{(a)}$ |  | 288.4 |  | 114.8 |
| Assets pledged at Federal Reserve banks and FHLBs ${ }^{\text {(b) }}$ |  | 621.8 |  | 567.6 |
| Total pledged assets | \$ | 1,071.5 | \$ | 793.2 |

(a) As of June 30, 2023, included $\$ 120.0$ billion of assets pledged to the FDIC as part of the shared-loss agreements associated with the First Republic acquisition. Refer to Note 28 for additional information.
(b) As of June 30, 2023, included $\$ 23.7$ billion of assets pledged to the FHLB associated with the First Republic acquisition.
Total pledged assets do not include assets of consolidated VIEs; these assets are used to settle the liabilities of those entities. Refer to Note 14 for additional information on assets and liabilities of consolidated VIEs. Refer to Note 11 for additional information on the Firm's securities financing activities. Refer to Note 20 of JPMorgan Chase's 2022 Form 10-K for additional information on the Firm's long-term debt.

## Collateral

The Firm accepts financial assets as collateral that it is permitted to sell or repledge, deliver or otherwise use. This collateral is generally obtained under resale and other securities financing agreements, prime brokerage-related held-for-investment customer receivables and derivative contracts. Collateral is generally used under repurchase and other securities financing agreements, to cover short sales and to collateralize derivative contracts and deposits.
The following table presents the fair value of collateral accepted.

| (in billions) | June 30, <br> $\mathbf{2 0 2 3}$ | December 31, <br> 2022 |  |
| :--- | ---: | :--- | ---: |
| Collateral permitted to be sold or <br> repledged, delivered, or otherwise <br> used | $\mathbf{\$}$ | $\mathbf{1 , 3 0 3 . 7}$ | $\$$ |
| Collateral sold, repledged, delivered <br> or otherwise used | $\mathbf{9 8 6 . 3}$ | $1,346.9$ |  |

## Note 26 - Litigation

## Contingencies

As of June 30, 2023, the Firm and its subsidiaries and affiliates are defendants or respondents in numerous legal proceedings, including private, civil litigations, government investigations or regulatory enforcement matters. The litigations range from individual actions involving a single plaintiff to class action lawsuits with potentially millions of class members. Investigations and regulatory enforcement matters involve both formal and informal proceedings, by both governmental agencies and self-regulatory organizations. These legal proceedings are at varying stages of adjudication, arbitration or investigation, and involve each of the Firm's lines of business and several geographies and a wide variety of claims (including common law tort and contract claims and statutory antitrust, securities and consumer protection claims), some of which present novel legal theories.

The Firm believes the estimate of the aggregate range of reasonably possible losses, in excess of reserves established, for its legal proceedings is from $\$ 0$ to approximately $\$ 1.3$ billion at June 30, 2023. This estimated aggregate range of reasonably possible losses was based upon information available as of that date for those proceedings in which the Firm believes that an estimate of reasonably possible loss can be made. For certain matters, the Firm does not believe that such an estimate can be made, as of that date. The Firm's estimate of the aggregate range of reasonably possible losses involves significant judgment, given:

- the number, variety and varying stages of the proceedings, including the fact that many are in preliminary stages,
- the existence in many such proceedings of multiple defendants, including the Firm, whose share of liability (if any) has yet to be determined,
- the numerous yet-unresolved issues in many of the proceedings, including issues regarding class certification and the scope of many of the claims, and
- the uncertainty of the various potential outcomes of such proceedings, including where the Firm has made assumptions concerning future rulings by the court or other adjudicator, or about the behavior or incentives of adverse parties or regulatory authorities, and those assumptions prove to be incorrect.

In addition, the outcome of a particular proceeding may be a result which the Firm did not take into account in its estimate because the Firm had deemed the likelihood of that outcome to be remote. Accordingly, the Firm's estimate of the aggregate range of reasonably possible losses will change from time to time, and actual losses may vary significantly.

Set forth below are descriptions of the Firm's material legal proceedings.

1MDB Litigation. J.P. Morgan (Suisse) SA was named as a defendant in a civil litigation filed in May 2021 in Malaysia by 1Malaysia Development Berhad ("1MDB"), a Malaysian state-owned and controlled investment fund. J.P. Morgan (Suisse) SA was served in August 2022. The claim alleges "dishonest assistance" against J.P. Morgan (Suisse) SA in relation to payments of $\$ 300$ million and $\$ 500$ million, from 2009 and 2010, respectively, received from 1MDB and paid into an account at J.P. Morgan Suisse (SA) held by 1MDB PetroSaudi Limited, a joint venture company between 1MDB and PetroSaudi Holdings (Cayman) Limited. In September 2022, the Firm filed an application challenging the validity of service and the Malaysian Court's jurisdiction to hear the claim. In April 2023, 1MDB discontinued its claim against J.P. Morgan (Suisse) SA, but requested permission of the Court to refile in the future, which the Court took under consideration.

Amrapali. India’s Enforcement Directorate ("ED") is investigating J.P. Morgan India Private Limited in connection with investments made in 2010 and 2012 by two offshore funds formerly managed by JPMorgan Chase entities into residential housing projects developed by the Amrapali Group ("Amrapali"). In 2017, numerous creditors filed civil claims against Amrapali, including petitions brought by home buyers relating to delays in delivering or failure to deliver residential units. The home buyers' petitions have been overseen by the Supreme Court of India and are ongoing. In August 2021, the ED issued an order fining J.P. Morgan India Private Limited approximately $\$ 31.5$ million. The Firm is appealing the order and the fine. Relatedly, in July 2019, the Supreme Court of India issued an order making preliminary findings that Amrapali and other parties, including unspecified JPMorgan Chase entities and the offshore funds that had invested in the projects, violated certain currency control and money laundering provisions, and ordering the ED to conduct a further inquiry under India's Prevention of Money Laundering Act ("PMLA") and Foreign Exchange Management Act ("FEMA"). In May 2020, the ED attached approximately $\$ 25$ million from J.P. Morgan India Private Limited in connection with the criminal PMLA investigation. The Firm is responding to and cooperating with the PMLA investigation.

Foreign Exchange Investigations and Litigation. The Firm previously reported settlements with certain government authorities relating to its foreign exchange ("FX") sales and trading activities and controls related to those activities. Among those resolutions, in May 2015, the Firm pleaded guilty to a single violation of federal antitrust law. The Department of Labor ("DOL") granted the Firm exemptions that permit the Firm and its affiliates to continue to rely on the Qualified Professional Asset Manager exemption under the Employee Retirement Income Security Act ("ERISA")
through the ten-year disqualification period following the antitrust plea. The only remaining FX-related governmental inquiry is a South Africa Competition Commission matter which is currently pending before the South Africa Competition Tribunal.

With respect to civil litigation matters, in August 2018, the United States District Court for the Southern District of New York granted final approval to the Firm's settlement of a consolidated class action brought by U.S.-based plaintiffs, which principally alleged violations of federal antitrust laws based on an alleged conspiracy to manipulate foreign exchange rates and also sought damages on behalf of persons who transacted in FX futures and options on futures. Although certain members of the settlement class filed requests to the Court to be excluded from the class, an agreement to resolve their claims was reached in December 2022. The District Court denied certification of a putative class action against the Firm and other foreign exchange dealers on behalf of certain parties who purchased foreign currencies at allegedly inflated rates and granted summary judgment against the named plaintiffs in March 2023. Those plaintiffs have filed a notice of appeal. In addition, some FX-related individual and putative class actions based on similar alleged underlying conduct have been filed outside the U.S., including in the U.K., Israel, the Netherlands, Brazil and Australia. An agreement to resolve one of the UK actions was reached in December 2022. In July 2023, the U.K. Court of Appeal overturned the Competition Appeal Tribunal's earlier denial of a request for class certification on an opt-out basis. In Israel, a settlement in principle has been reached in the putative class action, which remains subject to court approval.

Interchange Litigation. Groups of merchants and retail associations filed a series of class action complaints alleging that Visa and Mastercard, as well as certain banks, conspired to set the price of credit and debit card interchange fees and enacted related rules in violation of antitrust laws. In 2012, the parties initially settled the cases for a cash payment, but that settlement was reversed on appeal and remanded to the United States District Court for the Eastern District of New York.

The original class action was divided into two separate actions, one seeking primarily monetary relief and the other seeking primarily injunctive relief. In September 2018, the parties to the monetary class action finalized an agreement which amends and supersedes the prior settlement agreement. Pursuant to this settlement, the defendants collectively contributed an additional $\$ 900$ million to the approximately $\$ 5.3$ billion previously held in escrow from the original settlement. In December 2019, the amended settlement agreement was approved by the District Court. In March 2023, the United States Court of Appeals for the Second Circuit affirmed the District Court's approval of the settlement, and two merchants have filed petitions for rehearing of the Appellate Court's approval. Based on the percentage of merchants that opted out of the amended class settlement, $\$ 700$ million has been returned to the
defendants from the settlement escrow in accordance with the settlement agreement. The injunctive class action continues separately, and in September 2021, the District Court granted plaintiffs' motion for class certification in part, and denied the motion in part.

Of the merchants who opted out of the amended damages class settlement, certain merchants filed individual actions raising similar allegations against Visa and Mastercard, as well as against the Firm and other banks. While some of those actions remain pending, the defendants have reached settlements with the merchants who opted out representing approximately $65 \%$ of the combined Mastercard-branded and Visa-branded payment card sales volume.

Jeffrey Epstein Litigation. JPMorgan Chase Bank, N.A. was named as a defendant in two lawsuits filed in the United States District Court for the Southern District of New York alleging that JPMorgan Chase Bank, N.A. knowingly facilitated Jeffrey Epstein's sex trafficking and other unlawful conduct by providing banking services to Epstein until 2013. One case, which was filed in November 2022, was a putative class action filed by an alleged sextrafficking victim of Epstein, and the other case, which was filed in December 2022, was brought on behalf of the government of the United States Virgin Islands and also alleges certain Virgin Islands statutory claims. In March 2023, the Court granted in part and denied in part JPMorgan Chase Bank, N.A.'s motions to dismiss these complaints, allowing some claims to proceed in both lawsuits. Also in March 2023, JPMorgan Chase Bank, N.A. filed third-party complaints impleading the Firm's former employee, James Edward Staley, into the two lawsuits, asserting claims for indemnification, contribution, breach of fiduciary duty and violation of the faithless servant doctrine. In May 2023, the Court denied Staley's motion to dismiss the impleader complaints. In June 2023, the Court granted the putative class' motion for class certification and granted a preliminary approval of a settlement between the class and JPMorgan Chase Bank, N.A., pursuant to which JPMorgan Chase Bank, N.A. will pay $\$ 290$ million to a fund for Epstein survivors. The actions involving the government of the United States Virgin Islands and Staley are proceeding.
LIBOR and Other Benchmark Rate Investigations and Litigation. JPMorgan Chase has responded to inquiries from various governmental agencies and entities around the world relating primarily to the British Bankers Association's ("BBA") London Interbank Offered Rate ("LIBOR") for various currencies and the European Banking Federation's Euro Interbank Offered Rate ("EURIBOR"). The Swiss Competition Commission's investigation relating to EURIBOR, to which the Firm and one other bank remain subject, continues. In December 2016, the European Commission issued a decision against the Firm and other banks finding an infringement of European antitrust rules relating to EURIBOR. The Firm has filed an appeal of that decision with the European General Court, and that appeal is pending.

In addition, the Firm has been named as a defendant along with other banks in various individual and putative class actions related to benchmark rates, including U.S. dollar LIBOR. In actions related to U.S. dollar LIBOR during the period that it was administered by the BBA, the Firm has obtained dismissal of certain actions and resolved certain other actions, and others are in various stages of litigation. The United States District Court for the Southern District of New York has granted class certification of antitrust claims related to bonds and interest rate swaps sold directly by the defendants, including the Firm. A consolidated putative class action related to the period that U.S. dollar LIBOR was administered by ICE Benchmark Administration has been dismissed. In addition, a group of individual plaintiffs filed a lawsuit asserting antitrust claims, alleging that the Firm and other defendants were engaged in an unlawful agreement to set U.S. dollar LIBOR and conspired to monopolize the market for LIBOR-based consumer loans and credit cards. In September 2022, the Court dismissed plaintiffs' complaint in its entirety, and plaintiffs filed an amended complaint asserting similar antitrust claims, which defendants have moved to dismiss. The Firm's settlements of putative class actions related to the Singapore Interbank Offered Rate and the Singapore Swap Offer Rate, and the Australian Bank Bill Swap Reference Rate received final court approval in November 2022, while the settlement related to Swiss franc LIBOR remains subject to court approval.

Securities Lending Antitrust Litigation. JPMorgan Chase Bank, N.A., J.P. Morgan Securities LLC, J.P. Morgan Prime, Inc., and J.P. Morgan Strategic Securities Lending Corp. are named as defendants in a putative class action filed in the United States District Court for the Southern District of New York. The complaint asserts violations of federal antitrust law and New York State common law in connection with an alleged conspiracy to prevent the emergence of anonymous exchange trading for securities lending transactions. Defendants' motion to dismiss the complaint was denied. Plaintiffs have moved to certify a class in this action, which defendants have opposed. The parties have reached an agreement in principle to settle this action, subject to final documentation and court approval.
Shareholder Litigation. Several shareholder putative class actions, as well as shareholder derivative actions purporting to act on behalf of the Firm, have been filed against the Firm, its Board of Directors and certain of its current and former officers.

Certain of these shareholder suits relate to historical trading practices by former employees in the precious metals and U.S. treasuries markets and related conduct which were the subject of the Firm's resolutions with the DOJ, CFTC and SEC in September 2020, and fiduciary activities that were separately the subject of a resolution between JPMorgan Chase Bank, N.A. and the OCC in November 2020. One of these shareholder derivative suits was filed in the Supreme Court of the State of New York in May 2022, asserting breach of fiduciary duty and unjust enrichment claims relating to the historical trading practices and related conduct and fiduciary activities which
were the subject of the resolutions described above. In December 2022, the court granted defendants' motion to dismiss this action in full, and in January 2023, the plaintiff filed a notice of appeal, which remains pending. A second shareholder derivative action was filed in the United States District Court for the Eastern District of New York in December 2022 relating to the historical trading practices and related conduct, which asserts breach of fiduciary duty and contribution claims and alleges that the shareholder is excused from making a demand to commence litigation because such a demand would have been futile. Defendants have moved to dismiss the complaint. In addition, a consolidated putative class action is pending in the United States District Court for the Eastern District of New York on behalf of shareholders who acquired shares of JPMorgan Chase common stock during the putative class period, alleging that certain SEC filings of the Firm were materially false or misleading because they did not disclose certain information relating to the historical trading practices and conduct. Defendants have moved to dismiss the amended complaint in this action.

A separate shareholder derivative suit was filed in March 2022 in the United States District Court for the Eastern District of New York asserting breaches of fiduciary duty and violations of federal securities laws based on the alleged failure of the Board of Directors to exercise adequate oversight over the Firm's compliance with records preservation requirements which were the subject of resolutions between certain of the Firm's subsidiaries and the SEC and the CFTC. Defendants' motion to dismiss the amended complaint is pending.
Two shareholder derivative suits were filed in May and June 2023, respectively, in the United States District Court for the Southern District of New York asserting breaches of fiduciary duty and unjust enrichment based on the alleged failure of the Board of Directors and James Dimon to exercise adequate oversight with respect to the Firm's provision of banking services to Jeffrey Epstein. These actions allege that the shareholders are excused from making a demand to commence litigation because such a demand would have been futile. These actions were consolidated and defendants have moved to dismiss the amended complaint filed by the plaintiffs.

In addition to the various legal proceedings discussed above, JPMorgan Chase and its subsidiaries are named as defendants or are otherwise involved in a substantial number of other legal proceedings. The Firm believes it has meritorious defenses to the claims asserted against it in its currently outstanding legal proceedings and it intends to defend itself vigorously. Additional legal proceedings may be initiated from time to time in the future.

The Firm has established reserves for several hundred of its currently outstanding legal proceedings. In accordance with the provisions of U.S. GAAP for contingencies, the Firm accrues for a litigation-related liability when it is probable
that such a liability has been incurred and the amount of the loss can be reasonably estimated. The Firm evaluates its outstanding legal proceedings each quarter to assess its litigation reserves, and makes adjustments in such reserves, upward or downward, as appropriate, based on management's best judgment after consultation with counsel. The Firm's legal expense was $\$ 420$ million and $\$ 73$ million for the three months ended June 30, 2023 and 2022, respectively. There is no assurance that the Firm's litigation reserves will not need to be adjusted in the future.

In view of the inherent difficulty of predicting the outcome of legal proceedings, particularly where the claimants seek very large or indeterminate damages, or where the matters present novel legal theories, involve a large number of parties or are in early stages of discovery, the Firm cannot state with confidence what will be the eventual outcomes of the currently pending matters, the timing of their ultimate resolution or the eventual losses, fines, penalties or consequences related to those matters. JPMorgan Chase believes, based upon its current knowledge and after consultation with counsel, consideration of the material legal proceedings described above and after taking into account its current litigation reserves and its estimated aggregate range of possible losses, that the other legal proceedings currently pending against it should not have a material adverse effect on the Firm's consolidated financial condition. The Firm notes, however, that in light of the uncertainties involved in such proceedings, there is no assurance that the ultimate resolution of these matters will not significantly exceed the reserves it has currently accrued or that a matter will not have material reputational consequences. As a result, the outcome of a particular matter may be material to JPMorgan Chase's operating results for a particular period, depending on, among other factors, the size of the loss or liability imposed and the level of JPMorgan Chase's income for that period.

## Note 27 - Business segments

The Firm is managed on an LOB basis. There are four major reportable business segments - Consumer \& Community Banking, Corporate \& Investment Bank, Commercial Banking and Asset \& Wealth Management. In addition, there is a Corporate segment. The business segments are determined based on the products and services provided, or the type of customer served, and they reflect the manner in which financial information is currently evaluated by the Firm's Operating Committee. Segment results are presented on a managed basis. Refer to Segment results below, and Note 32 of JPMorgan Chase's 2022 Form 10-K for a further discussion of JPMorgan Chase's business segments.

## Segment results

The following table provides a summary of the Firm's segment results as of or for the three and six months ended June 30, 2023 and 2022, on a managed basis. The Firm's definition of managed basis starts with the reported U.S. GAAP results and includes certain reclassifications to present total net revenue for the Firm (and each of the reportable business segments) on an FTE basis.

Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented in the managed results on a basis comparable to taxable investments and securities. Refer to Note 32 of JPMorgan Chase's 2022 Form 10-K for additional information on the Firm's managed basis.

## Capital allocation

The amount of capital assigned to each business segment is referred to as equity. At least annually, the assumptions, judgments and methodologies used to allocate capital are reassessed and, as a result, the capital allocated to the LOBs may change. As of June 30, 2023, the Firm updated its line of business capital allocations to reflect the impact of the First Republic acquisition. Refer to Line of business equity on page 93 of JPMorgan Chase's 2022 Form 10-K for additional information on capital allocation.

(a) Segment managed results reflect revenue on an FTE basis with the corresponding income tax impact recorded within income tax expense/(benefit). These adjustments are eliminated in reconciling items to arrive at the Firm's reported U.S. GAAP results.
(b) In the first quarter of 2023, the allocations of revenue and expense to CCB associated with a Merchant Services revenue sharing agreement were discontinued and are now retained in Payments in CIB. Prior-period amounts have been revised to conform with the current presentation.

Segment results and reconciliation ${ }^{(\mathrm{a})}$

| As of or for the six months ended June 30, (in millions, except ratios) | Consumer \&Community Banking |  |  |  | Corporate \&Investment Bank |  |  |  |  |  | Commercial Banking |  |  |  | Asset \& Wealth Management |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  | 2022 |  | 2023 |  |  | 2022 |  |  | 2023 |  | 2022 |  | 2023 |  | 2022 |  |
| Noninterest revenue | \$ | 7,166 | \$ | 7,705 | (b) | \$ | 22,325 | \$ | 18,809 | (b) | \$ | 1,616 | \$ | 1,771 | \$ | 6,691 | \$ | 6,323 |
| Net interest income |  | 26,523 |  | 17,035 |  |  | 3,794 |  | 6,770 |  |  | 5,883 |  | 3,310 |  | 3,036 |  | 2,298 |
| Total net revenue |  | 33,689 |  | 24,740 |  |  | 26,119 |  | 25,579 |  |  | 7,499 |  | 5,081 |  | 9,727 |  | 8,621 |
| Provision for credit losses |  | 3,264 |  | 1,439 |  |  | 96 |  | 504 |  |  | 1,514 |  | 366 |  | 173 |  | 198 |
| Noninterest expense |  | 16,378 |  | 15,313 | (b) |  | 14,377 |  | 14,173 | (b) |  | 2,608 |  | 2,285 |  | 6,254 |  | 5,779 |
| Income/(loss) before income tax expense/ (benefit) |  | 14,047 |  | 7,988 |  |  | 11,646 |  | 10,902 |  |  | 3,377 |  | 2,430 |  | 3,300 |  | 2,644 |
| Income tax expense/(benefit) |  | 3,498 |  | 1,972 | (b) |  | 3,133 |  | 2,813 | (b) |  | 822 |  | 586 |  | 707 |  | 632 |
| Net income/(loss) | \$ | 10,549 | \$ | 6,016 |  | \$ | 8,513 | \$ | 8,089 |  | \$ | 2,555 | \$ | 1,844 | \$ | 2,593 | \$ | 2,012 |
| Average equity | \$ | 53,180 | \$ | 50,000 |  | \$ | 108,000 | \$ | 103,000 |  | \$ | 29,005 | \$ | 25,000 | \$ | 16,337 | \$ | 17,000 |
| Total assets |  | 620,193 |  | 500,219 |  |  | 1,432,054 |  | ,403,558 |  |  | 305,280 |  | 242,456 |  | 247,118 |  | 235,553 |
| ROE |  | 39 \% |  | 23 \% |  |  | 15 \% |  | 15 \% |  |  | 17 \% |  | 14 \% |  | 31 \% |  | 23 \% |
| Overhead ratio |  | 49 |  | 62 |  |  | 55 |  | 55 |  |  | 35 |  | 45 |  | 64 |  | 67 |


| As of or for the six months ended June 30, (in millions, except ratios) | Corporate |  |  |  | Reconciling Items ${ }^{(\mathrm{a})}$ |  |  |  | Total |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  | 2022 |  | 2023 |  | 2022 |  | 2023 |  | 2022 |  |
| Noninterest revenue | \$ | 1,225 | \$ | (589) | \$ | $(1,857)$ | \$ | $(1,587)$ | \$ | 37,166 | \$ | 32,432 |
| Net interest income |  | 3,478 |  | (212) |  | (224) |  | (201) |  | 42,490 |  | 29,000 |
| Total net revenue |  | 4,703 |  | (801) |  | $(2,081)$ |  | $(1,788)$ |  | 79,656 |  | 61,432 |
| Provision for credit losses |  | 127 |  | 57 |  | - |  | - |  | 5,174 |  | 2,564 |
| Noninterest expense |  | 1,312 |  | 390 |  | - |  | - |  | 40,929 |  | 37,940 |
| Income/(loss) before income tax expense/ (benefit) |  | 3,264 |  | $(1,248)$ |  | $(2,081)$ |  | $(1,788)$ |  | 33,553 |  | 20,928 |
| Income tax expense/(benefit) |  | 380 |  | (218) |  | $(2,081)$ |  | $(1,788)$ |  | 6,459 |  | 3,997 |
| Net income/(loss) | \$ | 2,884 | \$ | $(1,030)$ | \$ | - | \$ | - | \$ | 27,094 | \$ | 16,931 |
| Average equity | \$ | 68,038 | \$ | 55,234 | \$ | - | \$ | - | \$ | 274,560 | \$ | 250,234 |
| Total assets |  | 263,595 |  | 459,528 |  | NA |  | NA |  | 3,868,240 |  | 3,841,314 |
| ROE |  | NM |  | NM |  | NM |  | NM |  | 19 \% |  | 13 \% |
| Overhead ratio |  | NM |  | NM |  | NM |  | NM |  | 51 |  | 62 |

(a) Segment managed results reflect revenue on an FTE basis with the corresponding income tax impact recorded within income tax expense/(benefit). These adjustments are eliminated in reconciling items to arrive at the Firm's reported U.S. GAAP results.
(b) In the first quarter of 2023, the allocations of revenue and expense to CCB associated with a Merchant Services revenue sharing agreement were discontinued and are now retained in Payments in CIB. Prior-period amounts have been revised to conform with the current presentation.

## Note 28 - Business combinations

On May 1, 2023, JPMorgan Chase acquired certain assets and assumed certain liabilities of First Republic Bank (the "First Republic acquisition") from the Federal Deposit Insurance Corporation ("FDIC"), as receiver, for $\$ 67.9$ billion, resulting in an estimated bargain purchase gain of $\$ 2.7$ billion recorded in other income. The estimated bargain purchase gain represents the excess of the estimated fair value of the net assets acquired above the purchase price. The First Republic acquisition further advances the Firm's wealth management strategy and is complementary to the Firm's existing franchises.
The Firm has determined that this acquisition constitutes a business combination under U.S. GAAP. Accordingly, the initial recognition of the assets acquired and liabilities assumed were generally measured at their estimated fair values as of May 1, 2023. The determination of those fair values required management to make certain market-based assumptions about expected future cash flows, discount rates and other valuation inputs at the time of the acquisition. The Firm believes that the fair value estimates of the assets acquired and liabilities assumed provide a reasonable basis for determining the estimated bargain purchase gain.
The Firm and the FDIC have not yet completed the settlement process under which the purchase price, and the identification of the assets acquired and liabilities assumed, will be finalized. The finalization of this settlement process may impact the amount of the estimated bargain purchase gain. The purchase and assumption agreement entered into with the FDIC allows for final settlement to occur up to a year after the acquisition date.
In addition, the purchase price and the estimated bargain purchase gain could change pending management's finalization of its acquisition date fair value estimates for certain of the assets acquired and liabilities assumed (such as loans and commitments, intangible assets and leases), which may take place up to one year from the acquisition date, as permitted by U.S. GAAP.

In connection with the First Republic acquisition, the Firm and the FDIC entered into two shared-loss agreements with respect to certain loans and lending-related commitments (the "shared-loss assets"): the Commercial Shared-Loss Agreement ("CSLA") and the Single-Family Shared-Loss Agreement ("SFSLA"). The CSLA covers $80 \%$ of credit losses, on a pari-passu basis, over 5 years with a subsequent 3 -year recovery period for certain acquired commercial loans and other real estate exposure. The SFSLA covers $80 \%$ of credit losses, on a pari-passu basis, for 7 years for certain acquired loans secured by mortgages on real property or shares in cooperative property constituting a primary residence. The indemnification assets which represent the fair value of the CSLA and SFSLA are reflected in the total assets acquired.

As part of the consideration paid, JPMorgan Chase issued a five-year, $\$ 50$ billion secured note to the FDIC (the "Purchase Money Note"). The Purchase Money Note bears interest at a fixed rate of $3.4 \%$ and is secured by certain of the acquired loans. The Purchase Money Note is prepayable upon notice to the FDIC.
The Firm had placed a $\$ 5$ billion deposit with First Republic Bank on March 16, 2023, as part of $\$ 30$ billion of deposits provided by a consortium of large U.S. banks. The Firm's $\$ 5$ billion deposit was effectively settled as part of the acquisition and the associated allowance for credit losses was released upon closing. The Firm subsequently repaid the remaining $\$ 25$ billion of deposits to the consortium of banks, including accrued interest through the payment date on May 9, 2023.

The computation of the purchase price, the estimated fair value of the assets acquired and liabilities assumed as part of the First Republic acquisition and the related estimated bargain purchase gain are presented below.

| (in millions) | Fair value purchase price allocation as of May 1, 2023 |  |
| :---: | :---: | :---: |
| Purchase price consideration |  |  |
| Amounts paid/due to the FDIC, net of cash acquired ${ }^{(a)}$ | \$ | 13,589 |
| Purchase Money Note (at fair value) |  | 48,848 |
| Settlement of First Republic deposit and other related party transactions ${ }^{(b)}$ |  | 5,447 |
| Contingent consideration - Shared-loss agreements |  | 15 |
| Purchase price consideration | \$ | 67,899 |
| Assets |  |  |
| Securities | \$ | 30,285 |
| Loans |  | 152,335 |
| Core deposit and customer relationship intangibles |  | 1,462 |
| Indemnification assets - Shared-loss agreements |  | 675 |
| Accounts receivable and other assets ${ }^{(\mathrm{c})}$ |  | 7,551 |
| Total assets acquired | \$ | 192,308 |
| Liabilities |  |  |
| Deposits | \$ | 87,507 |
| FHLB advances |  | 27,919 |
| Lending-related commitments |  | 2,409 |
| Accounts payable and other liabilities ${ }^{(c)}$ |  | 3,006 |
| Deferred tax liabilities |  | 856 |
| Total liabilities assumed | \$ | 121,697 |
| Fair value of net assets acquired | \$ | 70,611 |
| Estimated gain on acquisition, after income taxes | \$ | 2,712 |

(a) Includes $\$ 10.6$ billion of cash paid to the FDIC at acquisition and $\$ 3.7$ billion payable to the FDIC, less cash acquired of $\$ 680$ million.
(b) Includes $\$ 447$ million of securities financing transactions with First Republic Bank that were effectively settled on the acquisition date.
(c) Other assets include $\$ 1.2$ billion in tax-oriented investments and $\$ 756$ million of lease right-of-use assets. Other liabilities include the related tax-oriented investment liabilities of $\$ 669$ million and lease liabilities of $\$ 756$ million. Refer to Note 14 and Note 17 for additional information.

The issuance of the $\$ 50$ billion Purchase Money Note, the effective settlement of the Firm's $\$ 5$ billion deposit and $\$ 447$ million of securities financing with First Republic Bank, and the $\$ 3.7$ billion payable to the FDIC as part of the purchase price consideration are considered non-cash transactions.
The following describes the accounting policies and fair value methodologies generally used by the Firm for the following assets acquired and liabilities assumed: core deposit and customer relationship intangibles, shared-loss agreements and the related indemnification assets, Purchase Money Note, and FHLB advances.

Refer to JPMorgan Chase's 2022 Form 10-K for a discussion of the Firm's accounting policies and valuation methodologies for securities, loans, deposits, and lending-related commitments.

Core deposit and customer relationship intangibles Core deposit and certain wealth management customer relationship intangibles were acquired as part of the First Republic transaction. The core deposit intangible of $\$ 1.3$ billion was valued by discounting estimated after-tax cost savings over the remaining useful life of the deposits using the favorable source of funds method. The after-tax cost savings were estimated based on the difference between the cost of maintaining the core deposit base relative to the cost of next best alternative funding sources available to market participants. The customer relationship intangibles of $\$ 187$ million were valued by discounting estimated aftertax earnings over their remaining useful lives using the multi-period excess earnings method. Both intangible asset valuations utilized assumptions that the Firm believes a market participant would use to estimate fair values, such as growth and attrition rates, projected fee income as well
as related costs to service the relationships, and discount rates. The core deposit and customer relationship intangibles will be amortized over a projected period of future cash flows of approximately 7 years. As of June 30, 2023, the carrying values of the core deposit and customer relationship intangibles were $\$ 1.2$ billion and $\$ 183$ million, respectively, reflecting accumulated amortization of approximately $\$ 30$ million and $\$ 4$ million, respectively.

Indemnification assets - Shared-loss agreements The indemnification assets represent forecasted recoveries from the FDIC associated with the shared-loss assets over the respective shared loss recovery periods. The indemnification assets were recorded at fair value in other assets on the Consolidated balance sheets on the acquisition date. The fair values of the indemnification assets were estimated based on the timing of the forecasted losses underlying the related allowance for credit losses.

The subsequent quarterly remeasurement of the indemnification assets will be based on changes in amount and timing of forecasted losses in the allowance for credit losses associated with the shared loss assets and will be recorded in other income. Under certain circumstances, the Firm may be required to make a payment to the FDIC upon termination of the shared-loss agreements based on the level of actual losses and recoveries on the shared-loss assets. The estimated potential future payment is reflected as contingent consideration as part of the purchase price consideration.

## Purchase Money Note and FHLB advances

The Purchase Money Note is recorded in Iong-term debt on the Consolidated balance sheets. The fair value of the Purchase Money Note was estimated based on a discounted cash flow methodology and incorporated estimated market discount rates.
The FHLB advances assumed in the acquisition are recorded in short-term borrowings and in long-term debt. The fair value of the FHLB advances was based on a discounted cash flow methodology and considered the observed FHLB advance issuance rates.

Loans
The following table presents the unpaid principal balance and estimated fair value of the loans acquired as of May 1, 2023.

| (in millions) | May 1, 2023 |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | UPB |  | Fair value |  |
| Residential real estate | \$ | 106,240 | \$ | 91,906 |
| Auto and other |  | 3,092 |  | 2,031 |
| Total consumer |  | 109,332 |  | 93,937 |
| Secured by real estate |  | 37,119 |  | 33,605 |
| Commercial \& industrial |  | 4,333 |  | 3,933 |
| Other |  | 22,597 |  | 20,860 |
| Total wholesale |  | 64,049 |  | 58,398 |
| Total loans | \$ | 173,381 | \$ | 152,335 |

Unaudited pro forma condensed combined financial information
Included in the Firm's Consolidated statements of income are noninterest revenue, net interest income and net income contributed by First Republic since the acquisition date of May 1, 2023 of $\$ 3.1$ billion, $\$ 897$ million and $\$ 2.4$ billion, respectively, for the three and six months ended June 30, 2023.

The following table presents certain unaudited pro forma financial information for the three and six months ended June 30, 2023 and 2022 as if the First Republic acquisition had occurred on January 1, 2022, including recognition of the estimated bargain purchase gain of $\$ 2.7$ billion and the provision for credit losses of $\$ 1.2$ billion. Additional adjustments include the interest on the Purchase Money Note and the impact of amortizing and accreting certain estimated fair value adjustments related to intangible assets and loans.

The Firm expects to achieve operating cost savings and other business synergies resulting from the acquisition that are not reflected in the pro forma amounts. The pro forma information is not necessarily indicative of the historical results of operations had the acquisition occurred on January 1, 2022, nor is it indicative of the results of operations in future periods, particularly in light of recent changes in market and economic conditions.

| (in millions) | Three months ended June 30, |  |  |  | Six months ended June 30, |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  |  | 2022 |  | 2023 |  | 2022 |
| Noninterest revenue | \$ | 16,924 | \$ | 15,853 | \$ | 34,832 | \$ | 35,675 |
| Net interest income |  | 22,184 |  | 16,180 |  | 44,084 |  | 30,997 |
| Net income |  | 13,565 |  | 9,086 |  | 26,726 |  | 18,887 |

## Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of JPMorgan Chase \& Co.:

## Results of Review of Interim Financial Statements

 We have reviewed the accompanying consolidated balance sheet of JPMorgan Chase \& Co. and its subsidiaries (the "Firm") as of June 30, 2023, and the related consolidated statements of income, comprehensive income and changes in stockholders' equity for the three-month and six-month periods ended June 30,2023 and 2022 and the consolidated statements of cash flows for the six-month periods ended June 30, 2023 and 2022, including the related notes (collectively referred to as the "interim financial statements"). Based on our reviews, we are not aware of any material modifications that should be made to the accompanying interim financial statements for them to be in conformity with accounting principles generally accepted in the United States of America.We have previously audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheet of the Firm as of December 31, 2022, and the related consolidated statements of income, comprehensive income, changes in stockholders' equity and of cash flows for the year then ended (not presented herein), and in our report dated February 21, 2023, which included a paragraph describing a change in the manner of accounting for credit losses on certain financial instruments in 2020, we expressed an unqualified opinion on those consolidated financial statements. In our opinion, the information set forth in the accompanying consolidated balance sheet information as of December 31, 2022, is fairly stated, in all material respects, in relation to the consolidated balance sheet from which it has been derived.

## Basis for Review Results

These interim financial statements are the responsibility of the Firm's management. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Firm in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB. We conducted our review in accordance with the standards of the PCAOB. A review of interim financial information consists principally of applying analytical procedures and making inquiries of persons responsible for financial and accounting matters. It is substantially less in scope than an audit conducted in accordance with the standards of the PCAOB, the objective of which is the expression of an opinion regarding the financial statements taken as a whole. Accordingly, we do not express such an opinion.


August 3, 2023

JPMorgan Chase \& Co.

## Consolidated average balance sheets, interest and rates (unaudited) (Taxable-equivalent interest and rates; in millions, except rates)

|  | Three months ended June 30, 2023 |  |  |  |  | Three months ended June 30, 2022 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Average balance |  | Interest ${ }^{(f)}$ |  | Rate (annualized) | Average balance |  | Interest ${ }^{(f)}$ |  | Rate (annualized) |
| Assets |  |  |  |  |  |  |  |  |  |  |
| Deposits with banks | \$ | 495,018 | \$ | 5,189 | 4.20 \% | \$ | 694,644 | \$ | 1,079 | 0.62 \% |
| Federal funds sold and securities purchased under resale agreements |  | 326,563 |  | 3,767 | 4.63 |  | 305,132 |  | 543 | 0.71 |
| Securities borrowed |  | 191,393 |  | 1,866 | 3.91 |  | 207,437 |  | 173 | 0.33 |
| Trading assets - debt instruments |  | 391,945 |  | 4,025 | 4.12 |  | 273,736 |  | 2,058 | 3.02 |
| Taxable securities |  | 578,876 |  | 4,194 | 2.91 |  | 644,037 |  | 2,289 | 1.43 |
| Nontaxable securities ${ }^{(a)}$ |  | 32,676 |  | 390 | 4.79 |  | 28,762 |  | 309 | 4.31 |
| Total investment securities |  | 611,552 |  | 4,584 | 3.01 (g) |  | 672,799 |  | 2,598 | 1.55 (g) |
| Loans |  | 1,238,237 |  | 20,351 | 6.59 |  | 1,093,106 |  | 11,656 | 4.28 |
| All other interest-earning assets ${ }^{(b)}$ |  | 89,072 |  | 1,966 | 8.85 |  | 139,040 |  | 642 | 1.85 |
| Total interest-earning assets |  | 3,343,780 |  | 41,748 | 5.01 |  | 3,385,894 |  | 18,749 | 2.22 |
| Allowance for loan losses |  | $(20,055)$ |  |  |  |  | $(17,194)$ |  |  |  |
| Cash and due from banks |  | 25,228 |  |  |  |  | 28,712 |  |  |  |
| Trading assets - equity and other instruments |  | 169,558 |  |  |  |  | 151,309 |  |  |  |
| Trading assets - derivative receivables |  | 63,339 |  |  |  |  | 84,483 |  |  |  |
| Goodwill, MSRs and other intangible Assets |  | 62,530 |  |  |  |  | 59,355 |  |  |  |
| All other noninterest-earning assets |  | 207,008 |  |  |  |  | 219,084 |  |  |  |
| Total assets |  | 3,851,388 |  |  |  |  | 3,911,643 |  |  |  |
| Liabilities |  |  |  |  |  |  |  |  |  |  |
| Interest-bearing deposits | \$ | 1,715,699 | \$ | 9,591 | 2.24 \% | \$ | ,790,421 | \$ | 898 | 0.20 \% |
| Federal funds purchased and securities loaned or sold under repurchase agreements |  | 263,718 |  | 3,400 | 5.17 |  | 233,376 |  | 445 | 0.76 |
| Short-term borrowings ${ }^{(c)}$ |  | 35,335 |  | 428 | 4.87 |  | 50,833 |  | 113 | 0.91 |
| Trading liabilities - debt and all other interest-bearing liabilities ${ }^{(d)(e)}$ |  | 293,269 |  | 2,373 | 3.25 |  | 274,435 |  | 471 | 0.69 |
| Beneficial interests issued by consolidated VIEs |  | 15,947 |  | 197 | 4.95 |  | 10,577 |  | 30 | 1.11 |
| Long-term debt |  | 294,239 |  | 3,876 | 5.28 |  | 246,195 |  | 1,561 | 2.54 |
| Total interest-bearing liabilities |  | 2,618,207 |  | 19,865 | 3.04 |  | 2,605,837 |  | 3,518 | 0.54 |
| Noninterest-bearing deposits |  | 671,715 |  |  |  |  | 741,891 |  |  |  |
| Trading liabilities - equity and other instruments ${ }^{(e)}$ |  | 28,513 |  |  |  |  | 40,937 |  |  |  |
| Trading liabilities - derivative payables |  | 46,934 |  |  |  |  | 61,026 |  |  |  |
| All other liabilities, including the allowance for lending-related commitments |  | 180,730 |  |  |  |  | 181,128 |  |  |  |
| Total liabilities |  | 3,546,099 |  |  |  |  | 3,630,819 |  |  |  |
| Stockholders' equity |  |  |  |  |  |  |  |  |  |  |
| Preferred stock |  | 27,404 |  |  |  |  | 32,838 |  |  |  |
| Common stockholders' equity |  | 277,885 |  |  |  |  | 247,986 |  |  |  |
| Total stockholders' equity |  | 305,289 |  |  |  |  | 280,824 |  |  |  |
| Total liabilities and stockholders' equity |  | 3,851,388 |  |  |  |  | 3,911,643 |  |  |  |
| Interest rate spread |  |  |  |  | 1.97 \% |  |  |  |  | 1.68 \% |
| Net interest income and net yield on interest-earning assets |  |  |  | 21,883 | 2.62 |  |  | \$ | 15,231 | 1.80 |

(a) Represents securities which are tax-exempt for U.S. federal income tax purposes.
(b) Includes brokerage-related held-for-investment customer receivables, which are classified in accrued interest and accounts receivable, and all other interest-earning assets, which are classified in other assets on the Consolidated Balance Sheets.
(c) Includes commercial paper.
(d) All other interest-bearing liabilities include brokerage-related customer payables.
(e) The combined balance of trading liabilities - debt and equity instruments was $\$ 153.7$ billion and $\$ 140.2$ billion for the three months ended June 30 , 2023 and 2022, respectively.
(f) Interest includes the effect of certain related hedging derivatives. Taxable-equivalent amounts are used where applicable.
(g) The annualized rate for securities based on amortized cost was $2.96 \%$ and $1.52 \%$ for the three months ended June 30 , 2023 and 2022 , respectively, and does not give effect to changes in fair value that are reflected in AOCI.

## JPMorgan Chase \& Co.

## Consolidated average balance sheets, interest and rates (unaudited) <br> (Taxable-equivalent interest and rates; in millions, except rates)

|  | Six months ended June 30, 2023 |  |  | Six months ended June 30, 2022 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Average balance | Interest ${ }^{(f)}$ | Rate (annualized) | Average balance | Interest ${ }^{(f)}$ | Rate (annualized) |
| Assets |  |  |  |  |  |  |
| Deposits with banks | \$ 500,311 | \$ 10,008 | 4.03 \% | \$ 718,346 | \$ 1,317 | 0.37 \% |
| Federal funds sold and securities purchased under resale agreements | 319,911 | 6,898 | 4.35 | 300,070 | 940 | 0.63 |
| Securities borrowed | 192,114 | 3,582 | 3.76 | 212,704 | 86 | 0.08 |
| Trading assets - debt instruments | 374,908 | 7,685 | 4.13 | 272,931 | 3,833 | 2.83 |
| Taxable securities | 587,750 | 8,161 | 2.80 | 643,340 | 4,268 | 1.34 |
| Nontaxable securities ${ }^{(a)}$ | 29,022 | 698 | 4.85 | 28,647 | 616 | 4.34 |
| Total investment securities | 616,772 | 8,859 | $2.90{ }^{\text {(g) }}$ | 671,987 | 4,884 | 1.47 (g) |
| Loans | 1,184,231 | 38,105 | 6.49 | 1,080,939 | 22,317 | 4.16 |
| All other interest-earning assets ${ }^{(\text {b) }}$ | 92,372 | 3,735 | 8.15 | 136,902 | 966 | 1.42 |
| Total interest-earning assets | 3,280,619 | 78,872 | 4.85 | 3,393,879 | 34,343 | 2.04 |
| Allowance for loan losses | $(19,593)$ |  |  | $(16,807)$ |  |  |
| Cash and due from banks | 25,640 |  |  | 28,340 |  |  |
| Trading assets - equity and other instruments | 160,868 |  |  | 154,093 |  |  |
| Trading assets - derivative receivables | 63,929 |  |  | 75,956 |  |  |
| Goodwill, MSRs and other intangible Assets | 61,697 |  |  | 58,455 |  |  |
| All other noninterest-earning assets | 207,913 |  |  | 215,313 |  |  |
| Total assets | \$ 3,781,073 |  |  | \$ 3,909,229 |  |  |
| Liabilities |  |  |  |  |  |  |
| Interest-bearing deposits | \$ 1,692,993 | \$ 17,228 | 2.05 \% | \$ 1,785,896 | \$ 1,080 | 0.12 \% |
| Federal funds purchased and securities loaned or sold under repurchase agreements | 258,045 | 6,204 | 4.85 | 241,749 | 558 | 0.47 |
| Short-term borrowings ${ }^{(c)}$ | 37,039 | 849 | 4.63 | 49,360 | 157 | 0.64 |
| Trading liabilities - debt and all other interest-bearing liabilities ${ }^{(d)(e)}$ | 285,467 | 4,344 | 3.07 | 268,762 | 662 | 0.50 |
| Beneficial interests issued by consolidated VIEs | 14,722 | 344 | 4.71 | 10,733 | 48 | 0.90 |
| Long-term debt | 271,912 | 7,189 | 5.33 | 250,165 | 2,637 | 2.13 |
| Total interest-bearing liabilities | 2,560,178 | 36,158 | 2.85 | 2,606,665 | 5,142 | 0.40 |
| Noninterest-bearing deposits | 661,138 |  |  | 738,083 |  |  |
| Trading liabilities - equity and other instruments ${ }^{(\mathrm{e})}$ | 29,137 |  |  | 42,159 |  |  |
| Trading liabilities - derivative payables | 48,139 |  |  | 57,792 |  |  |
| All other liabilities, including the allowance for lending-related commitments | 180,517 |  |  | 181,116 |  |  |
| Total liabilities | 3,479,109 |  |  | 3,625,815 |  |  |
| Stockholders' equity |  |  |  |  |  |  |
| Preferred stock | 27,404 |  |  | 33,180 |  |  |
| Common stockholders' equity | 274,560 |  |  | 250,234 |  |  |
| Total stockholders' equity | 301,964 |  |  | 283,414 |  |  |
| Total liabilities and stockholders' equity | \$ 3,781,073 |  |  | \$ 3,909,229 |  |  |
| Interest rate spread |  |  | 2.00 \% |  |  | 1.64 \% |
| Net interest income and net yield on interest-earning assets |  | \$ 42,714 | 2.63 |  | \$ 29,201 | 1.74 |

(a) Represents securities which are tax-exempt for U.S. federal income tax purposes.
(b) Includes brokerage-related held-for-investment customer receivables, which are classified in accrued interest and accounts receivable, and all other interest-earning assets, which are classified in other assets on the Consolidated Balance Sheets.
(c) Includes commercial paper.
(d) All other interest-bearing liabilities include brokerage-related customer payables.
(e) The combined balance of trading liabilities - debt and equity instruments was $\$ 148.5$ billion and $\$ 140.2$ billion for the six months ended June 30 , 2023 and 2022, respectively.
(f) Interest includes the effect of certain related hedging derivatives. Taxable-equivalent amounts are used where applicable.
(g) The annualized rate for securities based on amortized cost was $2.85 \%$ and $1.45 \%$ for the six months ended June 30,2023 and 2022 , respectively, and does not give effect to changes in fair value that are reflected in AOCI.

2022 Form 10-K: Annual report on Form 10-K for year ended December 31, 2022, filed with the U.S. Securities and Exchange Commission.

## ABS: Asset-backed securities

Active foreclosures: Loans referred to foreclosure where formal foreclosure proceedings are ongoing. Includes both judicial and non-judicial states.

AFS: Available-for-sale
Allowance for loan losses to total retained loans: represents period-end allowance for loan losses divided by retained loans.

Amortized cost: Amount at which a financing receivable or investment is originated or acquired, adjusted for accretion or amortization of premium, discount, and net deferred fees or costs, collection of cash, charge-offs, foreign exchange, and fair value hedge accounting adjustments. For AFS securities, amortized cost is also reduced by any impairment losses recognized in earnings. Amortized cost is not reduced by the allowance for credit losses, except where explicitly presented net.
AOCI: Accumulated other comprehensive income/(loss)
ARM(s): Adjustable rate mortgage(s)
AUC: "Assets under custody": Represents assets held directly or indirectly on behalf of clients under safekeeping, custody and servicing arrangements.
Auto loan and lease origination volume: Dollar amount of auto loans and leases originated.

AWM: Asset \& Wealth Management

## Beneficial interests issued by consolidated VIEs:

represents the interest of third-party holders of debt, equity securities, or other obligations, issued by VIEs that JPMorgan Chase consolidates.
BHC: Bank holding company
BWM: Banking \& Wealth Management
Bridge Financing Portfolio: A portfolio of held-for-sale unfunded loan commitments and funded loans. The unfunded commitments include both short-term bridge loan commitments that will ultimately be replaced by longer term financing as well as term loan commitments. The funded loans include term loans and funded revolver facilities.

CB: Commercial Banking
CCAR: Comprehensive Capital Analysis and Review
CCB: Consumer \& Community Banking
CDS: Credit default swaps
CECL: Current Expected Credit Losses
CEO: Chief Executive Officer
CET1 capital: Common equity Tier 1 capital
CFO: Chief Financial Officer

CFTC: Commodity Futures Trading Commission
CIB: Corporate \& Investment Bank
CIO: Chief Investment Office
Client assets: Represent assets under management as well as custody, brokerage, administration and deposit accounts.
Client deposits and other third-party liabilities: Deposits, as well as deposits that are swept to on-balance sheet liabilities (e.g., commercial paper, federal funds purchased and securities loaned or sold under repurchase agreements) as part of client cash management programs.
Client investment assets: Represent assets under management as well as custody, brokerage and annuity accounts, and deposits held in investment accounts.
CLTV: Combined loan-to-value
CMT: Constant Maturity Treasury
Collateral-dependent: A loan is considered to be collateraldependent when repayment of the loan is expected to be provided substantially through the operation or sale of thecollateral when the borrower is experiencing financial difficulty, including when foreclosure is deemed probable based on borrower delinquency.
Commercial Card: provides a wide range of payment services to corporate and public sector clients worldwide through the commercial card products. Services include procurement, corporate travel and entertainment, expense management services, and business-to-business payment solutions.
Credit derivatives: Financial instruments whose value is derived from the credit risk associated with the debt of a third-party issuer (the reference entity) which allow one party (the protection purchaser) to transfer that risk to another party (the protection seller). Upon the occurrence of a credit event by the reference entity, which may include, among other events, the bankruptcy or failure to pay its obligations, or certain restructurings of the debt of the reference entity, neither party has recourse to the reference entity. The protection purchaser has recourse to the protection seller for the difference between the face value of the CDS contract and the fair value at the time of settling the credit derivative contract. The determination as to whether a credit event has occurred is generally made by the relevant International Swaps and Derivatives Association ("ISDA") Determinations Committee.
Criticized: Criticized loans, lending-related commitments and derivative receivables that are classified as special mention, substandard and doubtful categories for regulatory purposes and are generally consistent with a rating of CCC+/Caa1 and below, as defined by S\&P and Moody's.
CRR: Capital Requirements Regulation
CVA: Credit valuation adjustment

Deposit margin: Represents net interest income expressed as a percentage of average deposits.

DVA: Debit valuation adjustment
EC: European Commission
Eligible HQLA: Eligible high-quality liquid assets, for purposes of calculating the LCR, is the amount of unencumbered HQLA that satisfy certain operational considerations as defined in the LCR rule.

Eligible LTD: Long-term debt satisfying certain eligibility criteria
Embedded derivatives: are implicit or explicit terms or features of a financial instrument that affect some or all of the cash flows or the value of the instrument in a manner similar to a derivative. An instrument containing such terms or features is referred to as a "hybrid." The component of the hybrid that is the non-derivative instrument is referred to as the "host." For example, callable debt is a hybrid instrument that contains a plain vanilla debt instrument (i.e., the host) and an embedded option that allows the issuer to redeem the debt issue at a specified date for a specified amount (i.e., the embedded derivative). However, a floating rate instrument is not a hybrid composed of a fixed-rate instrument and an interest rate swap.

EPS: Earnings per share
ERISA: Employee Retirement Income Security Act of 1974
ESG: Environmental, Social and Governance
ETD: "Exchange-traded derivatives": Derivative contracts that are executed on an exchange and settled via a central clearing house.

## EU: European Union

## Expense categories:

- Volume- and/or revenue-related expenses generally correlate with changes in the related business/ transaction volume or revenue. Examples of volume- and revenue-related expenses include commissions and incentive compensation, depreciation expense related to operating lease assets, and brokerage expense related to equities trading transaction volume.
- Investments include expenses associated with supporting medium- to longer-term strategic plans of the Firm. Examples of investments include initiatives in technology (including related compensation), marketing, and compensation for new bankers and client advisors.
- Structural expenses are those associated with the day-today cost of running the bank and are expenses not covered by the above two categories. Examples of structural expenses include employee salaries and benefits, as well as noncompensation costs such as real estate and all other expenses.

Fannie Mae: Federal National Mortgage Association
FASB: Financial Accounting Standards Board
FCA: Financial Conduct Authority
FDIC: Federal Deposit Insurance Corporation

FDM: "Financial difficulty modification" applies to loan modifications effective January 1,2023 , and is deemed to occur when the Firm modifies specific terms of the original Ioan agreement. The following types of modifications are considered FDMs: principal forgiveness, interest rate reduction, other-than-insignificant payment delay, term extension or a combination of these modifications.

Federal Reserve: The Board of the Governors of the Federal Reserve System
FFIEC: Federal Financial Institutions Examination Council
FHA: Federal Housing Administration
FHLB: Federal Home Loan Bank
FICO score: A measure of consumer credit risk based on information in consumer credit reports produced by Fair Isaac Corporation. Because certain aged data is excluded from credit reports based on rules in the Fair Credit Reporting Act, FICO scores may not reflect all historical information about a consumer.

FICC: Fixed Income Clearing Corporation
FINRA: Financial Industry Regulatory Authority
Firm: JPMorgan Chase \& Co.
Forward points: represents the interest rate differential between two currencies, which is either added to or subtracted from the current exchange rate (i.e., "spot rate") to determine the forward exchange rate.
Freddie Mac: Federal Home Loan Mortgage Corporation
Free-standing derivatives: is a derivative contract entered into either separate and apart from any of the Firm's other financial instruments or equity transactions. Or, in conjunction with some other transaction and is legally detachable and separately exercisable.
FTE: Fully taxable-equivalent
FVA: Funding valuation adjustment
FX: Foreign exchange
G7: "Group of Seven nations": Countries in the G7 are Canada, France, Germany, Italy, Japan, the U.K. and the U.S.

G7 government securities: Securities issued by the government of one of the G7 nations.

Ginnie Mae: Government National Mortgage Association
GSIB: Global systemically important banks
HELOC: Home equity line of credit
Home equity - senior lien: represents loans and commitments where JPMorgan Chase holds the first security interest on the property.
Home equity - junior lien: represents loans and commitments where JPMorgan Chase holds a security interest that is subordinate in rank to other liens.
HQLA: High-quality liquid assets
HTM: Held-to-maturity
IBOR: Interbank Offered Rate

IDI: Insured depository institutions
IHC: JPMorgan Chase Holdings LLC, an intermediate holding company

Investment-grade: An indication of credit quality based on JPMorgan Chase's internal risk assessment system. "Investment grade" generally represents a risk profile similar to a rating of a "BBB-"/"Baa3" or better, as defined by independent rating agencies.

IR: Interest rate
ISDA: International Swaps and Derivatives Association
JPMorgan Chase: JPMorgan Chase \& Co.
JPMorgan Chase Bank, N.A.: JPMorgan Chase Bank, National Association
JPMorgan Chase Foundation or Foundation: a not-forprofit organization that makes contributions for charitable and educational purposes.
J.P. Morgan Securities: J.P. Morgan Securities LLC

JPMSE: J.P. Morgan SE
LCR: Liquidity coverage ratio
LIBOR: London Interbank Offered Rate
LLC: Limited Liability Company
LOB: Line of business
LTV: "Loan-to-value ratio": For residential real estate loans, the relationship, expressed as a percentage, between the principal amount of a loan and the appraised value of the collateral (i.e., residential real estate) securing the loan.

## Origination date LTV ratio

The LTV ratio at the origination date of the loan. Origination date LTV ratios are calculated based on the actual appraised values of collateral (i.e., loan-level data) at the origination date.

## Current estimated LTV ratio

An estimate of the LTV as of a certain date. The current estimated LTV ratios are calculated using estimated collateral values derived from a nationally recognized home price index measured at the metropolitan statistical area ("MSA") level. These MSA-level home price indices consist of actual data to the extent available and forecasted data where actual data is not available. As a result, the estimated collateral values used to calculate these ratios do not represent actual appraised loan-level collateral values; as such, the resulting LTV ratios are necessarily imprecise and should therefore be viewed as estimates.

## Combined LTV ratio

The LTV ratio considering all available lien positions, as well as unused lines, related to the property. Combined LTV ratios are used for junior lien home equity products.
Macro businesses: the macro businesses include Rates, Currencies and Emerging Markets, Fixed Income Financing and Commodities in CIB's Fixed Income Markets.

Managed basis: A non-GAAP presentation of Firmwide financial results that includes reclassifications to present
revenue on a fully taxable-equivalent basis. Management also uses this financial measure at the segment level, because it believes this provides information to enable investors to understand the underlying operational performance and trends of the particular business segment and facilitates a comparison of the business segment with the performance of competitors.
Markets: consists of CIB's Fixed Income Markets and Equity Markets businesses.

Master netting agreement: A single agreement with a counterparty that permits multiple transactions governed by that agreement to be terminated or accelerated and settled through a single payment in a single currency in the event of a default (e.g., bankruptcy, failure to make a required payment or securities transfer or deliver collateral or margin when due).
MBS: Mortgage-backed securities
MD\&A: Management's discussion and analysis
Measurement alternative: Measures equity securities without readily determinable fair values at cost less impairment (if any), plus or minus observable price changes from an identical or similar investment of the same issuer.
Merchant Services: offers merchants payment processing capabilities, fraud and risk management, data and analytics, and other payments services. Through Merchant Services, merchants of all sizes can accept payments via credit and debit cards and payments in multiple currencies.

MEV: Macroeconomic variable
Moody's: Moody's Investor Services
Mortgage product types:
Alt-A
Alt-A loans are generally higher in credit quality than subprime loans but have characteristics that would disqualify the borrower from a traditional prime loan. Alt-A lending characteristics may include one or more of the following: (i) limited documentation; (ii) a high CLTV ratio; (iii) loans secured by non-owner occupied properties; or (iv) a debt-to-income ratio above normal limits. A substantial proportion of the Firm's Alt-A loans are those where a borrower does not provide complete documentation of his or her assets or the amount or source of his or her income.
Option ARMs
The option ARM real estate loan product is an adjustablerate mortgage loan that provides the borrower with the option each month to make a fully amortizing, interest-only or minimum payment. The minimum payment on an option ARM Ioan is based on the interest rate charged during the introductory period. This introductory rate is usually significantly below the fully indexed rate. The fully indexed rate is calculated using an index rate plus a margin. Once the introductory period ends, the contractual interest rate charged on the loan increases to the fully indexed rate and adjusts monthly to reflect movements in the index. The minimum payment is typically insufficient to cover interest
accrued in the prior month, and any unpaid interest is deferred and added to the principal balance of the loan. Option ARM loans are subject to payment recast, which converts the loan to a variable-rate fully amortizing loan upon meeting specified loan balance and anniversary date triggers.
Prime
Prime mortgage Ioans are made to borrowers with good credit records who meet specific underwriting requirements, including prescriptive requirements related to income and overall debt levels. New prime mortgage borrowers provide full documentation and generally have reliable payment histories.
Subprime
Subprime loans are loans that, prior to mid-2008, were offered to certain customers with one or more high risk characteristics, including but not limited to: (i) unreliable or poor payment histories; (ii) a high LTV ratio of greater than 80\% (without borrower-paid mortgage insurance); (iii) a high debt-to-income ratio; (iv) an occupancy type for the loan is other than the borrower's primary residence; or (v) a history of delinquencies or late payments on the loan.
MREL: Minimum requirements for own funds and eligible liabilities

MSR: Mortgage servicing rights
NA: Data is not applicable or available for the period presented.

Net Capital Rule: Rule 15c3-1 under the Securities Exchange Act of 1934.
Net charge-off/(recovery) rate: represents net chargeoffs/(recoveries) (annualized) divided by average retained loans for the reporting period.

Net interchange income includes the following components:

- Interchange income: Fees earned by credit and debit card issuers on sales transactions.
- Rewards costs: The cost to the Firm for points earned by cardholders enrolled in credit card rewards programs generally tied to sales transactions.
- Partner payments: Payments to co-brand credit card partners based on the cost of loyalty program rewards earned by cardholders on credit card transactions.
Net yield on interest-earning assets: The average rate for interest-earning assets less the average rate paid for all sources of funds.

NFA: National Futures Association
NM: Not meaningful
Nonaccrual loans: Loans for which interest income is not recognized on an accrual basis. Loans (other than credit card loans and certain consumer loans insured by U.S. government agencies) are placed on nonaccrual status when full payment of principal and interest is not expected, regardless of delinquency status, or when principal and
interest has been in default for a period of 90 days or more unless the loan is both well-secured and in the process of collection. Collateral-dependent loans are typically maintained on nonaccrual status.
Nonperforming assets: Nonperforming assets include nonaccrual loans, nonperforming derivatives and certain assets acquired in loan satisfactions, predominantly real estate owned and other commercial and personal property.

NSFR: Net Stable Funding Ratio
OCC: Office of the Comptroller of the Currency
OCI: Other comprehensive income/(loss)
OPEB: Other postretirement employee benefit
OTC: "Over-the-counter derivatives": Derivative contracts that are negotiated, executed and settled bilaterally between two derivative counterparties, where one or both counterparties is a derivatives dealer.
OTC cleared: "Over-the-counter cleared derivatives": Derivative contracts that are negotiated and executed bilaterally, but subsequently settled via a central clearing house, such that each derivative counterparty is only exposed to the default of that clearing house.
Overhead ratio: Noninterest expense as a percentage of total net revenue.

## Parent Company: JPMorgan Chase \& Co.

Participating securities: represents unvested share-based compensation awards containing nonforfeitable rights to dividends or dividend equivalents (collectively, "dividends"), which are included in the earnings per share calculation using the two-class method. JPMorgan Chase grants restricted stock and RSUs to certain employees under its share-based compensation programs, which entitle the recipients to receive nonforfeitable dividends during the vesting period on a basis equivalent to the dividends paid to holders of common stock. These unvested awards meet the definition of participating securities. Under the two-class method, all earnings (distributed and undistributed) are allocated to each class of common stock and participating securities, based on their respective rights to receive dividends.
PCD: "Purchased credit deteriorated" assets represent acquired financial assets that as of the date of acquisition have experienced a more-than-insignificant deterioration in credit quality since origination, as determined by the Firm.
Pillar 1: The Basel framework consists of a three "Pillar" approach. Pillar 1 establishes minimum capital requirements, defines eligible capital instruments, and prescribes rules for calculating RWA.
Pillar 3: The Basel framework consists of a three "Pillar" approach. Pillar 3 encourages market discipline through disclosure requirements which allow market participants to assess the risk and capital profiles of banks.
PPP: Paycheck Protection Program under the Small Business Association ("SBA")

PRA: Prudential Regulation Authority
Pre-provision profit/(loss): represents total net revenue less noninterest expense. The Firm believes that this financial measure is useful in assessing the ability of a lending institution to generate income in excess of its provision for credit losses.
Principal transactions revenue: Principal transactions revenue is driven by many factors, including the bid-offer spread, which is the difference between the price at which the Firm is willing to buy a financial or other instrument and the price at which the Firm is willing to sell that instrument. It also consists of realized (as a result of closing out or termination of transactions, or interim cash payments) and unrealized (as a result of changes in valuation) gains and losses on financial and other instruments (including those accounted for under the fair value option) primarily used in client-driven market-making activities and on private equity investments. In connection with its client-driven marketmaking activities, the Firm transacts in debt and equity instruments, derivatives and commodities (including physical commodities inventories and financial instruments that reference commodities). Principal transactions revenue also includes certain realized and unrealized gains and losses related to hedge accounting and specified riskmanagement activities, including: (a) certain derivatives designated in qualifying hedge accounting relationships (primarily fair value hedges of commodity and foreign exchange risk), (b) certain derivatives used for specific risk management purposes, primarily to mitigate credit risk and foreign exchange risk, and (c) other derivatives.

## PSU(s): Performance share units

Regulatory VaR: Daily aggregated VaR calculated in accordance with regulatory rules.

## REO: Real estate owned

Reported basis: Financial statements prepared under U.S. GAAP, which excludes the impact of taxable-equivalent adjustments.
Retained loans: Loans that are held-for-investment (i.e. excludes loans held-for-sale and loans at fair value).
Revenue wallet: Total fee revenue based on estimates of investment banking fees generated across the industry (i.e., the revenue wallet) from investment banking transactions in M\&A, equity and debt underwriting, and loan syndications. Source: Dealogic, a third-party provider of investment banking competitive analysis and volume based league tables for the above noted industry products.
RHS: Rural Housing Service of the U.S. Department of Agriculture
ROE: Return on equity
ROTCE: Return on tangible common equity
ROU assets: Right-of-use assets
RSU(s): Restricted stock units
RWA: "Risk-weighted assets": Basel III establishes two comprehensive approaches for calculating RWA (a

Standardized approach and an Advanced approach) which include capital requirements for credit risk, market risk, and in the case of Basel III Advanced, also operational risk. Key differences in the calculation of credit risk RWA between the Standardized and Advanced approaches are that for Basel III Advanced, credit risk RWA is based on risk-sensitive approaches which largely rely on the use of internal credit models and parameters, whereas for Basel III Standardized, credit risk RWA is generally based on supervisory riskweightings which vary primarily by counterparty type and asset class. Market risk RWA is calculated on a generally consistent basis between Basel III Standardized and Basel III Advanced.
S\&P: Standard and Poors
SA-CCR: Standardized Approach for Counterparty Credit Risk
SAR as it pertains to Hong Kong: Special Administrative Region
SAR(s) as it pertains to employee stock awards: Stock appreciation rights
SCB: Stress capital buffer
Scored portfolios: Consumer Ioan portfolios that predominantly include residential real estate loans, credit card loans, auto loans to individuals and certain small business loans.

## SEC: U.S. Securities and Exchange Commission

Securitized Products Group: Comprised of Securitized Products and tax-oriented investments.
Seed capital: Initial JPMorgan capital invested in products, such as mutual funds, with the intention of ensuring the fund is of sufficient size to represent a viable offering to clients, enabling pricing of its shares, and allowing the manager to develop a track record. After these goals are achieved, the intent is to remove the Firm's capital from the investment.
Shelf securities: Securities registered with the SEC under a shelf registration statement that have not been issued, offered or sold. These securities are not included in league tables until they have actually been issued.
Single-name: Single reference-entities
SLR: Supplementary leverage ratio
SOFR: Secured Overnight Financing Rate
SPEs: Special purpose entities
Structural interest rate risk: represents interest rate risk of the non-trading assets and liabilities of the Firm.
Structured notes: Structured notes are financial instruments whose cash flows are linked to the movement in one or more indexes, interest rates, foreign exchange rates, commodities prices, prepayment rates, underlying reference pool of loans or other market variables. The notes typically contain embedded (but not separable or detachable) derivatives. Contractual cash flows for principal, interest, or both can vary in amount and timing
throughout the life of the note based on non-traditional indexes or non-traditional uses of traditional interest rates or indexes.
Suspended foreclosures: Loans referred to foreclosure where formal foreclosure proceedings have started but are currently on hold, which could be due to bankruptcy or loss mitigation. Includes both judicial and non-judicial states.

Taxable-equivalent basis: In presenting managed results, the total net revenue for each of the business segments and the Firm is presented on a tax-equivalent basis.
Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented in the managed results on a basis comparable to taxable investments and securities; the corresponding income tax impact related to tax-exempt items is recorded within income tax expense.

TBVPS: Tangible book value per share
TCE: Tangible common equity
TDR: "Troubled debt restructuring" applies to loan modifications granted prior to January 1, 2023 and is deemed to occur when the Firm modifies the original terms of a loan agreement by granting a concession to a borrower that is experiencing financial difficulty. Loans with shortterm and other insignificant modifications that are not considered concessions are not TDRs.

TLAC: Total Loss Absorbing Capacity
U.K.: United Kingdom
U.S.: United States of America
U.S. GAAP: Accounting principles generally accepted in the United States of America.
U.S. government agencies: U.S. government agencies include, but are not limited to, agencies such as Ginnie Mae and FHA, and do not include Fannie Mae and Freddie Mac which are U.S. government-sponsored enterprises ("U.S. GSEs"). In general, obligations of U.S. government agencies are fully and explicitly guaranteed as to the timely payment of principal and interest by the full faith and credit of the U.S. government in the event of a default.
U.S. GSE(s): "U.S. government-sponsored enterprises" are quasi-governmental, privately-held entities established or chartered by the U.S. government to serve public purposes as specified by the U.S. Congress to improve the flow of credit to specific sectors of the economy and provide certain essential services to the public. U.S. GSEs include Fannie Mae and Freddie Mac, but do not include Ginnie Mae or FHA. U.S. GSE obligations are not explicitly guaranteed as to the timely payment of principal and interest by the full faith and credit of the U.S. government.
U.S. Treasury: U.S. Department of the Treasury

Unaudited: Financial statements and/or information that have not been subject to auditing procedures by an independent registered public accounting firm.

VA: U.S. Department of Veterans Affairs

VaR: "Value-at-risk" is a measure of the dollar amount of potential loss from adverse market moves in an ordinary market environment.

VIEs: Variable interest entities
Warehouse loans: consist of prime mortgages originated with the intent to sell that are accounted for at fair value and classified as loans.

## CONSUMER \& COMMUNITY BANKING ("CCB")

Debit and credit card sales volume: Dollar amount of card member purchases, net of returns.

Deposit margin: Represents net interest income expressed as a percentage of average deposits.

## Home Lending Production and Home Lending Servicing

 revenue comprises the following:Net mortgage servicing revenue: Includes operating revenue earned from servicing third-party mortgage loans, which is recognized over the period in which the service is provided; changes in the fair value of MSRs; the impact of risk management activities associated with MSRs; and gains and losses on securitization of excess mortgage servicing. Net mortgage servicing revenue also includes gains and losses on sales and lower of cost or fair value adjustments of certain repurchased loans insured by U.S. government agencies.

Production revenue: Includes fees and income recognized as earned on mortgage loans originated with the intent to sell, and the impact of risk management activities associated with the mortgage pipeline and warehouse loans. Production revenue also includes gains and losses on sales and lower of cost or fair value adjustments on mortgage loans held-for-sale (excluding certain repurchased loans insured by U.S. government agencies), and changes in the fair value of financial instruments measured under the fair value option.

Mortgage origination channels comprise the following:
Retail: Borrowers who buy or refinance a home through direct contact with a mortgage banker employed by the Firm using a branch office, the Internet or by phone. Borrowers are frequently referred to a mortgage banker by a banker in a Chase branch, real estate brokers, home builders or other third parties.
Correspondent: Banks, thrifts, other mortgage banks and other financial institutions that sell closed loans to the Firm.

Credit card: is a business that primarily issues credit cards to consumers and small businesses.

Net revenue rate: Represents Card Services net revenue (annualized) expressed as a percentage of average loans for the period.

Auto loan and lease origination volume: Dollar amount of auto loans and leases originated.

## CORPORATE \& INVESTMENT BANK ("CIB")

Definition of selected CIB revenue:
Investment Banking: incorporates all revenue associated with investment banking activities, and is reported net of investment banking revenue shared with other LOBS.
Payments is a full service provider of cash management solutions, which primarily includes merchant acquiring, cross border and domestic payments, liquidity and account services, and global trade for multinational corporations, ecommerce and marketplace operators, and financial institutions.

Lending: includes net interest income, fees, gains or losses on loan sale activity, gains or losses on securities received as part of a loan restructuring, and the risk management results related to the credit portfolio.

Fixed Income Markets: primarily includes revenue related to market-making across global fixed income markets, including foreign exchange, interest rate, credit and commodities markets.

Equity Markets: primarily includes revenue related to market-making across global equity products, including cash instruments, derivatives, convertibles and prime brokerage.

Securities Services: primarily includes custody, fund accounting and administration, and securities lending products sold principally to asset managers, insurance companies and public and private investment funds. Also includes collateral management and depositary receipts businesses which provide collateral management products, and depositary bank services for American and global depositary receipt programs.
Description of certain business metrics:
Assets under custody ("Auc"): represents activities associated with the safekeeping and servicing of assets on which Securities Services earns fees.

Investment banking fees: represents advisory, equity underwriting, bond underwriting and loan syndication fees.

## COMMERCIAL BANKING ("CB")

Commercial Banking provides comprehensive financial solutions, including lending, payments, investment banking and asset management products across three primary client segments: Middle Market Banking, Corporate Client Banking and Commercial Real Estate Banking. Other includes amounts not aligned with a primary client segment.
Middle Market Banking: covers small and midsized companies, local governments and nonprofit clients.
Corporate Client Banking: covers large corporations.
Commercial Real Estate Banking: covers investors, developers, and owners of multifamily, office, retail, industrial and affordable housing properties.

CB product revenue comprises the following:
Lending: includes a variety of financing alternatives, which are primarily provided on a secured basis; collateral includes receivables, inventory, equipment, real estate or other assets. Products include term loans, revolving lines of credit, bridge financing, asset-based structures, leases, and standby letters of credit.

Payments: includes cash management solutions, which primarily includes merchant acquiring, cross border and domestic payments, liquidity and account services, and global trade solutions offered to CB clients.

Investment banking: includes revenue from a range of products providing CB clients with sophisticated capitalraising alternatives, as well as balance sheet and risk management tools through advisory, equity underwriting, and loan syndications. Revenue from fixed income and equity market products used by CB clients is also included.
Other: revenue primarily includes tax-equivalent adjustments generated from Community Development Banking and activity derived from principal transactions.

## ASSET \& WEALTH MANAGEMENT ("AWM")

Assets under management ("AuM"): represent assets managed by AWM on behalf of its Private Banking, Global Institutional and Global Funds clients. Includes "Committed capital not Called."

Client assets: represent assets under management, as well as custody, brokerage, administration and deposit accounts.

Multi-asset: Any fund or account that allocates assets under management to more than one asset class.
Alternative assets: The following types of assets constitute alternative investments - hedge funds, currency, real estate, private equity and other investment funds designed to focus on nontraditional strategies.

AWM's lines of business consist of the following:
Asset Management: offers multi-asset investment management solutions across equities, fixed income, alternatives and money market funds to institutional and retail investors providing for a broad range of clients' investment needs.

Global Private Bank: provides retirement products and services, brokerage, custody, trusts and estates, loans, mortgages, deposits and investment management to high net worth clients.

## AWM's client segments consist of the following:

Private Banking: clients include high- and ultra-high-networth individuals, families, money managers and business owners.
Global Institutional: clients include both corporate and public institutions, endowments, foundations, nonprofit organizations and governments worldwide.
Global Funds: clients include financial intermediaries and individual investors.

Asset Management has two high-level measures of its overall fund performance:
Percentage of mutual fund assets under management in funds rated 4- or 5-star: Mutual fund rating services rank funds based on their risk-adjusted performance over various periods. A 5-star rating is the best rating and represents the top $10 \%$ of industry-wide ranked funds. A 4star rating represents the next $22.5 \%$ of industry-wide ranked funds. A 3-star rating represents the next 35\% of industry-wide ranked funds. A 2-star rating represents the next $22.5 \%$ of industry-wide ranked funds. A 1-star rating is the worst rating and represents the bottom $10 \%$ of industry-wide ranked funds. An overall Morningstar rating is derived from a weighted average of the performance associated with a fund's three-, five- and ten- year (if applicable) Morningstar Rating metrics. For U.S.-domiciled funds, separate star ratings are provided at the individual share class level. The Nomura "star rating" is based on three-year risk-adjusted performance only. Funds with fewer than three years of history are not rated and hence excluded from these rankings. All ratings, the assigned peer
categories and the asset values used to derive these rankings are sourced from the applicable fund rating provider. Where applicable, the fund rating providers redenominate asset values into U.S. dollars. The percentage of AUM is based on star ratings at the share class level for U.S.-domiciled funds, and at a "primary share class" level to represent the star rating of all other funds, except for Japan, for which Nomura provides ratings at the fund level. The performance data may have been different if all share classes had been included. Past performance is not indicative of future results.

Percentage of mutual fund assets under management in funds ranked in the 1st or 2nd quartile (one, three, and five years): All quartile rankings, the assigned peer categories and the asset values used to derive these rankings are sourced from the fund rating providers. Quartile rankings are based on the net-of-fee absolute return of each fund. Where applicable, the fund rating providers redenominate asset values into U.S. dollars. The percentage of AUM is based on fund performance and associated peer rankings at the share class level for U.S.domiciled funds, at a "primary share class" level to represent the quartile ranking for U.K., Luxembourg and Hong Kong funds and at the fund level for all other funds. The performance data may have been different if all share classes had been included. Past performance is not indicative of future results.
"Primary share class" means the C share class for European funds and Acc share class for Hong Kong and Taiwan funds. If these share classes are not available, the oldest share class is used as the primary share class.

Item 3. Quantitative and Qualitative Disclosures About Market Risk.
Refer to the Market Risk Management section of Management's discussion and analysis and pages 131-138 of JPMorgan Chase's 2022 Form 10-K for a discussion of the quantitative and qualitative disclosures about market risk.
Item 4. Controls and Procedures.
As of the end of the period covered by this report, an evaluation was carried out under the supervision and with the participation of the Firm's management, including its Chairman and Chief Executive Officer and its Chief Financial Officer, of the effectiveness of its disclosure controls and procedures (as defined in Rule 13a-15(e) under the Securities Exchange Act of 1934). Based on that evaluation, the Chairman and Chief Executive Officer and the Chief Financial Officer concluded that these disclosure controls and procedures were effective. Refer to Exhibits 31.1 and 31.2 for the Certifications furnished by the Chairman and Chief Executive Officer and Chief Financial Officer, respectively.
The Firm is committed to maintaining high standards of internal control over financial reporting. Nevertheless, because of its inherent limitations, internal control over financial reporting may not prevent or detect all misstatements. Deficiencies or lapses in internal controls may occur from time to time, and there can be no assurance that any such deficiencies will not result in significant deficiencies or material weaknesses in internal control in the future and collateral consequences therefrom. Refer to "Management's report on internal control over financial reporting" on page 155 of JPMorgan Chase's 2022 Form 10K for further information.
On May 1, 2023, the Firm acquired certain assets and assumed certain liabilities of First Republic Bank from the FDIC. The Firm has included internal controls over these acquired assets and assumed liabilities in its evaluation of the effectiveness of disclosure controls and procedures. Otherwise, there was no change in the Firm's internal control over financial reporting (as defined in Rule 13a-15(f) under the Securities Exchange Act of 1934) that occurred during the three months ended June 30, 2023, that has materially affected, or is reasonably likely to materially affect, the Firm's internal control over financial reporting.
Part II - Other Information
Item 1. Legal Proceedings.
Refer to the discussion of the Firm's material legal proceedings in Note 26 of this Form 10-Q for information that updates the disclosures set forth under Part I, Item 3: Legal Proceedings, in JPMorgan Chase's 2022 Form 10-K.

Item 1A. Risk Factors.
The following discussion supplements the discussion of risk factors affecting the Firm as set forth in Part I, Item 1A: Risk Factors on pages 9-32 of JPMorgan Chase's 2022 Form 10-K and Forward-Looking Statements on page 95 of this Form $10-\mathrm{Q}$. The discussion of risk factors, as so supplemented, sets forth the material risk factors that could affect JPMorgan Chase's financial condition and operations. Readers should not consider any descriptions of such factors to be a complete set of all potential risks that could affect the Firm.

## JPMorgan Chase's acquisition of certain assets and liabilities of First Republic Bank may not result in all of the benefits anticipated.

On May 1, 2023, JPMorgan Chase Bank, N.A. acquired certain assets and assumed certain liabilities of First Republic Bank from the FDIC (the "First Republic acquisition"). There can be no assurance that the First Republic acquisition will have the anticipated positive results, including with respect to:

- the total cost of integration
- the time required to complete the integration
- the amount of longer-term cost savings
- the overall performance of the assets and liabilities acquired in the First Republic acquisition, or - an improved price for JPMorgan Chase's common stock. Integration of an acquired business can be complex and costly, and typically will involve the combination of relevant accounting and data processing systems and management controls, as well as managing relevant relationships with employees, clients, suppliers and other business partners. Integration efforts could divert management attention and resources, which could adversely affect JPMorgan Chase's operations or results. In addition, JPMorgan Chase could incur unanticipated costs or losses in connection with the First Republic acquisition and its integration efforts.
Acquisitions may also result in business disruptions that cause JPMorgan Chase to lose clients and customers, or cause clients and customers to move their business to competing financial institutions. It is possible that the integration process could result in the disruption of ongoing businesses or inconsistencies in standards, controls, procedures and policies that could adversely affect JPMorgan Chase's ability to maintain relationships with clients, customers, depositors and employees. In addition, the loss of key employees in connection with the First Republic acquisition could adversely affect JPMorgan Chase's ability to successfully conduct its business.


## Supervision and regulation

Refer to the Supervision and regulation section on pages 4-8 of JPMorgan Chase's 2022 Form 10-K for information on Supervision and Regulation.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds.
The Firm did not have any unregistered sale of equity
securities during the three months ended June 30, 2023.
Repurchases under the common share repurchase program Refer to Capital Risk Management on pages 48-53 of this Form 10-Q and pages 86-96 of JPMorgan Chase's 2022 Form 10-K for information regarding repurchases under the Firm's common share repurchase program.

The Firm is authorized to purchase up to $\$ 30$ billion under its common share repurchase program previously approved by the Board of Directors.

Shares repurchased pursuant to the common share repurchase program during the six months ended June 30,2023 were as follows.

| Six months ended June 30, 2023 | Total number of shares of common stock repurchased | Average price paid per share of common stock ${ }^{(a)}$ |  | Aggregate purchase price of common stock repurchases (in millions) ${ }^{\text {(a) }}$ |  | Dollar value of remaining authorized repurchase (in millions) ${ }^{(\mathrm{a})(\mathrm{b})}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| First quarter | 21,995,253 | \$ | 133.67 | \$ | 2,940 | \$ | 26,693 |
| April | 5,327,553 | \$ | 134.39 | \$ | 716 | \$ | 25,977 |
| May | 6,251,030 |  | 136.77 |  | 855 |  | 25,122 |
| June | 5,132,716 |  | 140.66 |  | 722 |  | 24,400 |
| Second quarter | 16,711,299 | \$ | 137.20 | \$ | 2,293 | \$ | 24,400 |
| Year-to-date | 38,706,552 | \$ | 135.19 | \$ | 5,233 | \$ | 24,400 |

(a) Excludes excise tax and commissions cost. As part of the Inflation Reduction Act of 2022, a $1 \%$ excise tax was imposed on net share repurchases effective January 1, 2023.
(b) Represents the amount remaining under the $\$ 30$ billion repurchase program.

## Item 3. Defaults Upon Senior Securities.

None.

## Item 4. Mine Safety Disclosures.

Not applicable.

## Item 5. Other Information.

## Director and executive officer trading arrangements

The following table provides information concerning Rule 10b5-1 trading arrangements adopted in the second quarter of 2023 by any director or any executive officer who is subject to the filing requirements of Section 16 of the Securities Exchange Act of 1934. These trading arrangements are intended to satisfy the affirmative defense of Rule 10b5-1(c). Certain of the Firm's directors and executive officers may participate in employee stock purchase plans, 401(k) plans or dividend reinvestment plans of the Firm that have been designed to comply with Rule 10b5-1(c). No non-Rule 10b5-1 trading arrangements were adopted by any director or executive officer during the second quarter of 2023. Additionally, no Rule 10b5-1 or non-Rule 10b5-1 trading arrangements were terminated by any director or executive officer in the second quarter of 2023 .

| Name |  |  | Ditle | Duration ${ }^{(\mathrm{a})}$ |
| :--- | :--- | :---: | :---: | :---: | | Aggregate number of shares |
| :---: |
| to be sold |

(a) Subject to compliance with Rule 10b5-1, duration could cease earlier than the final date shown above to the extent that the aggregate number of shares to be sold under the trading arrangement have been sold.

## Iran threat reduction disclosure

Pursuant to Section 219 of the Iran Threat Reduction and Syria Human Rights Act of 2012, which added Section 13(r) to the Securities Exchange Act of 1934, an issuer is required to disclose in its annual or quarterly reports, as applicable, whether it or any of its affiliates knowingly engaged in certain activities, transactions or dealings relating to Iran or with individuals or entities designated pursuant to certain Executive Orders. Disclosure may be required even where the activities, transactions or dealings were conducted in compliance with applicable law. As of the date of this report, the Firm is not aware of any activity, transaction or dealing by any of its affiliates during the quarter ended June 30, 2023 that requires disclosure under Section 219.

During the first quarter of 2023, a foreign-incorporated subsidiary of JPMorgan Chase \& Co. processed a transaction in the amount of EUR 9.90 for its client, a non-U.S. subsidiary of a U.S. insurance provider, where the transaction originated from an external account held by an individual designated under 31 C.F.R. Part 594. The transaction, which was received into the client's account held at the foreign-incorporated subsidiary of JPMorgan Chase \& Co., was for the premium of a non-life insurance product that is now suspended and no funds were made available to the designated individual. The transaction was processed in error. JPMorgan Chase \& Co. charged a fee of $\$ 0.006$ for this transaction. JPMorgan Chase \& Co. does not intend to engage in such transactions in the future.

Item 6. Exhibits.

| Exhibit No. | Description of Exhibit |
| :---: | :---: |
| 15 | Letter re: Unaudited Interim Financial Information. ${ }^{(a)}$ |
| 22 | Subsidiary Guarantors and Issuers of Guaranteed Securities. ${ }^{\left({ }^{\text {a }}\right.}$ |
| 31.1 | Certification. ${ }^{(a)}$ |
| 31.2 | Certification. ${ }^{(a)}$ |
| 32 | Certification Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. ${ }^{\text {(b) }}$ |
| 101.INS | The instance document does not appear in the interactive data file because its XBRL tags are embedded within the Inline XBRL document. |
| 101.SCH | XBRL Taxonomy Extension Schema Document. ${ }^{(a)}$ |
| 101.CAL | XBRL Taxonomy Extension Calculation Linkbase Document. ${ }^{(a)}$ |
| 101.DEF | XBRL Taxonomy Extension Definition Linkbase Document. ${ }^{(a)}$ |
| 101.LAB | XBRL Taxonomy Extension Label Linkbase Document. ${ }^{(a)}$ |
| 101.PRE | XBRL Taxonomy Extension Presentation Linkbase Document. ${ }^{(a)}$ |
| 104 | Cover Page Interactive Data File (embedded within the Inline XBRL document and included in Exhibit 101). |

(a) Filed herewith.
(b) Furnished herewith. This exhibit shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, or otherwise subject to the liability of that Section. Such exhibit shall not be deemed incorporated into any filing under the Securities Act of 1933 or the Securities Exchange Act of 1934.
(c) Pursuant to Rule 405 of Regulation S-T, includes the following financial information included in the Firm's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2023, formatted in XBRL (eXtensible Business Reporting Language) interactive data files: (i) the Consolidated statements of income (unaudited) for the three and six months ended June 30, 2023 and 2022, (ii) the Consolidated statements of comprehensive income (unaudited) for the three and six months ended June 30, 2023 and 2022, (iii) the Consolidated balance sheets (unaudited) as of June 30, 2023, and December 31, 2022, (iv) the Consolidated statements of changes in stockholders' equity (unaudited) for the three and six months ended June 30 , 2023 and 2022, (v) the Consolidated statements of cash flows (unaudited) for the six months ended June 30, 2023 and 2022, and (vi) the Notes to Consolidated Financial Statements (unaudited).

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

|  | JPMorgan Chase \& Co. |
| :---: | :---: |
| $:$ | (Registrant) |
| Managing Director and Firmwide Controller <br> (Principal Accounting Officer) |  |

Date: August 3, 2023

## Exhibit 15

## PWC

August 3, 2023

Securities and Exchange Commission
100 F Street, N.E.
Washington, DC 20549

Re: JPMorgan Chase \& Co.
Registration Statements on Form S-3
(No. 333-270004)
(No. 333-270004-01)
(No. 333-263304)

Registration Statements on Form S-8
(No. 333-272306)
(No. 333-272303)
(No. 333-272302)
(No. 333-272299)
(No. 333-219702)
(No. 333-219701)
(No. 333-219699)
(No. 333-185584)
(No. 333-185582)
(No. 333-185581)
(No. 333-175681)
(No. 333-158325)
(No. 333-142109)
(No. 333-125827)
(No. 333-112967)

Commissioners:

We are aware that our report dated August 3, 2023 on our review of interim financial information of JPMorgan Chase \& Co. and its subsidiaries (the "Firm"), which appears in this Quarterly Report on Form 10-Q, is incorporated by reference in the Registration Statements of the Firm referred to above. Pursuant to Rule 436(c) under the Securities Act of 1933, such report should not be considered a part of such Registration Statements, and is not a report within the meaning of Sections 7 and 11 of that Act.

Very truly yours,
/s/ PricewaterhouseCoopers LLP

## Exhibit 22

JPMorgan Chase \& Co.
JPMorgan Chase \& Co. guarantee of subsidiary issuances

| Securities | Guarantor |
| :--- | :--- |
| JPMorgan Chase Financial Company LLC has issued, from time to | JPMorgan Chase \& Co. |
| time, its Global Medium-Term Notes, Series A, under the Indenture |  |
| dated Februarry 19, 2016 ("Series A Notes"), that are each fully |  |
| and unconditionally guaranteed by JPMorgan Chase \& Co. In |  |
| addition, JPMorgan Chase Financial Company LLC may issue, from |  |
| time to time, debt securities (including its Series A Notes) and |  |
| warrants that are each fully and unconditionally guaranteed by |  |
| JPMorgan Chase \& Co. under the Registration Statement on Form |  |
| S-3 (Registration Statement Nos. 333-27000 and |  |
| 333-270004-01), which was declared effective on April 13, 2023. |  |

Exhibit 31.1
JPMorgan Chase \& Co.

## CERTIFICATION

I, James Dimon, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of JPMorgan Chase \& Co.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent function):
(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 3, 2023
/s/ James Dimon
James Dimon
Chairman and Chief Executive Officer

## Exhibit 31.2

JPMorgan Chase \& Co.

## CERTIFICATION

I, Jeremy Barnum, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of JPMorgan Chase \& Co.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent function):
(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 3, 2023
/s/ Jeremy Barnum
Jeremy Barnum
Executive Vice President and Chief Financial Officer

## Exhibit 32

JPMorgan Chase \& Co.

## CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of JPMorgan Chase \& Co. on Form 10-Q for the period ended June 30, 2023 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned officers of JPMorgan Chase \& Co., certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of JPMorgan Chase \& Co.
Date: August 3, 2023
By: /s/ James Dimon
James Dimon
Chairman and Chief Executive Officer
Date: August 3, 2023
By: /s/ Jeremy Barnum
Jeremy Barnum
Executive Vice President and Chief Financial Officer

This certification accompanies this Quarterly Report on Form 10-Q and shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, or otherwise subject to the liability of that Section.

A signed original of this written statement required by Section 906 has been provided to, and will be retained by, JPMorgan Chase \& Co. and furnished to the Securities and Exchange Commission or its staff upon request.

# JPMorgan Chase Bank, National Association 

## CERTIFICATE

I, Sarah Anne Clark, do hereby certify that I am a duly appointed Assistant Corporate Secretary of JPMorgan Chase Bank, National Association, a national banking association formed under the laws of the United States (the "Bank"), and that set forth below is a true and correct copy of a resolution duly adopted by the Board of Directors of the Bank on March 20, 2018. I further certify that the said resolution is still in full force and effect as of the date hereof.
"RESOLVED that loan agreements, contracts, indentures, mortgages, deeds, releases, conveyances, assignments, transfers, certificates, certifications, declarations, leases, discharges, satisfactions, settlements, petitions, schedules, accounts, affidavits, bonds, undertakings, guarantees, proxies, requisitions, demands, proofs of debt, claims, records, notes signifying indebtedness of JPMorgan Chase Bank, N.A. (the "Bank") and any other contracts, instruments or documents in connection with the conduct of the business of the Bank ("Documents"), whether or not specified in the resolutions of the Bank's Board of Directors (the "Board"), may be signed, executed, acknowledged, verified, delivered or accepted on behalf of the Bank by the Chairman of the Board, the Chief Executive Officer of the Bank ("CEO"), a President, the Chief Operating Officer, a Vice Chairman of the Board, a Vice Chairman, any member of the Firm's Operating Committee (an "Operating Committee Member"), any Executive Vice President, the Chief Financial Officer, the General Counsel, the Treasurer, the Controller, the Chief Risk Officer, the Secretary, any Senior Vice President, any Managing Director, any Executive Director, any Vice President, or any other officer having a functional title or official status which is at least equivalent to any of the foregoing corporate titles, and the seal of the Bank may be affixed to any thereof and attested by the Secretary, any Assistant Corporate Secretary, or any of the foregoing officers; provided, however, that any guarantees, comfort letters or other letters of support issued by the Bank in respect of obligations of any of the Bank's affiliates or subsidiaries ("Support Documents") may be executed only where consistent with such resolutions of the Board dated December 8, 2015, as amended, relating to the provision of Bank guarantees and other support issued by the Bank in respect of obligations of its subsidiaries and affiliates."

I further certify that the individual listed on the attached schedule holds the corresponding title indicated on the schedule for the Bank, with corresponding specimen signature included, and is empowered to act in conformity with the referenced resolution.

This certificate may be executed and delivered by electronic means. Such electronic signature shall be valid and binding as of the date indicated by the timestamp accompanying the electronic signature.

Sarah Anne Clark<br>on November 08, 2021 13:07:00 EST<br>Sarah Anne Clark

## Schedule

| Name | Title | Specimen Signature |
| :---: | :---: | :---: |
| Joanne M. Baer <br> (F/K/A <br> Joanne M. Meulendyke) | Vice President |  |

# JPMorgan Chase \& Ci. 

## POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that the undersigned, JPMORGAN CHASE \& CO., a Delaware corporation (the "Corporation"), hereby makes, constitutes and appoints Jeffrey J. Sundheimer (SID O597873), a Managing Director of JPMorgan Chase Bank, National Association and Lori M. Cadden (SID U437834), an Executive Director of JPMorgan Chase Bank, National Association (individually, each an "Attorney" and collectively, the "Attorneys"), as its true and lawful attorneys-in-fact to act on behalf of the Corporation with full power to act in its name, place and stead to do the following:
(1) to execute and deliver all documents necessary or required in connection with the submission of Requests for Proposals, disclosure statements and other documents related to transactions with government clients including, without limitation, the State of Illinois, Cook County, Illinois and the City of Chicago, in connection with the Corporation's business; and
(2) to represent the Corporation in all other acts related to the foregoing.
(3) Notwithstanding the foregoing, the Attorney may not execute powers of attorney, guarantees, comfort letters or other letters of support issued by the Corporation in respect of obligations of any of the Corporation's affiliates or subsidiaries, nor any document that would constitute a "prohibited corporate practice" under Section 64(a) of Regulation YY of the Board of Governors of the Federal Reserve System (12 C.F.R. § 252.64(a)).

This power of attorney (the "Power of Attorney") shall be effective as of the date hereof and shall remain in full force and effect until the earlier of: (i) a period of three (3) years from the date hereof; (ii) the date this Power of Attorney is revoked or terminated by the Corporation; (iii) such time as the Attorney's ordinary course of employment does not require such Attorney to take the actions authorized above; or (iv) the date the Attorney shall no longer be in the employ of the Corporation or a subsidiary or affiliate thereof.

Previous lawful actions taken by the Attorneys on behalf of the Corporation in accordance with the terms of this Power of Attorney prior to the effective date of this Power of Attorney are hereby ratified and confirmed.

The authority granted to the Attorneys by this Power of Attorney is not transferable or delegable to any other party or entity.

The Corporation hereby revokes all prior powers of attorney granted to the Attorneys named herein, which have been made by the Corporation for the same purpose.

This Power of Attorney shall be deemed to be made under, and shall be governed by and construed in accordance with, the laws of the State of New York, without regard to its conflict of laws rules.

IN WITNESS WHEREOF, the Corporation has caused this Power of Attorney to be executed by its duly authorized officer as of the $21^{\text {st }}$ day of December 2022.

## JPMORGAN CHASE \& CO.

By: Holly K.jporsed
Name: Holly K. Youngwood
Title: Managing Director


[^0]:    New York, New York 10179

[^1]:    ${ }^{1}$ This list was prepared by History Associates Incorporated at the direction of JPMorgan Chase \& Co.

[^2]:    ${ }^{1}$ This list was prepared by History Associates Incorporated at the direction of JPMorgan Chase \& Co.

[^3]:    Tulane University, Citizens Bank Minute Book No. 1 1834/07/22

    Tulane University, Citizens Bank Minute Book No. 1

[^4]:    Tulane University, Citizens Bank of Louisiana Papers, 1834-1914, Folder 3: 1852/09/13; Citizens Bank of Louisiana Papers, 1834-1914, Folder 3:

[^5]:    Avoyelles Parish, Conveyance Book I, p. 267, 1832/04/28

    Avoyelles Parish, Conveyance Book I p. 256, 1832/04/25

[^6]:    St. James Parish, Mortgage, Book 13, p. 255 1833/05/29

    St. James Parish, Mortgage, Book 19, p. 511 1841/06/14

    St James Parish, Mortgage, Book 18, p. 442, 1840/03/28

[^7]:    West Feliciana Parish, Mortgage Book L, p. 59 1840/02/07

    West Feliciana Parish, Mortgage Book L, p. 89, 1840/03/19

    West Feliciana Parish, Mortgage Book M, p. 322, 1843/04/24

[^8]:    *The definitions of certain terms set forth in Chapter 2-32 of the Municipal Code of Chicago and used in the Anti-Predatory Lending Pledge are reproduced on the attached pages.

[^9]:    The estimated average burden associated with this information collection is 50.4 hours per respondent and is estimated to vary from 20 to 775 hours per response, depending on individual circumstances. Burden estimates include the time for reviewing instructions, gathering and maintaining data in the required form, and completing the information collection, but exclude the time for compiling and maintaining business records in the normal course of a respondent's activities. A Federal agency may not conduct or sponsor, and an organization (or a person) is not required to respond to a collection of information, unless it displays a currently valid OMB control number. Comments concerning the accuracy of this burden estimate and suggestions for reducing this burden should be directed to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503, and to one of the following: Secretary, Board of Governors of the Federal Reserve System, 20th and C Streets, NW, Washington, DC 20551; Legislative and Regulatory Analysis Division, Office of the Comptroller of the Currency, Washington, DC 20219; Assistant Executive Secretary, Federal Deposit Insurance Corporation, Washington, DC 20429.

[^10]:    1. Includes interest income on time certificates of deposit not held for trading.
    2. Institutions that have adopted ASU 2016-13 should report in item 4, the provisions for credit losses for all financial assets and off-balance-sheet credit exposures that fall within the scope of the standard.
    3. For banks required to complete Schedule RC-T, items 14 through 22 , income from fiduciary activities reported in Schedule RI, item 5.a, must equal the amount reported in Schedule RC-T, item 22.
[^11]:    3. For banks required to complete Schedule RI, Memorandum item 8, trading revenue reported in Schedule RI, item 5.c, must equal the sum of Memorandum items 8.a through 8.e.
    4. Exclude net gains (losses) on sales of trading assets and held-to-maturity and available-for-sale debt securities.
    *. Describe on Schedule RI-E-Explanations.
    5. Item $8 . \mathrm{b}$ is to be completed by all institutions. See the instructions this item and the Glossary entry for "Securities Activities" for further detail on accounting for investments in equity securities.
[^12]:    2. Report the date in YYYYMMDD format. For example, a bank acquired on March 1, 2023, would report 20230301.
    3. Memorandum item 14 is to be completed only by institutions that have not adopted ASU 2016-13.
[^13]:    *. Describe on Schedule RI-E—Explanations

    1. Includes, but is not limited to, changes in net unrealized holding gains (losses) on available-for-sale debt securities, changes in accumulated net gains (losses) on cash flow hedges, foreign currency translation adjustments, and pension and other postretirement plan-related changes other than net periodic benefit cost.
[^14]:     against the allowance for credit losses on loans and leases).

[^15]:    3. Institutions that have not yet adopted ASU 2016-13 should report write-downs arising from transfers of loans to a held-for-sale account in item 4, column A.
    4. Institutions that have not yet adopted ASU 2016-13 should report the provision for loan and lease losses in item 5, column A and the amount reported must equal Schedule RI, item 4.
    *. Describe on Schedule RI-E - Explanations.
     charges.
    Memorandum item 4 is to be completed only by institutions that have not yet adopted ASU 2016-13.
    Memorandum items 5, 6, 7, and 8 are to be completed only by institutions that have adopted ASU 2016-13 Memorandum items 5, 6, 7, and 8 are to be completed only by institutions that have adopted ASU 2016-13. Memorandum items 5, 6, 7, and 8 are to be completed only by institutions that have adopted ASU 2016-13. Memorandum items 5, 6, 7, and 8 are to be completed only by institutions that have adopted ASU 2016-13.
[^16]:    3. Include all loans and leases not reported as real estate loans, credit cards, or other consumer loans in items 1,3, or 4 of Schedule RI-C.
    4. The sum of item 6, columns B, D, and F, must equal Schedule RC, item 4.c. Item 6, column E, must equal Schedule RC-C, Part I, Memorandum item 7.b. Item 6, column F, must equal Schedule RI-B, Part II, Memorandum item 4 .
[^17]:    3. Include all loans and leases not reported as real estate loans, credit cards, or other consumer loans in item 1, 3, or 4 of Schedule RI-C, Part II.
    4. Item 6, column B must equal schedule RC, item 4.c.
    5. Item 11 must equal Schedule RI-B, Part II, item 7, column B.
     of the standard in item 3.
[^18]:    Only institutions that have adopted ASU 2016-13 should report amounts in items 4.a, 6.a and 6.b, if applicable.
    Institutions that have not adopted ASU 2016-13 should report the allowance for loan and lease losses in item 6, where applicable.
    Only institutions that have adopted ASU 2016-13 should report amounts in items 4.a, 6.a and 6.b, if applicable.

    1. Only institutions that have adopted ASU 2016-13 should report amounts in items 4.a, 6.a and 6.b, if applicable.
[^19]:    Includes cash items in process of collection and unposted debits. Includes time certificates of deposit not held for trading.
    Institutions that have adopted ASU 2016-13 should report in item 2.a, amounts net of any applicable allowance for credit losses, and should equal to Schedule RC-B, item 8, column A less Schedule RI-B, Part II, item 7, column B.
    Item 2.c is to be completed by all institutions. See the instructions for this item and the Glossary entry for "Securities Activities" for further detail on accounting for investments in equity securities. Includes all securities resale agreements, regardless of maturity. Institutions that have adopted ASU 2016-13 should report in item 4.c the allowance for credit losses on loans and leases. Institutions that have adopted ASU 2016-13 should report in items 3.b and 11 amounts net of any applicable allowance for credit losses. Includes noninterest-bearing demand, time, and savings deposits.
    Report overnight Federal Home Loan Bank advances in Schedule RC, item 16, "Other borrowed money."
    10. Includes all securities repurchase agreements, regardless of maturity

    1. Includes limited-life preferred stock and related surplus.
[^20]:     adjustments, and accumulated defined benefit pension and other postretirement plan adjustments
    3. Includes treasury stock and unearned Employee Stock Ownership Plan shares.

[^21]:    1. Includes Small Business Administration "Guaranteed Loan Pool Certificates"; U.S. Maritime Administration obligations; Export-Import Bank participation certificates; and obligations (other than mortgage-backed securities) issued by the Farm Credit System, the Federal Home Loan Bank System, the Federal Home Loan Mortgage Corporation, the Federal National Mortgage Association, the Financing Corporation, Resolution Funding Corporation, the Student Loan Marketing Association, and the Tennessee Valley Authority.
    2. U.S. Government agencies include, but are not limited to, such agencies as the Government National Mortgage Association (GNMA), the Federal Deposit Insurance Corporation (FDIC), and the National Credit Union Administration (NCUA). U.S. Government-sponsored agencies include, but are not limited to, such agencies as the Federal Home Loan Mortgage Corporation (FHLMC) and the Federal National Mortgage Association (FNMA).
    3. U.S. Government agencies include, but are not limited to, such agencies as the Government National Mortgage Association (GNMA), the Federal Deposit Insurance Corporation (FDIC), and the National Credit Union Administration (NCUA). U.S. Government-sponsored agencies include, but are not limited to, such agencies as the Federal Home Loan Mortgage Corporation (FHLMC) and the Federal National Mortgage Association (FNMA).
    4. For institutions that have adopted ASU 2016-13, the total reported in column A must equal Schedule RC, item 2.a, plus Schedule RI-B, Part II, item 7, column B. For institutions that have not adopted ASU 2016-13, the total reported in column A must equal Schedule RC, item 2.a. For all institutions, the total reported in column D must equal Schedule RC, item $2 . \mathrm{b}$.
[^22]:     Schedule RC, item 2.c) at fair value.
     Schedule RC, item 2.c) at fair value.
    2. Report fixed-rate debt securities by remaining maturity and floating-rate debt securities by next repricing date.
    2. Report fixed-rate debt securities by remaining maturity and floating-rate debt securities by next repricing date.
    5. Sum of Memorandum items 2.c.(1) and 2.c.(2) plus any nonaccrual "Other mortgage-backed securities" included in Schedule RC-N, item 10, column C, must equal Schedule RC-B, sum of items 4.b and 4.c.(2), columns A and D.

    1. The $\$ 10$ billion asset size test is based on the total assets reported on the June 30, 2022, Report of Condition.
[^23]:    4. Exclude loans secured by real estate that are included in Schedule RC-C, Part I, item 1, column A.
[^24]:    1. Institutions that have adopted ASU 2016-13 should report only loans held for investment not considered purchased credit-deteriorated in Memorandum item 12.
[^25]:    1. U.S. Government agencies include, but are not limited to, such agencies as the Government National Mortgage Association (GNMA), the Federal Deposit Insurance Corporation (FDIC), and the National Credit Union Administration (NCUA). U.S. Government-sponsored agencies include, but are not limited to, such agencies as the Federal Home Loan Mortgage Corporation (FHLMC) and the Federal National Mortgage Association (FNMA).
    2. The $\$ 10$ billion asset size test is based on the total assets reported on the June 30, 2022, Report of Condition.
[^26]:    1. Exclude equity securities.
[^27]:    2. The dollar amount used as the basis for reporting in Memorandum item 1.c reflects the deposit insurance limit in effect on the report date.
     one year.
[^28]:    5. The $\$ 1$ billion asset size test is based on the total assets reported on the June 30, 2022, Report of Condition.
[^29]:     the balance sheet.
    3. See discussion of deferred income taxes in Glossary entry on "income taxes."
    4. Report interest-only strips receivable in the form of a security as available-for-sale securities in Schedule RC, item 2.b, or as trading assets in Schedule RC, item 5 , as appropriate
    5. Include Federal Reserve stock, Federal Home Loan Bank stock, and bankers' bank stock.

[^30]:    6. For savings banks, include "dividends" accrued and unpaid on deposits.
    7. See discussion of deferred income taxes in Glossary entry on "income taxes."
    8. Institutions that have adopted ASU 2016-13 should report in Schedule RC-G, item 3 the allowance for credit losses on those off-balance sheet credit exposures that are not unconditionally cancelable.
[^31]:    1. U.S. Government agencies include, but are not limited to, such agencies as the Government National Mortgage Association (GNMA), the Federal Deposit Insurance Corporation (FDIC), and the National Credit Union Administration (NCUA). U.S. Government-sponsored agencies include, but are not limited to, such agencies as the Federal Home Loan Mortgage Corporation (FHLMC) and the Federal National Mortgage Association (FNMA).
    2. Item 18.a is to be completed by all institutions. See the instructions for this item and the Glossary entry for "Securities Activities" for further detail on accounting for investments in equity securities.
[^32]:    2. Quarterly averages for all debt securities should be based on amortized cost.
    3. Quarterly averages for all debt securities should be based on amortized cost.
     fair value, c) Equity investments without readily determinable fair values, their balance sheet carrying values (i.e., fair value or, if elected, cost minus impairment, if any, plus or minus changes resulting from observable price changes).
[^33]:    1. The asset-size tests and the $\$ 300$ million credit card lines test are based on the total assets and credit card lines reported in the June 30, 2022, Report of Condition.
    2. The asset-size tests and the $\$ 300$ million credit card lines test are based on the total assets and credit card lines reported in the June 30, 2022, Report of Condition.
[^34]:    1. Sum of items 7.c.(1)(a) and 7.c.(2)(a), must equal sum of items 7.a.(1) through (4), column A. Sum of items 7.c.(1)(b), 7.c.(2)(b), and 7.c.(2)(c) must equal sum of items $7 . \mathrm{a}$.(1) through (4), column B.
    2. Sum of items 7.d.(1)(a) and (b), columns A through C, must equal sum of items 7.a.(1) through (4), column A.
    3. Sum of items 7.d.(2)(a) and (b), columns A through C, must equal sum of items 7.a.(1) through (4), column B.
[^35]:    1. The $\$ 10$ billion asset-size test is based on the total assets reported on the June 30, 2022, Report of Condition.
[^36]:     "Securities Activities" for further detail on accounting for investments in equity securities.

    1. Report fixed-rate advances by remaining maturity and floating-rate advances by next repricing date.
    2. Report both fixed- and floating-rate advances by remaining maturity. Exclude floating-rate advances with a next repricing date of one year or less that have a remaining maturity of over one year.
    3. Report fixed-rate other borrowings by remaining maturity and floating-rate other borrowings by next repricing date.
     of over one year.
[^37]:    1. Report only highest level URLs (for example, report www.examplebank.biz, but do not also report www.examplebank.biz/checking). Report each top level domain name used (for example, report both www.examplebank.biz and www.examplebank.net).
[^38]:    1. Exclude amounts reported in Memorandum items 1.f.(1) through 1.f.(4) when calculating the total in Memorandum item 1.g.
[^39]:    2. 
[^40]:     and reported in Schedule RC-R, Part I, item 26, except as described in the instructions.

    1. The dollar amounts used as the basis for reporting in Memorandum items 1.a through 1.d reflect the deposit insurance limits in effect on the report date.
[^41]:    3. Uninsured deposits should be estimated based on the deposit insurance limits set forth in Memorandum items 1.a through 1.d.
[^42]:    1. Exclude originations and purchases of 1-4 family residential mortgage loans that are held for investment.
    2. The amount reported in item 1, column A, must equal the sum of Schedule RC, items 2.b and 2.c.
[^43]:    1. Institutions that have adopted ASU 2016-13 and have elected to apply the 3-year or the 5 -year 2020 CECL transition provision should include the applicable portion of the CECL transitional amount or the modified CECL transitional amount, respectively, in this item.
[^44]:     approaches institutions should report in item 18, column B, the sum of items 13.b, 14.b, 15.b, 16, and 17, column B.
     should report the sum of item 19, column B, and item 25 in item 26.
    2. Institutions that have adopted ASU 2016-13 and have elected to apply the 3-year or the 5-year 2020 CECL transition provision should include the applicable portion of the CECL transitional amount or the modified CECL transitional amount, respectively, in item 27
    3. Beginning with the June 30,2020 , report date, all non-advanced approaches institutions should report in item 28 the sum of items $6,7,8,10 . b, 13 . a, 14 . a, 15 . a, 17$ (column $A$ ), and certain elements of item 24 - see instructions; all advanced approaches institutions should report in item 28 , the sum of items $6,7,8,10 . b, 11$, 13.b, 14.b, 15.b, 16, 17 (column B), and certain elements of item 24 - see instructions.
    4. For the December 31, 2021, report date only, advanced approaches institutions that adopt SA-CCR prior to the mandatory compliance date should enter "1" in item 31.b.

[^45]:    1. Items 38.a through 38.c should be completed only by institutions that have adopted ASU 2016-13.
     42.a.
    2. Institutions must complete item 53 only if the amount reported in item $52 . \mathrm{a}$ above is less than or equal to 2.5000 percent (plus any other applicable buffer if the institution is an advanced approaches institution or a Category III institution).
     percent (plus any other applicable buffer if the institution is an advanced approaches institution or a Category III institution).
    3. Institutions that have adopted ASU 2016-13 and have elected to apply the 3-year or the 5-year 2020 CECL transition provision should include the applicable portion of the CECL transitional amount or the modified CECL transitional amount, respectively, in item 55.a.
[^46]:    3. Institutions that have adopted ASU 2016-13 should report as a negative number allowances eligible for inclusion in tier 2 capital in Column B , which excludes PCD allowances.
    4. For loans and leases held for sale, exclude residential mortgage exposures, high volatility commercial real estate exposures, or sovereign exposures that are past due 90 days or more or on nonaccrual.
[^47]:    For loans and leases held for sale, exclude residential mortgage exposures, high volatility commercial real estate exposures, or sovereign exposures that are past due 90 days or more or on nonaccrual.
    For loans and leases, net of unearned income, exclude residential mortgage exposures, high volatility commercial real estate exposures, or sovereign exposures that are past due 90 days or more or on nonaccrual.
    8. Includes premises and fixed assets; other real estate owned; investments in unconsolidated subsidiaries and associated companies; direct and indirect investments in real estate ventures; intangible assets; and other assets.
    11. For loans and leases, net of unearned income, exclude residential mortgage exposures, high volatility commercial real estate exposures, or sovereign exposures that are past due 90 days or more or on nonaccrual.
    12. Includes premises and fixed assets; other real estate owned; investments in unconsolidated subsidiaries and associated companies; direct and indirect investments in real estate ventures; intangible assets; and other assets.

[^48]:    14. For each of columns $A$ through $R$ of item 11, report the sum of items 1 through 9 . For item 11 , the sum of columns $B$ through $R$ must equal column $A$. Item 11 , column $A$, must equal $S c h e d u l e ~ R C$, item 12 .
    15. Includes securities purchased under agreements to resell (reverse repos), securities sold under agreements to repurchase (repos), securities borrowed, and securities lent.

    - Excludes unused commitments to asset-backed commercial paper conduits.

[^49]:    22. For item 22 , the sum of columns $C$ through $Q$ must equal colum $A$.
[^50]:    24. Includes securities purchased under agreements to resell (reverse repos), securities sold under agreements to repurchase (repos), securities borrowed, and securities lent.
    *. Excludes unused commitments to asset-backed commercial paper conduits.
    25. For item 22, the sum of columns $C$ through $Q$ must equal column $A$.
[^51]:    27. Sum of items 2. b through 20 , column S; items $9 . a$, 9. b, $9 . c, 9 . d$, and 10 , columns $T$ and U ; item 25 , columns C through Q ; and item 27 (if applicable).
    28. Memorandum items 4.a through 4.c should be completed only by institutions that have adopted ASU 2016-13.
[^52]:    1. The $\$ 100$ billion asset-size test is based on the total assets reported on the June 30,2022 , Report of Condition.
    2. The $\$ 100$ billion asset-size test is based on the total assets reported on the June 30, 2022, Report of Condition.
    3. The $\$ 100$ billion asset-size test is based on the total assets reported on the June 30, 2022, Report of Condition.
[^53]:    1. Memorandum item $2 . c$ is to be completed if the principal balance of other financial assets serviced for others is more than $\$ 10$ million.
    2. The $\$ 100$ billion asset-size test is based on the total assets reported on the June 30, 2022, Report of Condition.
     as of the report date, or (2) are credit card specialty banks as defined for Uniform Bank Performance Report purposes.
[^54]:    The estimated average burden associated with this information collection is 50.4 hours per respondent and is estimated to vary from 20 to 775 hours per response, depending on individual circumstances. Burden estimates include the time for reviewing instructions, gathering and maintaining data in the required form, and completing the information collection, but exclude the time for compiling and maintaining business records in the normal course of a respondent's activities. A Federal agency may not conduct or sponsor, and an organization (or a person) is not required to respond to a collection of information, unless it displays a currently valid OMB control number. Comments concerning the accuracy of this burden estimate and suggestions for reducing this burden should be directed to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503, and to one of the following: Secretary, Board of Governors of the Federal Reserve System, 20th and C Streets, NW, Washington, DC 20551; Legislative and Regulatory Analysis Division, Office of the Comptroller of the Currency, Washington, DC 20219; Assistant Executive Secretary, Federal Deposit Insurance Corporation, Washington, DC 20429.

[^55]:    1. Includes interest income on time certificates of deposit not held for trading.
    2. Institutions that have adopted ASU 2016-13 should report in item 4, the provisions for credit losses for all financial assets and off-balance-sheet credit exposures that fall within the scope of the standard.
    3. For banks required to complete Schedule RC-T, items 14 through 22 , income from fiduciary activities reported in Schedule RI, item 5.a, must equal the amount reported in Schedule RC-T, item 22.
[^56]:    3. For banks required to complete Schedule RI, Memorandum item 8, trading revenue reported in Schedule RI, item 5.c, must equal the sum of Memorandum items 8.a through 8.e.
    4. Exclude net gains (losses) on sales of trading assets and held-to-maturity and available-for-sale debt securities.
    *. Describe on Schedule RI-E-Explanations.
    5. Item $8 . \mathrm{b}$ is to be completed by all institutions. See the instructions this item and the Glossary entry for "Securities Activities" for further detail on accounting for investments in equity securities.
[^57]:    2. Report the date in YYYYMMDD format. For example, a bank acquired on March 1, 2023, would report 20230301.
    3. Memorandum item 14 is to be completed only by institutions that have not adopted ASU 2016-13.
[^58]:    *. Describe on Schedule RI-E—Explanations

    1. Includes, but is not limited to, changes in net unrealized holding gains (losses) on available-for-sale debt securities, changes in accumulated net gains (losses) on cash flow hedges, foreign currency translation adjustments, and pension and other postretirement plan-related changes other than net periodic benefit cost.
[^59]:     against the allowance for credit losses on loans and leases).

[^60]:    3. Institutions that have not yet adopted ASU 2016-13 should report write-downs arising from transfers of loans to a held-for-sale account in item 4, column A.
    4. Institutions that have not yet adopted ASU 2016-13 should report the provision for loan and lease losses in item 5, column A and the amount reported must equal Schedule RI, item 4.
    *. Describe on Schedule RI-E - Explanations.
     charges.
    Memorandum item 4 is to be completed only by institutions that have not yet adopted ASU 2016-13.
    Memorandum items 5, 6, 7, and 8 are to be completed only by institutions that have adopted ASU 2016-13 Memorandum items 5, 6, 7, and 8 are to be completed only by institutions that have adopted ASU 2016-13. Memorandum items 5, 6, 7, and 8 are to be completed only by institutions that have adopted ASU 2016-13. Memorandum items 5, 6, 7, and 8 are to be completed only by institutions that have adopted ASU 2016-13.
[^61]:    3. Include all loans and leases not reported as real estate loans, credit cards, or other consumer loans in items 1,3, or 4 of Schedule RI-C.
    4. The sum of item 6, columns B, D, and F, must equal Schedule RC, item 4.c. Item 6, column E, must equal Schedule RC-C, Part I, Memorandum item 7.b. Item 6, column F, must equal Schedule RI-B, Part II, Memorandum item 4 .
[^62]:    3. Include all loans and leases not reported as real estate loans, credit cards, or other consumer loans in item 1, 3, or 4 of Schedule RI-C, Part II.
    4. Item 6, column B must equal schedule RC, item 4.c.
    5. Item 11 must equal Schedule RI-B, Part II, item 7, column B.
     of the standard in item 3.
[^63]:    Only institutions that have adopted ASU 2016-13 should report amounts in items 4.a, 6.a and 6.b, if applicable.
    Institutions that have not adopted ASU 2016-13 should report the allowance for loan and lease losses in item 6, where applicable.
    Only institutions that have adopted ASU 2016-13 should report amounts in items 4.a, 6.a and 6.b, if applicable.
    Only institutions that have adopted ASU 2016-13 should report amounts in items 4.a, 6.a and 6.b, if applicable.

[^64]:    Includes cash items in process of collection and unposted debits. Includes time certificates of deposit not held for trading.
    Institutions that have adopted ASU 2016-13 should report in item 2.a, amounts net of any applicable allowance for credit losses, and should equal to Schedule RC-B, item 8, column A less Schedule RI-B, Part II, item 7, column B.
    Item 2.c is to be completed by all institutions. See the instructions for this item and the Glossary entry for "Securities Activities" for further detail on accounting for investments in equity securities. Includes all securities resale agreements, regardless of maturity. Institutions that have adopted ASU 2016-13 should report in item 4.c the allowance for credit losses on loans and leases. Institutions that have adopted ASU 2016-13 should report in items 3.b and 11 amounts net of any applicable allowance for credit losses. Includes noninterest-bearing demand, time, and savings deposits.
    Report overnight Federal Home Loan Bank advances in Schedule RC, item 16, "Other borrowed money."
    10. Includes all securities repurchase agreements, regardless of maturity

    1. Includes limited-life preferred stock and related surplus.
[^65]:     adjustments, and accumulated defined benefit pension and other postretirement plan adjustments
    3. Includes treasury stock and unearned Employee Stock Ownership Plan shares.

[^66]:     mortgage-backed securities) issued by the Farm Credit System, the Federal Home Loan Bank System, the Federal Home Loan Mortgage Corporation, the Federal National Mortgage Association, the Financing Corporation, Resolution Funding Corporation, the Student Loan Marketing Association, and the Tennessee Valley Authority.
     the National Credit Union Administration (NCUA). U.S. Government-sponsored agencies include, but are not limited to, such agencies as the Federal Home Loan Mortgage Corporation (FHLMC) and the Federal National Mortgage Association (FNMA).
     the National Credit Union Administration (NCUA). U.S. Government-sponsored agencies include, but are not limited to, such agencies as the Federal Home Loan Mortgage Corporation (FHLMC) and the Federal National Mortgage Association (FNMA).
     adopted ASU 2016-13, the total reported in column A must equal Schedule RC, item 2.a. For all institutions, the total reported in column D must equal Schedule RC, item 2.b.

[^67]:     Schedule RC, item 2.c) at fair value.
     Schedule RC, item 2.c) at fair value.
    2. Report fixed-rate debt securities by remaining maturity and floating-rate debt securities by next repricing date.
    2. Report fixed-rate debt securities by remaining maturity and floating-rate debt securities by next repricing date.
    5. Sum of Memorandum items 2.c.(1) and 2.c.(2) plus any nonaccrual "Other mortgage-backed securities" included in Schedule RC-N, item 10 , column C , must equal Schedule RC-B, sum of items 4.b and 4.c.(2), columns A and D.

    1. The $\$ 10$ billion asset size test is based on the total assets reported on the June 30, 2022, Report of Condition.
[^68]:    4. Exclude loans secured by real estate that are included in Schedule RC-C, Part I, item 1, column A.
[^69]:    1. Institutions that have adopted ASU 2016-13 should report only loans held for investment not considered purchased credit-deteriorated in Memorandum item 12.
[^70]:    1. U.S. Government agencies include, but are not limited to, such agencies as the Government National Mortgage Association (GNMA), the Federal Deposit Insurance Corporation (FDIC), and the National Credit Union Administration (NCUA). U.S. Government-sponsored agencies include, but are not limited to, such agencies as the Federal Home Loan Mortgage Corporation (FHLMC) and the Federal National Mortgage Association (FNMA).
    2. The $\$ 10$ billion trading asset-size test is based on total trading assets reported on the June 30, 2022, Report of Condition.
[^71]:    1. Exclude equity securities.
[^72]:    2. The dollar amount used as the basis for reporting in Memorandum item 1.c reflects the deposit insurance limit in effect on the report date.
     one year.
[^73]:    5. The $\$ 1$ billion asset size test is based on the total assets reported on the June 30, 2022, Report of Condition.
[^74]:     the balance sheet.
    3. See discussion of deferred income taxes in Glossary entry on "income taxes."
    4. Report interest-only strips receivable in the form of a security as available-for-sale securities in Schedule RC, item 2.b, or as trading assets in Schedule RC, item 5 , as appropriate
    5. Include Federal Reserve stock, Federal Home Loan Bank stock, and bankers' bank stock.

[^75]:    6. For savings banks, include "dividends" accrued and unpaid on deposits.
    7. See discussion of deferred income taxes in Glossary entry on "income taxes."
    8. Institutions that have adopted ASU 2016-13 should report in Schedule RC-G, item 3 the allowance for credit losses on those off-balance sheet credit exposures that are not unconditionally cancelable.
[^76]:    1. U.S. Government agencies include, but are not limited to, such agencies as the Government National Mortgage Association (GNMA), the Federal Deposit Insurance Corporation (FDIC), and the National Credit Union Administration (NCUA). U.S. Government-sponsored agencies include, but are not limited to, such agencies as the Federal Home Loan Mortgage Corporation (FHLMC) and the Federal National Mortgage Association (FNMA).
    2. Item 18.a is to be completed by all institutions. See the instructions for this item and the Glossary entry for "Securities Activities" for further detail on accounting for investments in equity securities.
[^77]:    2. Quarterly averages for all debt securities should be based on amortized cost.
    3. Quarterly averages for all debt securities should be based on amortized cost.
     fair value, c) Equity investments without readily determinable fair values, their balance sheet carrying values (i.e., fair value or, if elected, cost minus impairment, if any, plus or minus changes resulting from observable price changes).
[^78]:    1. The asset-size tests and the $\$ 300$ million credit card lines test are based on the total assets and credit card lines reported in the June 30, 2022, Report of Condition.
    2. The asset-size tests and the $\$ 300$ million credit card lines test are based on the total assets and credit card lines reported in the June 30, 2022, Report of Condition.
[^79]:    1. Sum of items 7.c.(1)(a) and 7.c.(2)(a), must equal sum of items 7.a.(1) through (4), column A. Sum of items 7.c.(1)(b), 7.c.(2)(b), and 7.c.(2)(c) must equal sum of items $7 . \mathrm{a}$.(1) through (4), column B.
    2. Sum of items 7.d.(1)(a) and (b), columns A through C, must equal sum of items 7.a.(1) through (4), column A.
    3. Sum of items 7.d.(2)(a) and (b), columns A through C, must equal sum of items 7.a.(1) through (4), column B.
[^80]:    1. The $\$ 10$ billion asset-size test is based on the total assets reported on the June 30, 2022, Report of Condition.
[^81]:     "Securities Activities" for further detail on accounting for investments in equity securities.

    1. Report fixed-rate advances by remaining maturity and floating-rate advances by next repricing date.
    2. Report both fixed- and floating-rate advances by remaining maturity. Exclude floating-rate advances with a next repricing date of one year or less that have a remaining maturity of over one year.
    3. Report fixed-rate other borrowings by remaining maturity and floating-rate other borrowings by next repricing date.
     of over one year.
[^82]:    1. Report only highest level URLs (for example, report www.examplebank.biz, but do not also report www.examplebank.biz/checking). Report each top level domain name used (for example, report both www.examplebank.biz and www.examplebank.net).
[^83]:    1. Exclude amounts reported in Memorandum items 1.f.(1) through 1.f.(4) when calculating the total in Memorandum item 1.g.
[^84]:    2. 

    Memorandum items 9.a and 9.b should be completed only by institutions that have not yet adopted ASU 2016-13.

[^85]:     and reported in Schedule RC-R, Part I, item 26, except as described in the instructions.

    1. The dollar amounts used as the basis for reporting in Memorandum items 1.a through 1.d reflect the deposit insurance limits in effect on the report date.
[^86]:    3. Uninsured deposits should be estimated based on the deposit insurance limits set forth in Memorandum items 1.a through 1.d.
[^87]:    1. Exclude originations and purchases of 1-4 family residential mortgage loans that are held for investment.
    2. The amount reported in item 1, column A, must equal the sum of Schedule RC, items 2.b and 2.c.
[^88]:    1. Institutions that have adopted ASU 2016-13 and have elected to apply the 3-year or the 5 -year 2020 CECL transition provision should include the applicable portion of the CECL transitional amount or the modified CECL transitional amount, respectively, in this item.
[^89]:     approaches institutions should report in item 18, column B, the sum of items 13.b, 14.b, 15.b, 16, and 17, column B.
     should report the sum of item 19, column B, and item 25 in item 26.
    2. Institutions that have adopted ASU 2016-13 and have elected to apply the 3-year or the 5-year 2020 CECL transition provision should include the applicable portion of the CECL transitiona amount or the modified CECL transitional amount, respectively, in item 27
    3. Beginning with the June 30, 2020, report date, all non-advanced approaches institutions should report in item 28 the sum of items $6,7,8,10 . b, 13 . a, 14 . a, 15 . a, 17$ (column A), and certain elements of item 24 - see instructions; all advanced approaches institutions should report in item 28 , the sum of items $6,7,8,10 . b, 11$, 13.b, 14.b, 15.b, 16, 17 (column B), and certain elements of item 24 - see instructions.
    4. For the December 31, 2021, report date only, advanced approaches institutions that adopt SA-CCR prior to the mandatory compliance date should enter "1" in item 31.b.

[^90]:    1. Items 38.a through 38.c should be completed only by institutions that have adopted ASU 2016-13.
     42.a.
    2. Institutions must complete item 53 only if the amount reported in item $52 . \mathrm{a}$ above is less than or equal to 2.5000 percent (plus any other applicable buffer if the institution is an advanced approaches institution or a Category III institution).
     percent (plus any other applicable buffer if the institution is an advanced approaches institution or a Category III institution).
    3. Institutions that have adopted ASU 2016-13 and have elected to apply the 3-year or the 5-year 2020 CECL transition provision should include the applicable portion of the CECL transitional amount or the modified CECL transitional amount, respectively, in item 55.a.
[^91]:    3. Institutions that have adopted ASU 2016-13 should report as a negative number allowances eligible for inclusion in tier 2 capital in Column B , which excludes PCD allowances.
    4. For loans and leases held for sale, exclude residential mortgage exposures, high volatility commercial real estate exposures, or sovereign exposures that are past due 90 days or more or on nonaccrual.
[^92]:    For loans and leases held for sale, exclude residential mortgage exposures, high volatility commercial real estate exposures, or sovereign exposures that are past due 90 days or more or on nonaccrual.
    For loans and leases, net of unearned income, exclude residential mortgage exposures, high volatility commercial real estate exposures, or sovereign exposures that are past due 90 days or more or on nonaccrual.
    8. Includes premises and fixed assets; other real estate owned; investments in unconsolidated subsidiaries and associated companies; direct and indirect investments in real estate ventures; intangible assets; and other assets.
    11. For loans and leases, net of unearned income, exclude residential mortgage exposures, high volatility commercial real estate exposures, or sovereign exposures that are past due 90 days or more or on nonaccrual.
    12. Includes premises and fixed assets; other real estate owned; investments in unconsolidated subsidiaries and associated companies; direct and indirect investments in real estate ventures; intangible assets; and other assets.

[^93]:    14. For each of columns $A$ through $R$ of item 11 , report the sum of items 1 through 9 . For item 11 , the sum of columns $B$ through $R$ must equal column $A$. Item 11 , column $A$, must equal $S c h e d u l e ~ R C$, item 12 .
    15. Includes securities purchased under agreements to resell (reverse repos), securities sold under agreements to repurchase (repos), securities borrowed, and securities lent.

    Excludes unused commitments to asset-backed commercial paper conduits.

[^94]:    22. For item 22 , the sum of columns $C$ through $Q$ must equal coum $A$.
[^95]:    24. Includes securities purchased under agreements to resell (reverse repos), securities sold under agreements to repurchase (repos), securities borrowed, and securities lent.
    *. Excludes unused commitments to asset-backed commercial paper conduits.
    25. For item 22, the sum of columns $C$ through $Q$ must equal column $A$.
[^96]:    27. Sum of items 2. b through 20 , column S ; items $9 . a, 9 . b, 9 . c, 9 . \mathrm{d}$, and 10 , columns T and U ; item 25 , columns C through Q ; and item 27 (if applicable).
    28. Memorandum items 4.a through 4.c should be completed only by institutions that have adopted ASU 2016-13.
[^97]:    1. The $\$ 100$ billion asset-size test is based on the total assets reported on the June 30,2022 , Report of Condition.
    2. The $\$ 10$ billion asset-size test is based on the total assets reported on the June 30, 2022, Report of Condition.
    3. The $\$ 10$ billion asset-size test is based on the total assets reported on the June 30,2022 , Report of Condition.
[^98]:    1. Memorandum item $2 . c$ is to be completed if the principal balance of other financial assets serviced for others is more than $\$ 10$ million.
    2. The $\$ 10$ billion asset-size test is based on the total assets reported on the June 30, 2022, Report of Condition.
     as of the report date, or (2) are credit card specialty banks as defined for Uniform Bank Performance Report purposes.
[^99]:    ${ }^{1}$ This rating reflects performance within the multistate metropolitan statistical area. The statewide evaluations do not reflect performance in the parts of those states contained within the multistate metropolitan statistical area.

[^100]:    This rating reflects performance within the multistate metropolitan statistical area. The statewide evaluations do not reflect performance in the parts of those states contained within the multistate metropolitan statistical area.

[^101]:    ${ }^{4}$ This rating reflects performance within the multistate metropolitan statistical area. The statewide evaluations do not reflect performance in the parts of those states contained within the multistate metropolitan statistical area.

[^102]:    ${ }^{5}$ This rating reflects performance within the multistate metropolitan statistical area. The statewide evaluations do not reflect performance in the parts of those states contained within the multistate metropolitan statistical area.

[^103]:    ${ }^{6}$ This rating reflects performance within the multistate metropolitan statistical area. The statewide evaluations do not reflect performance in the parts of those states contained within the multistate metropolitan statistical area.

[^104]:    * May not add up to 100 percent due to geographies with unknown tract income level and rounding

[^105]:    ${ }^{7}$ This rating reflects performance within the multistate metropolitan statistical area. The statewide evaluations do not reflect performance in the parts of those states contained within the multistate metropolitan statistical area.

[^106]:    ${ }^{8}$ This rating reflects performance within the state. The statewide evaluations do not reflect performance in the parts of those states contained within the multistate metropolitan statistical area.

[^107]:    *The tables present the data for all assessment areas. The narrative below addresses performance in full-scope areas only.

[^108]:    ${ }^{9}$ This rating reflects performance within the state. The statewide evaluations do not reflect performance in the parts of those states contained within the multistate metropolitan statistical area.

[^109]:    ${ }^{10}$ This rating reflects performance within the state. The statewide evaluations do not reflect performance in the parts of those states contained within the multistate metropolitan statistical area.

[^110]:    * May not add up to 100 percent due to geographies with unknown tract income level and rounding

[^111]:    ${ }^{12}$ This rating reflects performance within the state. The statewide evaluations do not reflect performance in the parts of those states contained within the multistate metropolitan statistical area.

[^112]:    ${ }^{13}$ This rating reflects performance within the state. The statewide evaluations do not reflect performance in the parts of those states contained within the multistate metropolitan statistical area.

[^113]:    ${ }^{14}$ This rating reflects performance within the state. The statewide evaluations do not reflect performance in the parts of those states contained within the multistate metropolitan statistical area.

[^114]:    ${ }^{15}$ This rating reflects performance within the state. The statewide evaluations do not reflect performance in the parts of those states contained within the multistate metropolitan statistical area.

[^115]:    ${ }^{16}$ This rating reflects performance within the state. The statewide evaluations do not reflect performance in the parts of those states contained within the multistate metropolitan statistical area.

[^116]:    ${ }^{18}$ This rating reflects performance within the state. The statewide evaluations do not reflect performance in the parts of those states contained within the multistate metropolitan statistical area.

[^117]:    ${ }^{19}$ This rating reflects performance within the state. The statewide evaluations do not reflect performance in the parts of those states contained within the multistate metropolitan statistical area.

[^118]:    * May not add up to 100 percent due to geographies with unknown tract income level and rounding

[^119]:    ${ }^{20}$ This rating reflects performance within the state. The statewide evaluations do not reflect performance in the parts of those states contained within the multistate metropolitan statistical area.

[^120]:    ${ }^{21}$ This rating reflects performance within the state. The statewide evaluations do not reflect performance in the parts of those states contained within the multistate metropolitan statistical area.

[^121]:    ${ }^{22}$ This rating reflects performance within the state. The statewide evaluations do not reflect performance in the parts of those states contained within the multistate metropolitan statistical area.

[^122]:    This rating reflects performance within the state. The statewide evaluations do not reflect performance in the parts of those states contained within the multistate metropolitan statistical area.

[^123]:    ${ }^{24}$ This rating reflects performance within the state. The statewide evaluations do not reflect performance in the parts of those states contained within the multistate metropolitan statistical area.

[^124]:    ${ }^{25}$ This rating reflects performance within the state. The statewide evaluations do not reflect performance in the parts of those states contained within the multistate metropolitan statistical area.

[^125]:    ${ }^{28}$ This rating reflects performance within the state. The statewide evaluations do not reflect performance in the parts of those states contained within the multistate metropolitan statistical area.

[^126]:    ${ }^{29}$ This rating reflects performance within the state. The statewide evaluations do not reflect performance in the parts of those states contained within the multistate metropolitan statistical area.

[^127]:    Due to rounding, totals may not equal 100.0

[^128]:    Due to rounding, totals may not equal 100.0

[^129]:    Due to rounding, totals may not equal 100.0

[^130]:    Due to rounding, totals may not equal 100.0

[^131]:    Due to rounding, totals may not equal 100.0

[^132]:    Due to rounding, totals may not equal 100.0

[^133]:    Due to rounding, totals may not equal 100.0

[^134]:    Due to rounding, totals may not equal 100.0

[^135]:    (a) Represents cash on deposit at central banks, primarily the Federal

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[^137]:    (a) Includes pension settlement loss of $\$ 92$ million and $\$ 33$ million, respectively, for the years ended December 31, 2022 and 2021.

[^138]:    (a) Consists predominantly of equity securities, U.S. federal, state, and local and non-U.S. government debt securities, and cash equivalents.
    (b) Consists predominantly of corporate debt securities and U.S. federal, state, and local and non-U.S. government debt securities.
    (c) Consists of corporate-owned life insurance policies and participating annuity contracts.

[^139]:    (a) Represents TDRs.

[^140]:    (a) Negative interest and rates reflect the net impact of interest earned offset by fees paid on client-driven prime brokerage securities borrowed transactions.
    (b) Includes commercial paper.

[^141]:    "Performance Table" means the table used in the calculation of PSUs for the Performance Period as set forth below:

[^142]:    (a) Represents deferred tax liabilities related to tax-deductible goodwill and to identifiable intangibles created in nontaxable transactions, which are netted against goodwill and other intangibles when calculating TCE.

[^143]:    (a) Allowance for loan losses of $\$ 205$ million and $\$ 74$ million was held against nonaccrual loans retained at June 30, 2023 and 2022, respectively.
    (b) Loans held-for-sale and loans at fair value were excluded when calculating the net charge-off/(recovery) rate.
    (c) As of June 30, 2023, included a $\$ 608$ million allowance established as part of the First Republic acquisition.

[^144]:    (a) Represents the Morningstar Rating for all domiciled funds except for Japan domiciled funds which use Nomura. Includes only Asset Management retail open-ended mutual funds that have a rating. Excludes money market funds, Undiscovered Managers Fund, and Brazil domiciled funds.
    (b) Quartile ranking sourced from Morningstar, Lipper and Nomura based on country of domicile. Includes only Asset Management retail open-ended mutual funds that are ranked by the aforementioned sources. Excludes money market funds, Undiscovered Managers Fund, and Brazil domiciled funds.
    (c) Loans, deposits and related credit data and quality statistics relate to the Global Private Bank business.
    (d) Includes the impact of the First Republic acquisition. Refer to page 24 for additional information.
    (e) For the three and six months ended June 30, 2023, included $\$ 9.7$ billion and $\$ 4.9$ billion, respectively, associated with the First Republic acquisition.
    (f) As of June 30, 2023, included a $\$ 146$ million allowance established as part of the First Republic acquisition.

[^145]:    (a) Effective January 1, 2023, the Firm adopted new hedge accounting guidance. As permitted by the guidance, the Firm elected to transfer $\$ 7.1$ billion of HTM securities to AFS. During 2022, the Firm transferred $\$ 78.3$ billion of investment securities from AFS to HTM for capital management purposes. Refer to Note 1 and Note 10 for additional information on the new hedge accounting guidance.
    (b) As of June 30, 2023 and 2022, the allowance for credit losses on investment securities was $\$ 74$ million and $\$ 47$ million, respectively.
    (c) As of June 30, 2023, included $\$ 25.8$ billion of AFS securities associated with the First Republic acquisition. Refer to Note 28 for additional information.

[^146]:    (a) Includes the impact of the First Republic acquisition, primarily impacting obligations of U.S. states and municipalities. Refer to Note 28 for additional information.

